ANIMAL WELFARE ETHICS AND JURISPRUDENCE

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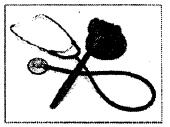
KALYANI PUBLISHERS
LUDHIANA • NEW DELHI • NOIDA (U.P.) • HYDERABAD • CHENNAI
KOLKATA • CUTTACK • GUWAHATI • KOCHI • BENGALURU

My goal was to publish a book that is primarily for those engaged in field activities of animal welfare and jurisprudence. I believe this book has come closer to attaining that goal. This is a single author, self-composed book and undoubtedly there will be many errors in the manuscript. I will appreciate that the persons who use this book to send helpful or critical comments so that the necessary corrections can be made in the future editions. I would like to thank my family members for their constant encouragement and support as this book would not be possible without their inputs.

2015

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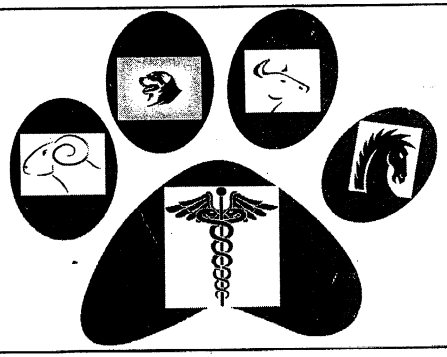
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1

Forensic Medicine and Judicial Procedures in India





CHAPTER OUTLINE

- Brief history of medical forensic medicine
- Commonly used terms in forensic science
- Judicial procedure in India
- Description of commonly used terms in court
- Procedure for recording the evidence
- Glossary of terms commonly used in court

BRIEF HISTORY OF MEDICAL FORENSIC MEDICINE



Physician treating a patient

The study of Veterinary jurisprudence/ Veterinary forensic medicine is completely different from other subjects. There are a host of criminal cases and situations where the problem can only be solved through an intelligent application of medical principles. The importance of human forensic investigation is well recognized in law enforcement. Veterinary forensic pathology plays a vital role in the enforcement of laws pertaining to domestic animals and wildlife laws.

The relationship between law and medicine is centuries old. Medicine and law have been related from the earliest times. The first medico-legal expert is considered to be Imhotep, the Grand Vizier, Chief Justice and Physician to king Zozer of Egypt around 3,000 BC. The oldest of these written records, the Code of Hammurabi, King of Babylon, includes legislation pertaining to the practice of medicine, dating back to the year 2200 B.C. The topics mentioned it are of medical malpractice and civil and criminal liability for improper and negligent medical care for which the penalties ranged from monetary compensation to cutting off the surgeon's hand.

The Egyptians had a good knowledge of poisons. Stab wounds were differentiated in the 17th century B.C. In ancient Egypt, the acts of the medical man were circumscribed by law. There is evidence that priests made determinations regarding the cause of death and whether it was natural or not. In ancient Greece also, there was a knowledge of poisons and laws against abortions. However, autopsies were not performed, since a dead body was regarded as sacred. The Chinese published information about poisons, including arsenic and opium 3000 years B.C. In ancient Persia, wounds were put into one of seven classes, ranging from simple to mortal. When Julius Caesar was assassinated in 44 B.C. the Roman physician Antistius examined his body and concluded that only one of the 23 stab wounds was mortal.

One of the earliest instances when science was used for the detection of crime was when the Greek scientist Archimedes (287-212 B.C.) could show that the gold crown indeed had been adulterated with silver found out an interesting way to detect the amount of silver used as an adulterant in a gold crown by applying the principle of buoyancy. Consequently the goldsmith was executed and this is perhaps the first instance when forensic science was used resulting in the execution of a criminal.

In 1248, a handbook entitled His Yüan Lu was published in China that suggested knowledge for applying medical knowledge to the solving of crimes and to the work of the courts a book. The book contains very useful information for the examination of corpses and wound injuries.

Kautilya, also called as Chankya and Vishnugupta, who wrote the "Arthashastra", which is the most comprehensive treatise of classical times. The book states that death can be caused by four ways of stopping the breathing (strangling, hanging, asphyxiation or drowning); two ways of physical injury (by beating or by throwing from a height); or poisoning (by poisons, snake or insect bite or narcotic drugs. If death is suspected to be due to poisoning, the undigested parts of the meal were tested by feeding it to birds. It also describes the necessity of autopsy in establishing the cause of death after smearing the body with oil to bring out bruises, swellings and other injuries.

The three books published by Devergie (Médecinelégale, théorique et pratique, - Legal medicine in theory and practice in 1835). Casper (Gerichtliche Leichenöffnung -Forensic Dissection in 1850, and Praktisches Handbuch der gerichtlichen Medizin -Practical Manual of Forensic Medicine in 1856) brought out a revolution in the world of forensic medicine. They covered a wide range of subjects, and gave details of thousands of cases, which they had solved, by applying rigorous observation, accurate and detailed autopsy, and microscopic and chemical examination.

In the 19th and the 20th centuries Forensic medicine made rapid advances. Newer discoveries were regularly being made. The latest forensic technique to be invented is the technique of DNA fingerprinting perfected in 1985, by a Leicester University professor Alec Jeffreys. It enables the forensic scientists to identify an individual positively among millions of suspects. The technique is very useful in solving cases of rape, disputed paternity, and putrefied bodies and so on.

The teaching of veterinary ethics and jurisprudence is improving in the country and there is lot of scope in the expansion of this subject. It is hoped that trained vetro-legists will be available in India in sufficient large numbers in the districts, in due course of time.

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COMMONLY USED TERMS IN FORENSIC SCIENCE

Forensic Science

Application of the knowledge of science for the purposes of law and justice.

Explanation: Forensic Science is a vast subject and comprises of the application of any branch of scientific knowledge such as physics, chemistry, biology and so on for the administration of justice. Chemical analysis of an unknown poison found in the stomach of a dead animal is an example of the application of chemistry in the administration of justice (*Forensic chemistry*). An analysis of blood stains found at the scene of crime requires the application of biology (*Forensic Biology*).

Forensic Medicine

Application of medical knowledge (all branches of medicine including laboratory examinations) for the administration of law and justice.

Explanation: A villager may allege that some Mr. X has sexually assaulted his she donkey, while Mr. X denies this. To find out the truth, veterinarian will examine the donkey and look for the injury marks around the genitalia. The seminal fluid recovered from her vagina must have the same DNA profile as that of Mr. X. Only after this, can one say whether or not Mr. X is guilty.

Legal Medicine or State Medicine

These terms are synonymous with forensic medicine.

Forensic Pathology

It is the application of the knowledge of pathology for the administration of justice.

Explanation: Doing post-mortem examinations, deducing the cause of death by looking at the state of internal organs, estimating the cause of death by doing histopathology of internal organs, etc. involves a thorough knowledge of pathology, and is included in forensic pathology.

Veterinary Jurisprudence

It is legal aspects of practice of medicine.

Explanation: For instance, a veterinarian while prescribing medicines for his patients is guided by certain rules and regulations. If he is negligent towards his patients, he may have to face the law. All the rules and regulations which guide a physician during his practice come under medical jurisprudence.

Veterinary Ethics

It is the moral principles which should guide members of veterinary profession in their dealings with one another, with their patients and with their State.

Explanation: He is not expected to ask for a "cut" from his colleague, to whom he refers his patient for some special investigation. If he asks for a "cut", and gets it, both doctors are guilty of breaching medical ethics. To give another example, a doctor is not expected to employ touts for furtherance of their medical practice. If some doctor does it, he breaches the code of medical ethics.

Veterinary Etiquette

Veterinary etiquette deals with the conventional laws and customs of courtesy observed between members of the veterinary profession.

Explanation: For instance, a doctor is not expected to charge for giving medical advice and/or medicines to another doctor.

Vetero-legal

It is the term, which incorporates the basics of two sister professions i.e. veterinary science and law.

JUDICIAL PROCEDURES IN INDIA



The Indian judicial system has three basic tiers: there are courts at the district level, at the state level and at the national level. Judgments of district-level courts may be appealed in the state-level court and judgments of the state courts may be appealed in the national-level court

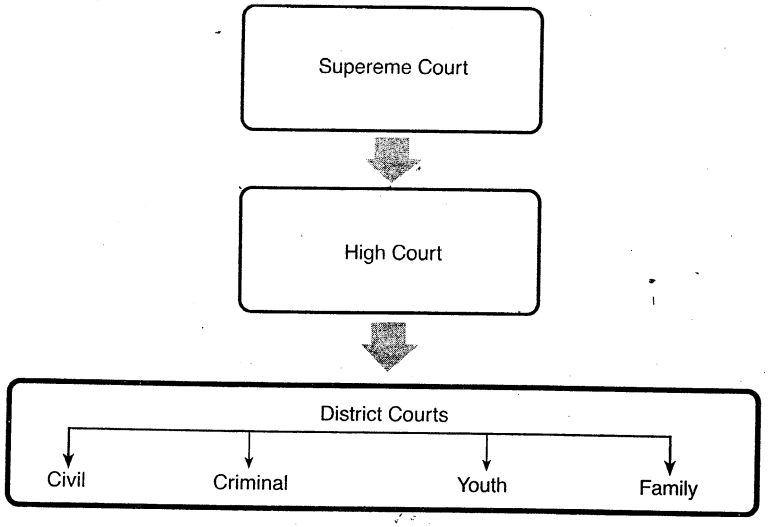
Functions of courts

The main functions of courts are-

- *Interpretation* – to ascertain the meaning of the laws;
- *Invalidation* – to declare as invalid a law or rule that violates principles stated i the Constitution or the statute under which it is made;

- *Enforcement*–to see that the laws do not remain on paper and are made applicable to real-life situations of people;
- *Legislation* – Courts can make laws on issues, which are not covered by any written laws. Some examples are inter-country adoption of children and sexual harassment at the workplace.

STRUCTURE OF COURTS IN INDIA



Classification of courts in India

Courts can be broadly divided into criminal courts and civil courts. Criminal courts deal with determining the guilt or innocence of individual accused of committing crimes. Civil courts deal with disputes such as those relating to property, land, tenancy, compensation for wrongs done to people or property and matrimonial disputes and remedies.

POWERS OF CRIMINAL COURTS

Court	Maximum Punishment
Supreme Court	Any sentence authorized by law, including death sentence.
High Court	Any sentence authorized by law, including death sentence.
Sessions Court	Any sentence authorized by law, including death sentence. But death sentence has to be confirmed by the High Court.
Chief Judicial Magistrate	Maximum sentence of 7 years and/ fine.
Judicial Magistrate 1st Class	Maximum sentence of 3 years and/ or fine up to Rs. 5000/- or both.
Judicial Magistrate 2nd Class	Maximum sentence of 1 year and/ or fine uptoRs. 1000/- or both.

A brief vocabulary is necessary for understanding this system: At the district level, a Sessions Court is one that tries criminal cases; a District Court tries civil cases such as those relating to property, land etc. At the district level one also finds several specialized courts. These include the Rent Tribunal, Consumer Court, Labour Court, Revenue Court and Executive Court. A state-level court in India is called a High Court. All courts work under the High Court that has powers of superintendence and control over subordinate courts. Above the High Court is the national level court; the Supreme Court.

DESCRIPTION OF COMMONLY USED TERMS IN COURT

Offenses

Offenses may be cognizable and non-cognizable. All cognizable and non-cognizable Offenses are listed in schedule 1 of the Criminal Procedure Code.

- A cognizable offense is that in which a police officer can arrest a person without an arrest warrant from a competent authority such as the magistrate.
- For a non-cognizable offense he would have to get an arrest warrant from the magistrate.

Subpoena

(It is a Latin word, *sub*, under; and *poena*, pain or penalty which means "under threat of penalty". A subpoena is also known as summons). It is a document compelling the attendance of a witness in a court of law under a penalty.

When it is served on a witness to give evidence and produce documents before a court, he must do so punctually. Non-compliance may render him liable to fine or imprisonment unless a reasonable excuse is forthcoming.

Witnesses

They are of following types :

Common witness

A witness who testifies to the fact observed by himself. These are the common people who saw a crime being committed. For instance a villager might have seen a person taking out a dagger from his pocket and stabbing some animal. When he gives evidence to this effect, he is known as a common witness.

Expert witness

An expert witness is one who on account of his professional training is capable of deducing opinions and inferences from the facts observed by himself/ herself or noticed by others. A veterinary witness is an expert witness. He can look at the dead animal and say when he must have died or he may look at the wounds on the body and opine how they must have been produced.

Hostile witness

Hostile witnesses are those who have some ulterior motive in concealing part of the truth or the whole truth. Generally these witnesses are honest in the beginning but were later "bought" over by the other party or have been threatened by the other party with dire consequences. If a witness has turned hostile, his earlier testimony is also rejected. Both common and expert witness may turn hostile.

Evidence

All statements, which the court permits or requires to be made before it by a witness in relation to matters of under investigations. It is of two types-

(*i*) *Oral evidence:* Oral evidence is the evidence of a witness who has seen, heard, or perceived an event.

(*ii*) *Documentary evidence:* Certificates e.g. health certificate and death certificate. Certificates may not be accepted in a court of law unless they are issued by a duly qualified veterinarian registered under the State Veterinary Council Act.

(*iii*) *Vetero-legal reports:* These are the documents prepared by a veterinarian in obedience to a demand by an authorized police officer or a magistrate and are referred to chiefly in criminal cases.

(*iv*) *Examination of exhibits: e.g.* articles, weapons. Articles, which are to be sent for chemical analysis, should be kept in the custody of the veterinary officer.

PROCEDURE FOR RECORDING THE EVIDENCE

It is important for the doctor to know the procedure of recording of evidence.

Step 1-Taking oath

Oath

The word oath includes a solemn affirmation substituted by law for an oath, and any declaration required or authorized by law to be made before a public servant or to be used for the purpose of proof, whether in a Court of Justice or not. On being called into the witness box, the witness has to take an oath before giving his evidence. Only then, the judge will record the evidence of the witness.

Normally the oath is administered according to the religion of the witness. While taking the oath, normally, a Christian holds the Bible, a Hindu, the Gita, and a Muslim, the Koran. If a witness does not believe in God, he must make a solemn affirmation (SA).

After taking an oath, a witness becomes legally bound to speak the truth and nothing but the truth. If a person who is legally bound by oath to speak the truth, does not speak the truth and give false evidence then he can be punished under Section 193 of the IPC which is imprisonment up to seven years and also fine. Giving false evidence while under oath is known as perjury.

Step 2—Examination in chief

This is the first examination of a witness by the party who calls him. This stage of examination is basically meant to bring out the facts of the case before the court.

Step 3—Cross–examination

The counsel holds this for the accused, who tries to elicit facts. In this examination, leading questions are permissible. The witness should answer the questions only after clearly and completely understanding them.

The basic purpose of the cross-examination is to bring out the truth from the witness. A witness who is willfully speaking lies will invariably end up contradicting himself, if questions were put through to him cleverly.

The Court can always forbid any question, which appears to it to be intended to insult or annoy somebody.

Step 4—Re-examination

The counsel, who conducts the examination-in-chief, has the right of re-examination of the witness to explain any discrepancy occurred during cross-examination. The adverse party may further cross-examine upon that matter.

Step 5—Question put by the judge

The judge may ask any question to clear his doubts. After this the recording of the witness ends.

- At times the cross-examination may go on so long, that a next date may have to be allotted to the witness.
- Whatever the witness is speaking, the typist goes on typing.
- After the recording of evidence is over, the typist types ROAC (Read Over And Corrected) below the typed statement, and the witness must sign over this.
- The witness must read the whole typewritten statement carefully and correct any mistakes manually.
- After this, the witness would request the court to give him the conduct money. A T.A. bill would be made by a court official and signed by the presiding officer.
- The witness would take that T.A. bill to the cashier of the court who would reimburse him the money mentioned in the bill.

Conduct money

A witness is paid some amount to cover his traveling and other incidental expenses. This is known as the conduct money. In a civil case, the conduct money is paid by the party who calls him.

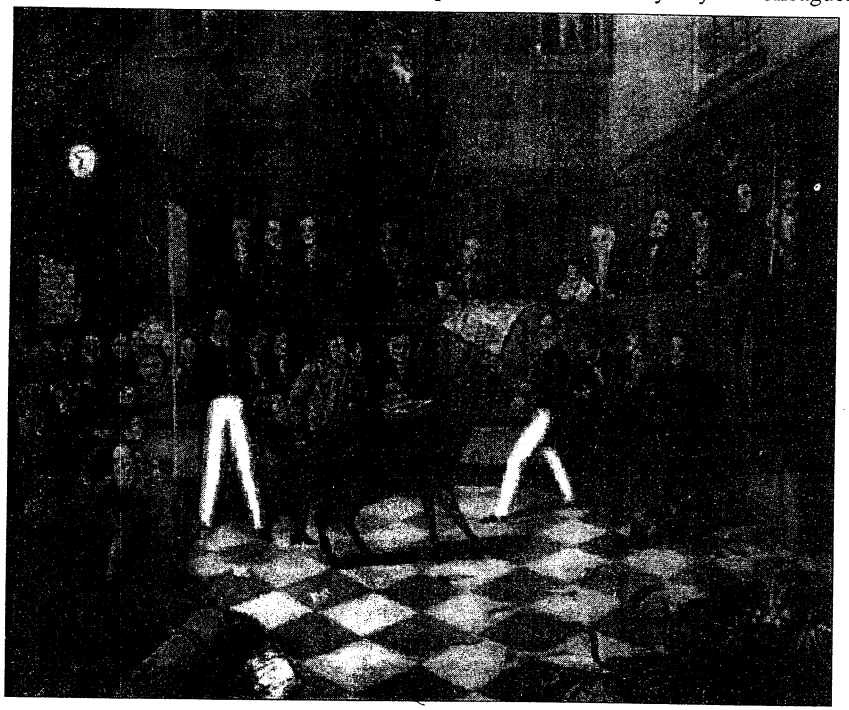
Hints for giving evidence

- Verify the facts of the case from your notes before going to court.

- Speak slowly and clearly.
- Use simple language and avoid technical terms.
- Be brief and if possible answer questions with a 'Yes' or 'No'.
- If unable to answer any question, say, "I cannot answer."
- Do not lose your temper.
- Express your opinion and avoid quotations from books.

One veterinarian against another

You may be opposed to the expert witness of the prosecution. All experts may not be always correct in all their observations. Show politeness and courtesy to your colleagues.



A painting of the trial of Bill Burns, showing Richard Martin with the donkey in an astonished courtroom, leading to the world's first known conviction for animal cruelty, after Burns was found beating his donkey.

GLOSSARY OF TERMS COMMONLY USED IN COURT

Abstract of judgment - An official copy of the contents of a civil judgment.

Abstract of conviction - An official copy of the contents of a criminal or traffic verdict and sentence.

Accused - The person against whom an accusation is made; one who is charged with a crime or traffic infraction.

Admissible - Pertinent and proper to be considered in reaching a decision. Refers to the evidence considered in determining the issues to be decided in any judicial proceeding.

Affidavit - A written, printed, or videotaped declaration or statement of facts, made voluntarily, and confirmed by the oath or affirmation of the party making it, taken before an officer having authority to administer such oath.

Affirm - To ratify, make firm, confirm, establish, reassert. Alternate procedure to swearing under an oath.

Aggravating factor - A fact or circumstance associated with a criminal act that makes it more serious or injurious.

Aggrieved party - One whose legal right is invaded by an act complained of.

Alleged - Claimed; asserted; charged.

Alias - "Otherwise called," indicating one was called by one or the other of two names.

Amend - To change.

Appeal - Taking a case which has been decided in a court of inferior jurisdiction to one of superior jurisdiction, for the purpose of obtaining a review.

Appellant - The party who takes an appeal from one court to another.

Appellee - The party who must respond to the appellant.

Arrest - To deprive a person of his liberty by legal authority.

Attachment - The act or process of taking, apprehending, or seizing persons or property, by virtue of a writ, summons, or other judicial order, and bringing the same into the custody of the law; used either for the purpose of bringing a person before the court, of acquiring jurisdiction over the property seized, to compel an appearance, to furnish security for debt or costs, or to arrest a fund in the hands of a third person who may become liable to pay it over.

Bail - The release of a person from legal custody by a written agreement that he shall appear at the time and place designated and submit himself to the jurisdiction of the court and observe the requirements set forth in the recognizance.

Bond - A certificate or evidence of a debt with a sum fixed as a penalty, which contains a written agreement binding the parties to pay the debt, conditioned.

Breach - The breaking or violating of a law, right, or duty, either by commission or omission.

Complaint - criminal - A charge brought before a judicial officer having jurisdiction, that a person named has committed a specified offense.

Contempt of court - Any act which is calculated to embarrass, hinder, or obstruct the court in administration of justice, or which is calculated to lessen its authority or its dignity.

Convict - To find a person guilty of a criminal charge.

Court order - A command or mandatory direction of a judge which is made during a case. Also includes a command of the judge which establishes courtroom or administrative procedures.

Crime - A positive or negative act in violation of penal law; an offense against the state classified either as a felony or misdemeanor.

Cross-examination - The examination of a witness upon a trial or hearing, or upon taking a deposition, by the party opposed to the one who put him on the witness stand to testify.

Custody - The detainment of a person by virtue of lawful process or authority; actual imprisonment.

Damages - Money awarded by the court to a person harmed by the unlawful or negligent act of another.

Decree - An order of the court in an equity matter. Decrees are issued by circuit courts.

Defendant - The party against whom relief or recovery is sought in a court action or suit. Sometimes used to designate the accused in criminal or traffic cases.

Default - An omission of that which ought to be done. Failure to act. Also, failure of the defendant in a civil case to appear and contest the claim.

Detention - The holding of a person in custody or confinement.

Direct examination - The initial questioning of a witness by the party who called the witness.

Dismissal - An order disposing of an action, suit, etc., without trial.

Disposition - Determination of the final arrangement or settlement of a case following judgment.

Evidence - All the means by which a matter of fact, the truth of which is submitted for investigation, is established or disproved.

Execute - To enforce a civil judgment by seizure and either transfer or liquidation of the judgment debtor's assets through post-trial judicial process.

Ex parte - A judicial proceeding, order, injunction, etc., is said to be ex parte when it is taken or granted at the instance and for the benefit of one party only, and without notice to, any person adversely interested.

Forfeiture - A deprivation or destruction of a property right in consequence of the nonperformance of some obligation or condition.

Grand Jury - A special type of jury assembled to investigate whether criminal charges should be brought. Grand jury proceedings are supervised by circuit courts.

Guilty - Responsible for committing a criminal offense or a traffic infraction. The word used by an accused in pleading to the charges when he confesses to committing the crime of which he is charged. It is also used by the judge if he finds that the accused committed a criminal offense or a traffic infraction.

Habeas corpus - A writ commanding the person holding a prisoner in custody to bring the prisoner before the court for a determination of whether the prisoner is restrained of his liberty by due process. It is not used to determine the guilt or innocence of the prisoner.

Incarceration - Imprisonment; confinement in a jail or penitentiary.

Indemnify - To shift responsibility for a loss from the person held legally responsible to another party.

Indictment - A formal accusation by a grand jury that charges a person with a crime. Indictments are used to bring more serious charges and are used in circuit court only.

Interrogatories - A set of series of written questions drawn up for the purpose of being asked of a party, a garnishee, or a witness or other party to be answered under oath.

Jail - A place of confinement for persons awaiting trial and for persons sentenced to shorter terms of confinement for misdemeanors.

Judgment - A final decision and order of the court.

Jurisdiction - The authority of a court or other governmental agency to adjudicate controversies brought before it.

Jury - A body of persons selected from the community to hear evidence and decide a criminal or civil case.

Juvenile - A person under the age of 18.

Legal aid - Legal services are available in some areas to persons unable to afford an attorney. Legal aid offices handle only civil matters.

Lien - A charge or security or encumbrance upon property.

Litigant - A party to a lawsuit; one engaged in litigation.

Magistrate - A judicial officer with limited powers who handles certain preliminary matters such as issuing warrants, determining bail, issuing emergency protection orders and temporarily committing people to mental institutions.

Motion - A request made to the judge by a litigant or other person connected with the case for a ruling or order.

Negligence - Failure to exercise that degree of care which a reasonable person would have exercised given the same circumstances.

Notary - A public officer whose function it is to administer oaths; to attest and certify, certain classes of documents; to take acknowledgments, and certify the same.

Not guilty - A finding or verdict in a criminal case wherein the judge or jury determines that the Commonwealth has not proven that the defendant is guilty of a charge. Also the plea that may be made by a defendant to assert that he or she is not guilty and to demand that the Commonwealth prove its case.

Notice - Formal notification of a legal proceeding or determination.

Objection - A protest or exception made by a party against an action by the opposing party.

Ordinance - The enactments of the legislative body of a local government.

Parole - In criminal law, a conditional release. If prisoner makes good, he will receive an absolute discharge from balance of sentence, but, if he does not, he will be returned to serve unexpired time.

Party - An individual person or a legal organization such as a partnership or corporation.

Perjury - A criminal offense committed by giving a false statement given under oath.

Personal recognizance - Release of a defendant from jail or arrest by a judicial officer, upon the promise to appear in court without the necessity of posting bond but with some conditions imposed.

Petition - A formal request to a court to take a certain action on a matter.

Plaintiff - A person who brings an action; the party who complains or sues in a personal action and is so named on the record.

Plea - Statement made by the defendant either as to his guilt or innocence to the charge made against him.

Pleadings - The formal allegations by the parties of their respective claims and defenses, for the judgment of the court.

Power of attorney - Authorization given by one person allowing another to take action on their behalf.

Preliminary hearing - The hearing given to an accused which is held by a judge, to ascertain whether there is evidence to warrant the binding over of the accused on the felony charge to the circuit court for further proceedings.

Preponderance - Greater weight of evidence, or evidence which is more credible and convincing to the mind.

Prima facie - Evidence good and sufficient on its face.

Quash - The action of a court to deny, vacate, or make void a request on legal process, such as a subpoena.

Recognizance - An obligation entered into by an accused before a court, with condition to do some particular acts, including to appear in criminal court as required, to keep the peace, to be of good behavior, and not to depart from the Commonwealth.

Remand - Sending a case back to the same court out of which it came for purpose of having some action taken on it there.

Restitution - The act of making good or giving equivalent for any loss, damage or injury.

Search warrant - An order in writing, issued by a judicial officer, in the name of the state, directed to a sheriff, or other officer commanding him to conduct a search to aid an official investigation.

Seizure - To take into possession forcibly.

Sentence - The judgment formally pronounced by the judge upon the defendant after his conviction in a criminal prosecution, setting the punishment for the offense.

Schedules- Schedules in legal statutes are something like appendices in a book.

Suspended - Postponing the execution of the sentence after it has been pronounced upon certain conditions.

Deferred - Postponing the imposition of the sentence or finding for a period of time upon certain conditions. Does not operate as a suspension of sentence.

Summons - A document notifying defendant that an action has been instituted against him and that he is required to answer to it at a time and place named.

Surety - One who undertakes to pay money or to do any other act in the event that another, called his principal, fails to perform as promised. In criminal cases, the accused is the principal.

Verdict - The formal decision or finding of guilt or innocence made by a judge in a criminal case.

Waive - To abandon, renounce, repudiate or surrender a claim, a privilege, a right, or the opportunity to take advantage of some defect, irregularity or wrong.

Warrant of arrest - A written order issued and signed by a judicial officer directed to a law enforcement officer or some other person specially named and commanding him to arrest the body of a person named in it who is accused of an offense.

Witness - One who testifies to what he has seen, heard or otherwise observed and who is not a party to the action.

Writ - An order in writing in the name of the state, issuing from a court, addressed to a sheriff or other officer of the law, or directly to the person whose action the court desires to command, either as the commencement of a suit or other proceeding or as incidental to its progress, and requiring the performance of a specified act, or giving authority and commission to have it done.



2

Legal Duties of the Veterinarians and Professional Conduct for Veterinary Practitioners



CHAPTER OUTLINE

- **Legal duties of veterinarians**
- **Professional conduct of veterinarians**
  - General principles
  - Duties of veterinarians to their clients and patients
  - Duties of veterinarians to the profession
  - Duty of practitioners in consultation
  - Duties of veterinarians to the public
  - Disciplinary action

LEGAL DUTIES OF VETERINARIANS

The primary role of a veterinarian is to provide law enforcement officials, judges, and jury members with the information necessary to make decisions (decision to prosecute, render a verdict, etc.) regarding a case associated with offences against animals.

Generally a veterinarian has the following responsibilities;

- Investigations of common offences against animals;
- Investigations in case of malicious and accidental poisoning;
- Investigations in case of frauds in the sale of livestock and livestock products;
- Issuing of health certificates;
- To get the real culprits punished and help in providing justice and fair treatment to man and animal and also to save innocent persons from the false accusations of crime;
- To prevent cruelty to animals;
- Application and enforcement of state of law meant for animals (The Prevention of Cruelty to Animals, Cattle Trespass Act, etc);
- To protect the interests of society at large and prevent the unethical practices in relation to animals in the society;
- In fact everything in which recourse to law is necessary in relation to the veterinary profession.
- Investigators have the responsibility of conducting examinations in an unbiased manner so as not to improperly influence the interpretation of findings. For successful presentation of evidence and findings, all of these actions and interpretations must withstand scrutiny in a court of law.

Most doctors during their professional life would be required to attend courts of law off and on. Most of the times, they would be called as expert medical witnesses. A doctor who does not know about the various types of courts in India, and various rules, regulations, and procedures followed in the courts may commit serious (although unintentional) errors and mistakes during interaction with courts and court officials. To avoid unnecessary embarrassment, it is expedient to the doctor to know something about the various types of courts in India and the various procedures followed there.

Lawyers, at least those who do not constantly deal with veterinary medicine issues in their legal practice, know very little about the veterinary profession and its problems; veterinarians frequently comprehend too little about the law and how it affects them in the practice of their profession. Vetero-legal experts can provide a link between these two professions for their smooth & effective functioning in a scientific manner.

To make a veterinarian know and recognize his exact duties, privileges and responsibilities in vetro-legal cases both as witness and as an expert advisor it is very essential that he should have a fair knowledge of all the subjects of veterinary sciences. He must be well acquainted with the animal related Acts and the legal procedures in the criminal courts.

PROFESSIONAL CONDUCT OF VETERINARIANS

VETERINARY COUNCIL OF INDIA (STANDARD OF PROFESSIONAL CONDUCT, ETIQUETTE AND CODE OF ETHICS, FOR VETERINARY PRACTITIONERS) REGULATIONS, 1992

In exercise of the powers conferred by section *66* read with section 31 of Indian Veterinary Council Act, 1984 (52 of 1984) the Veterinary Council of India, with previous approval of the Central Government, hereby makes the following regulations, namely:

1. Short title and commencement

These regulations may be called, the Veterinary Council of India (Standard of Professional Conduct, Etiquette and Code of Ethics, for Veterinary Practitioners) Regulations, 1992.

2. Definitions

- "veterinarian" means a registered veterinary practitioner as defined in the Act;
- "Act" means the Indian Veterinary Council Act, 1984 (52 of 1984);
- "regulations" means the Standard of Professional Conduct, Etiquette and Code of Ethics Regulations. This definition limits its meaning to the terms used within the said regulations;
- "patient" shall mean an animal, bird or a group of them being treated or managed or advised to be treated or managed by a veterinarian;
- "client" means the legal owner of the patient or his representative or the person or persons directly assigned responsibility of the patient;
- "profession" means veterinary profession covering all its branches, namely, animal health, animal production and technology, and shall include any sister profession wherein veterinary service is extended or is sought or is made use of, namely, laboratory animal medicine, animal experimentation and vaccine production.

3. Declaration and oath by a veterinarian

Being admitted to the profession of veterinary medicine, I solemnly swear to use my scientific knowledge and skills for the benefit of society through the protection of animal health, the relief of animal suffering, the conservation of livestock resources, the promotion of public health, and the advancement of knowledge in veterinary science.

I shall practice my profession conscientiously, with dignity, and in keeping with the principles of veterinary medical ethics.

I accept as a lifelong obligation the continuous improvement of my professional knowledge and competence.

GENERAL PRINCIPLES

4. Character of the veterinarian

The primary object of the veterinary profession is to render service to humanity by facilitating better animal production, ensuring veterinary public health as also caring for the sick animals and alleviating their suffering; financial reward is always a subordinate consideration.

Whosoever chooses the profession assumes the obligation to conduct oneself in accordance with the noble ideals of serving the dumb and mute creatures. The veterinarian shall be an upright person and shall be sincere and diligent in caring for the sick and managing the healthy animals. He/ She shall be modest, sober, and prompt in discharging his/her duties.

He/She shall conduct himself/herself with propriety in his/her profession and in all actions of his/her life.

5. Standards of character and moral

The veterinary profession expects from its members the highest level of character and morals. Every veterinarian owes to the profession and the public a duty to achieve such a level.

6. Veterinarian's responsibility

A veterinarian shall merit the trust and confidence of his/her clients, rendering their animals full measure of service with devotion.

7. Advertising

Solicitation of clients by a veterinarian directly or indirectly through an advertisement in newspapers, handbills etc. in a manner projecting himself/herself to be in a position of superiority which he/she himself/herself has not achieved, is unethical.

A veterinarian practitioner is permitted formal announcement in press about the following matters namely:

- starting of his/her practice;
- change of type of practice;
- change of address;
- temporary absence from duty;
- resumption of practice;
- Succeeding to another's practice.

He/She shall further not advertise through price lists or publicity materials of manufacturing firms or traders with whom he/she may be connected in any capacity, nor shall he/she publish cases, operations or letters of thanks from patients in non-professional newspapers or journals.

8. Fee for professional service

A veterinarian engaged in practice/advisory service/consultancy, shall limit the source of his/ her income to the fee received for services rendered to the client. Remuneration received for such services shall be in the form and amount specifically announced to the client at the time the service is rendered.

9. Patent and copyrights

A veterinarian may patent surgical instruments, appliances and medicine or copyright applications of methods and procedure.

10. Running an open shop

(Dispensing of drugs and appliances by veterinarians)—A veterinarian shall not run an open shop for sale of medicine for dispensing prescriptions by doctors other than himself.

11. Rebates, gifts and commissions

A veterinarian shall not give, or receive any gift, or, commission from any person for in consideration for the referring or procuring of, any client.

12. Secret remedies

The prescribing or dispensing by a veterinarian of secret medicines or other secret remedial agents, of which he/she does not know the composition or the manufacture, or promotion of their use, is unethical.

13. Evasion of legal restrictions

A veterinarian shall observe the laws of the country in regulating the practice of veterinary medicine and will not assist others to evade such laws.

DUTIES OF VETERINARIANS TO THEIR CLIENTS AND PATIENTS

14. Obligation to the patient

Though a veterinarian is not bound to treat cases of each and every one asking for his/her service, except in emergencies, he/she shall for the sake of humanity and the noble tradition of the profession, not only be ever ready to respond to the need of the sick and injured animals/birds, but shall also be mindful of the high character of his/her mission and the responsibility he/she incurs in the discharge of his/her professional duties.

15. Patient not to be neglected

A veterinarian is free to choose whom he/she will serve, provided that he/she shall respond to any request for his/her assistance in an emergency or whenever temperate public opinion expects the service.

Once having undertaken a case, a veterinarian shall not neglect the patient nor shall he/she withdraw from the case without giving notice to the client sufficiently in advance, to allow him secure another professional veterinarian.

16. Termination of service

(*a*) A veterinarian shall withdraw his/ her service under following valid reasons:

(*i*) Where he/ she finds another veterinarian in attendance.

(*ii*) Where remedies/advice other than those prescribed by him/ her are being used.

(*iii*) Where his/ her remedies/advice and instructions are refused.

(*iv*) Where he/she feels that the illness or the need of his/her service is an imposture and that he/she is being made a party to a false pretence.

(*v*) Where a client is resorting to the use of intoxicating drugs, means of quackery or witchcraft against medical advice; and

(*vi*) Where complete information/history concerning the fact and a client does not supply circumstances of the case.

(*b*) The discovery that the malady is incurable/the client's problems are unsolvable, is no excuse to discontinue attendance by a veterinarian as long as his/her client desire the service.

17. Act of negligence

1. No veterinarian shall willfully commit an act of negligence that may deprive patient of the care that is absolutely necessary.
2. A veterinarian is expected to show such diligence and skill in service as would be expected of another veterinarian of similar qualifications, experience and attainments.
3. His/ Her acts of commission or omission shall not be judged by any non-veterinary standards, but as those expected from a veterinarian of his/her training, standing and experience.
4. A veterinarian shall use any drug prepared under standard pharmacological principles and shall adopt all necessary preparations/precautions, like sterilization and verification of doses as are normally prescribed for that drug.

18. Behaviour to patients

The demeanour of a veterinarian towards his/her patient shall always be kind, tender and full of patience. Every patient shall be treated with attention, consideration and concentration.

19. Visit

Notwithstanding the fact that a veterinarian is not bound to visit his/her patient/client, he/she shall make it at the indicated hour, once he/she had committed to do so.

20. Prognosis

(*a*) A veterinarian shall neither exaggerate nor minimize the gravity of a patient's condition. He/she shall ensure that the legal owner of the patient has such knowledge of the patient's condition as will serve the best interest of the patient and its owner (client).

(*b*) In case of dangerous manifestations, or when grave and highly communicable diseases are encountered he shall not fail to inform the client and those to whom the disease can be of potent danger.

DUTIES OF VETERINARIANS TO THE PROFESSION

21. Upholding the honour of the profession

A veterinarian is expected to uphold the dignity and honour of his profession.

22. Membership of societies

For the advancement of his/her profession a veterinarian may affiliate himself/herself with professional societies and contribute his/ her time means and energy to their progress, so that they may represent and promote the ideals of the profession better.

23. Safeguarding the profession

Every veterinarian shall laid in safeguarding the profession against admission to it of those who are deficient in moral character or education. He/she should not employ in connection with his/her professional practice any unqualified personnel to treat or perform operation upon patients.

24. Exposure of unethical conduct

Exposure of unethical conduct on the part of any member of the profession shall be done without fear of favour. The incompetent corrupt, dishonest or unethical conduct on the part of any member of the profession shall be discouraged at any cost.

25. Appointment of substitute

Whenever a veterinarian (hereinafter mentioned as absent veterinarian) requests another veterinarian to attend to his/her patient/ clients during his/her temporary absence from practice professional courtesy requires the acceptance of such an appointment by the latter, if consistent with his/her other duties. The veterinarian under such appointment shall give utmost consideration to the interest and reputation of the 'absent' veterinarian. He/she shall not charge either the patient or the absent veterinarian or his/her services, except in case of special arrangement between them. All such patients shall be restored to the care of the absent veterinarian upon his/her return.

26. Professional services of veterinarians to one another

1. There is no rule that a veterinarian shall not charge another veterinarian or a member of a sister profession for service rendered. But a veterinarian shall consider it a pleasure and privilege to render gratuitous service to his/her professional brethren, if they are in his/ her vicinity, or to a veterinary student.

2. When a veterinarian is called from a distance to attend to a case of a fellow veterinarian or a member of a sister profession, reimbursement shall be made for travelling and other incidental expenses.
3. A veterinarian called in any emergency to visit a patient under the care of another veterinarian, shall when the emergency is over, retire in-favour of the latter; but shall be entitled to charge the client for his/her services.
4. When a veterinarian is consulted at his/her own residence, it is not binding on him/her to inquire if the patient has been under the care of another veterinarian. But in the interests of the patient he/she shall, while ascertaining history, go through the treatment followed if any. However, it is unethical that his information be used to malign or instigate against, directly or indirectly, the veterinarian who happened to attend on the patient previously. When a veterinarian sees a patient at the request of another veterinarian, it shall be the duty of the first veterinarian to write a letter to the veterinarian making the request stating his/her opinion of the case with the modes, of treatment he/she thinks proper to be adopted.

27. (1) If a veterinarian is engaged to attend on a patient of dystocia or a similar distress he/she shall do so. Refusal to do so under excuse of another engagement is unethical except when he/ she is already engaged in similar or another serious case(s).

(2) When a veterinarian engaged to attend a serious case is absent and another veterinarian is sent for, the latter shall be entitled to legitimate fees; provided that he/she shall secure the client's consent to withdraw on arrival of the former at a mutually consented or logical phase.

28. When it becomes the duty of a veterinarian occupying an official position to see and report on an illness or injury or any other professional problems concerning a patient, he/she shall do so, but communicate to the veterinarian in attendance, so as to give him/her an option to be present. The former shall avoid remarks on the diagnosis or treatment that has been adopted. This does not prevent him/her from discussing the matter with the later in isolation.

DUTY OF PRACTITIONERS IN CONSULTATION



Veterinary consultation

29. Consultation shall be encouraged

In case of serious illness/doubtful or difficult conditions, a veterinarian shall always request consultation; he/she shall also do so in the case of major surgical interventions, outbreak of herd diseases, poisoning, endemic or undiagnosable situations.

30. Punctuality in consultations

Punctuality shall be observed by a veterinarian in attending a consultation. If a consultant veterinarian does not arrive within reasonable time, the consulting veterinarian shall be at liberty to see the patient; provided that he/she shall leave his/her conclusion in writing in a closed envelope. The same rule is applicable if the consulting veterinarian fails to turn up in time.

31. Patient referred to another veterinarian

1. When a patient is referred to another veterinarian, a statement of the history, observation, clinical and laboratory examination as well as the tentative treatments undertaken shall be given.
2. On receipt of the above statement the veterinarian receiving the referred case shall communicate his/her opinion to the attending veterinarian and either shall continue the treatment as per his/her opinion or return the case along with his/her opinion communicated.

32. Consultation for patient's benefit

In every consultation, the benefit of the patient shall be of prime importance. It should not be done with an ulterior motive of evasion of responsibilities or on monetary considerations.

33. Conduct of consultation

1. In consultation there shall be no place for insincerity, rivalry or envy. All due respect shall be shown to the veterinarian in charge of the case and no statement or remark shall be made which would impair the confidence reposed in him/her by the client. For this purpose no such discussion shall, therefore, be made before the client.
2. All statements to the client shall be made in the presence of consulting veterinarian, except as otherwise agreed. Announcement to the client also shall be made by the consulting veterinarian to the extent possible.
3. Difference of opinion shall not be divulged unless both feel that it would be in the interest of the patient or dignity of the profession.
4. It shall be open to the client to take further advice and the consulting veterinarian with the consent of the client may consult yet another veterinarian, the rules of ethics remaining the same.

34. Cessation of consultation

Attendance of consulting veterinarian shall cease when consultation is concluded; unless another appointment is arranged by the attending veterinarian.

35. Treatment after consultation

1. No decision shall restrain the attending veterinarian from making such subsequent variation in the treatment as any unexpected change or development may demand; provided that at the next consultation, reasons for variations are stated.
2. The same privilege, with its obligations, belongs to the consultant when sent for in an emergency during the absence of attending veterinarian. The attending veterinarian may prescribe at any time; but the consultant only in case of emergency or instant need. All treatments by both shall be stated to each other.

36. Consultant not to take charge of the case

When a consultant veterinarian is called upon to be consulted, none but the rarest and most exceptional circumstances shall justify the consultant taking charge of the case. He must not do so merely on solicitation of the client of his representative.

37. Bar on consulting non-registered veterinary practitioners

No veterinarian shall have consultation with a veterinary practitioner who is not registered.

DUTIES OF VETERINARIANS TO THE PUBLIC

38. Veterinarian as citizen

Veterinarians as good citizens possessed of special training, shall advise concerning the health and husbandry of the animals, in the localities wherein they dwell. They shall play their part in enforcing the laws of the community (not favouring any communal overtones or prejudices) and in substantiating the institutions that advance the interests of humanity. They shall cooperate with the authorities in the observance and enforcement of sanitary laws and the laws relating to drugs poisons and pharmacy, made for the protection of health.

39. Public health

A veterinarian engaged in public health work shall enlighten the public concerning quarantine regulations and measures for the prevention of epizootic, zoonotic and food borne diseases and intoxications and communicable diseases. At all times, the veterinarians shall notify the respective authorities of every case of communicable diseases under their care in accordance with the laws, rules and regulations of the authorities. When an epidemic prevails, the veterinarian shall continue his/her labour without regard to the risk to his/her own health. He/ She shall endeavour to ensure hygienic handling of animal products and wastes thereof and educate the public of food-borne diseases and intoxications.

40. Livestock production and technology

A veterinarian shall strive for the betterment of animal production through timely advice/propaganda on scientific management involving economically viable and hygienic housing, adoption of scientific breeding schedule, disease prevention of routines, reproductive health monitoring, hygienic and systematic care before, at and following parturition, care of new born, hygienic collection of farm products and proper disposal of animal products and wastes thereof.

He/She should strive to educate the public and para-veterinary staff personnel regarding timely insemination and aseptic handling during A.I. and discourage the unscientific unhygienic inseminations.

DISCIPLINARY ACTION

41. The Veterinary Council of India brings to the notice of the registered veterinary practitioners the following

In matters regarding offences and form of professional misconduct, which may be brought before the appropriate Veterinary Council for disciplinary action, in view of the authority conferred by section 31 of the Act, the appropriate Veterinary Councils may award such punishment's as deemed necessary or may direct the removal altogether, or for a specific period, from the register, the name of any registered veterinary practitioner, who has been convicted of any such offence. The appropriate Veterinary Council may also direct that any name so removed shall be restored.

It must be clearly understood that the instances of offences and of professional misconduct, which are given, do not constitute a complete list of the infamous acts which may be punished. Circumstances may and do arise from time to time, in relation to which may occur questions of professional misconduct, which do not come within any of these categories. Every care should be taken that the code is not violation in letter or spirit. In such instance, as in all others the Veterinary Council of India and/or State Veterinary Council(s) has/have to consider and decide upon the facts brought before the Veterinary Council of India and/or State Veterinary Council(s).

42. Professional misconduct

The following actions shall constitute professional misconduct-

1. Improper conduct with a patient or maintaining an improper association with a client.
2. Conviction by a Court of law of offences involving moral turpitude.
3. Tampering with or falsely providing professional certificates, reports and other documents. The registered veterinary practitioners are in certain cases bound by law to give or may from time to time be called upon or requested to give signed certificates, reports and other documents of kindred character by courts, administrative offices, and banks as part of veterinary service. (See section 30 of the Act).

   (*1*) Notwithstanding the existence of other similar and/or kindred documents such documents shall include:

   (*a*) A vaccination certificate for licensing of pets.

   (*b*) A vaccination certificate for transport across border from one state to another.

(*c*) A vaccination certificate for export of animals.

(*d*) A soundness certificate for a horse or health certificate for cattle for the purpose of insurance, registration, etc.

(*e*) A certificate indicating results of test (diagnostic) like tuberculin test.

(*f*) Post-mortem reports in vetro-legal cases, for purpose of insurance claims etc.

(*g*) Trauma certificate indicating the extent and nature of damage and/or deterioration, in vetero-legal cases involving accidents, cruelty or vindication.

(*h*) Birth certificates required at times for purposes of insurance, registrations, loans etc.

(*i*) A certificate indicating, reproductive defects, diseases and other conditions rendering an animal uneconomic (fit for culling).

(*j*) A certificate for euthanasia where treatment is unlikely to be rewarding and; a certificate of performance of euthanasia.

(*k*) Quarantine clearance certificate for having cleared quarantine at places of disembarkation of animals/birds/ livestock products.

(2) Any registered veterinary practitioner who shall be proved to have signed or given under his/her name and authority any such certificate, report or document of a kindred character which is untrue, misleading or improperly relating to the several matters, some of which are specified above, is liable to have his/her name erased from the Indian Veterinary Practitioners' Register.

(3) A registered veterinary practitioner shall maintain a register of Veterinary Medical Certificates giving full details of certificates issued.

(4) When issuing such a certificate the identification mark of the patient, name or number, if any, age and other details including owner's name and keep a copy of the certificate for record with him. The client's signature and/or thumb impression and a declaration that he is the genuine owner of the patient or is his authorized representative shall invariably be obtained.

4. Contravention of the provisions of law relating to drugs and regulations made thereunder.
5. Selling a drug or poison regulated b law to the public or his/ her clients, save as provided by that law.
6. Performing, or enabling an unqualified person to perform, any illegal operation for which there is no medical, surgical or psychological indication.
7. Affixing a signboard on a chemist's shop or in places where the veterinarian does not reside or work. This should not be construed to mean announcement, boards or direction indicators.
8. While displaying a board or a name plate, to write anything other than his/her name, qualifications obtained from a university or a statutory body, titles and names of

his/her specialty if any (such name being the content of his/her prescription papers), and the registration number.

9. Before euthanasia or before performing an operation not obtaining in writing the consent of the client.
10. Using touts or agents for procuring patients.

43. Disciplinary committees

There shall be a disciplinary committee charged with the duty of considering and determining-

(*a*) Any case of indiscipline referred to them by State Veterinary Council or appeal by aggrieved registered veterinary practitioners.

(*b*) Any other case of which the disciplinary committee has cognizance.

44. The State Veterinary Council shall investigate, through Committee(s)/ Sub Committee(s) (by fact-finding and receiving complaints), regarding

(*a*) Registered veterinary practitioners being convicted of any criminal offence which in the opinion of the committee renders unfit to practice veterinary profession.

(*b*) Any such veterinarian detected/judged to have been guilty of disgraceful conduct in any professional respect.

(*c*) Any person whose name is fraudulently entered in the register.

45. The State Veterinary Council(s) shall on receipt of complaints regarding any unregistered individual and individuals who while rendering minor veterinary services described under sub-section (*b*) of section 30 of the Act, undertake unsupervised treatment/veterinary service assuming himself/herself to be a veterinarian, shall make necessary investigations and advise the concerned State government to take appropriate action or shall themselves initiate action under the law.



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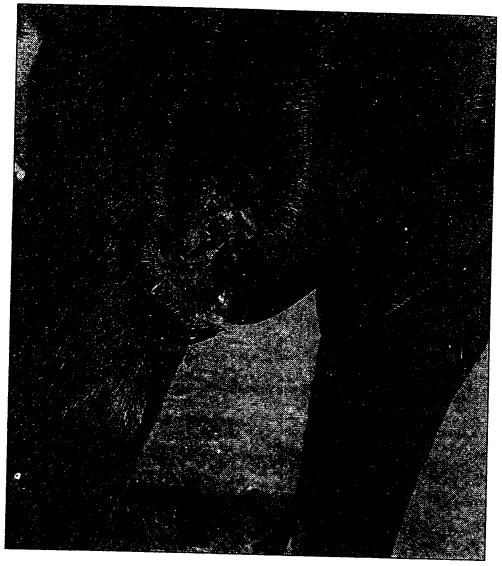
The Vetro-Legal Aspects of Wounds



CHAPTER OUTLINE

- **Wounds**
- **Classification of wounds**
- **Legal classification**
- **Classification based on type of injuries**
  - Mechanical injuries
    - Wounds caused by blunt instruments
      - Abrasions, Bruises, Contusions, Lacerations
    - Wounds caused by sharp instruments
      - Incised wounds, Stab wounds.
    - Wounds caused by firearm weapons
    - Fractures
    - Fabricated wounds
  - Burn injuries
    - Thermal Injuries, Chemical Injuries, Electrical Injuries, Radiological Injuries
- **Wound examination**
- **Cause of death due to wounds**
- **Examination of blood stains**
  - Visual examination of blood
  - Sample processing procedures
  - Lab examination
  - Confirmatory tests of blood
  - Spectroscopic examination
  - Determination the species of origin
- **Forensic photography**
- **Wound certificate**

WOUNDS



A wound may be defined as a break in any of the tissues of the body caused by injury. This includes wounds caused by stabbing, blunt trauma (punching, kicking, beating etc), strangling, biting, shooting, falling from a height, being hit by a vehicle, and blast trauma from explosives.

Wound examination is of prime importance in veterinary jurisprudence and it is desirable to establish a wound examination system in order to evaluate and record the nature of wound more accurately and objectively. A veterinarian may be asked to examine an animal that has been wounded and give a report whether wounds are serious or trivial, and whether the injured animal is alive or dead.

It is also necessary to determine whether a wound has vitality, and, if ante mortem, how long before death the wound has been sustained. In human forensic medicine modern diagnostic techniques and devices as well as advanced cell-biological methods are introduced as the means for this aim. For example, radiological, endoscopic or magnetic resonance imaging (MRI) examination have been used in addition to examination with the naked eye.

The identification and description of wounds may have serious vetero-legal implications. It is therefore essential that different types of wounds can be correctly identified and described, with a full description being made in notes taken at the time of, or shortly after the examination ('contemporaneous notes').

CLASSIFICATION OF WOUNDS

LEGAL CLASSIFICATION

Simple wound : Simple wound heals within 20 days.

Dangerous wound: Dangerous wound heals in more than 20 days (may be associated with permanent infirmity).

Fatal wound : Fatal wound leads to death.

CLASSIFICATION OF WOUNDS BASED ON TYPE OF INJURIES

MECHANICAL INJURIES (Wound caused by blunt objects)

ABRASIONS

An abrasion is a superficial injury and this type of wound damages only the epidermis and should not therefore bleed. However, abrasions do usually extend into the dermis causing slight bleeding. These wounds are seen where an object has struck the skin, or where the injured animal has fallen onto a rough surface, such as road.

Causative instruments

- Pointed instrument
- Blunt instrument with rough surface

Types of abrasions

- *Linear abrasions:* caused by linear movement of a pointed instrument on the skin. e.g. scratches.
- *Brush abrasions*: caused by tangential impact of a blunt instrument with rough surface against the skin e.g. Grazing or Sliding abrasions
- *Crush abrasions*: caused by vertical impact of a blunt instrument with rough surface to the skin (it takes the pattern of the causative instrument) e.g. bite abrasion, rope mark abrasion and impact abrasion as in collision against the front of the car that leaves abrasion taking the shape of the car radiator.
- *Finger nail abrasions*

Vetero- legal importance of abrasion

- It indicates violence.
- Its shape gives an idea about the causative instrument e.g.
  - Fingernail abrasions
  - Teeth abrasions in bites
  - Abrasions that take the shape of the radiator in car accidents
- Its site in the body may give an idea about the type of the crime e.g. Fingernail abrasions on the neck suggest throttling
- The age of the abrasion gives an idea about the time of its infliction as follows:
  - In the first 2 days, it is covered with dry serum or a soft scab
  - A dry brown scab is formed after 3 days
  - The scab falls after one week leaving a red colored area which disappears after 3 weeks

- An abrasion may rarely cause death when it is infected by tetanus or erysipelas.
- Abrasions differentiate cut wounds from contused wounds in the areas where the skin is stretched over bone (e.g. the skull).
- Abrasion differentiates hypostasis from bruises.

BRUISES OR CONTUSIONS

Extravascular collection of blood that have leaked from blood vessels damaged by mechanical impact. The amount of force used is less than the elasticity of the skin. A pure bruise lies beneath an intact epidermis but it is usually accompanied by abrasions.

Causative instrument

- Heavy blunt instrument.

Types of bruises

According to the amount of extravasated blood:

- *Haematoma:* large bruise
- *Ecchymosis:* small bruise
- *Petechial hemorrhage:* the size of a pin head bruise
- Ecchymosis and petechiae are usually caused by other than direct mechanical trauma and are often seen on serous membranes and conjunctiva as well as on skin.

Factors affecting the size of a bruise

- Severity of the blow rather than the size of the object.
- Onset of death: bruises to the precordium may lead to sudden death without any detected post mortem bruises.
- Site
  - Vascular and lax areas e.g. eye lids and labia major (minimal blow leads to severe bruises).
  - Tough areas e.g. (palm and sole) show minimal bruises
- Muscular bodies bruise less than non- muscular ones.
- A bruise usually occurs at the site of violence, but sometimes it may be shifted downwards under the effect of gravity e-g. a bruise at the forehead may sink down to eye lid giving a black eye.

Vetero- legal importance of bruises

- They indicate violence.
- They give an idea about the instrument used as they take its shape e.g. hammer, stick, whip, bite etc.
- Age of bruises can be compared to the date of its infliction from the colour changes due to cellular infiltration and the action of tissue enzymes.

- Bruises usually occur at the same site of the blow but may gravitated downwards
- Bruises differentiate cut from contused wounds in skin stretched over bone (skull)

Bruises may be dangerous if

- They occur in a trigger zone.
- They are extensive.
- They become infected.
- They hide a more serious injury e.g. rupture organ.
- Bruises must be differentiated from hypostasis.

DIFFERENCES BETWEEN HYPOSTASIS AND BRUISES

		Bruises (wound)	Hypostasis (post-mortem change)
1	Site	In any part of the body	In the dependent parts
2	Skin	Associated with abrasions	Intact
3	Edges	Have well marked edges associated with swelling	No swelling and no well marked edges
4	Colour	Colour changes may be present (signs of healing) Colour doesn't disappear by pressure	No color changes Colour disappear with applying pressure over it
5	By cutting over it	Blood is extravasular and clotted it is not washable	Blood is fluid and washable
6	Vital reaction	Cellular infiltration and color changes appear	No vital reaction

CONTUSED WOUNDS

It is a blunt injury in which the continuity of the tissues is disrupted by tearing rather than clean cutting. The force used is more than the elasticity of skin. It is usually associated with abrasions and bruises.

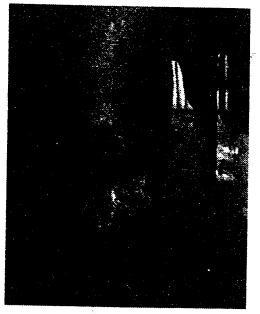
Causative instrument

- Heavy blunt instrument

Characters

- Irregular edge with no angles (except in areas where the skin is stretched over bone).
- Abrasions and contusions are usually present at the edges.
- The hairs are crushed or irregularly cut.
- The base is compressed with bridging of tissues across the edges (e.g. nerves, tendons).

- Bleeding is minimal due to crushing of the blood vessels.
- There is great liability to sepsis (due to severe tissue destruction).
- Healing is delayed with a thick scar.



Lacerated wound due to barbed wire

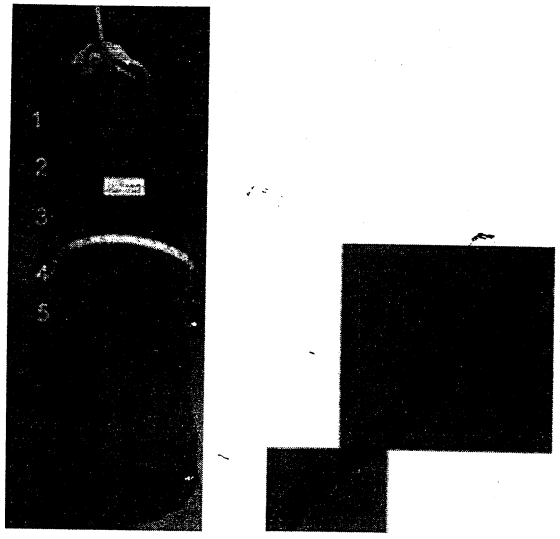
LACERATED WOUNDS

Lacerated wounds are caused by tearing of the skin and the underlying tissues. Lacerations have generally ragged wound edges, as they have been torn apart and not neatly incised as in a surgical wound. Barbed wires, claws, teeth or horns of animals generally cause these wounds. These wounds are common in vehicle accidents, from either impact or fall.

MECHANICAL INJURIES (Wound Caused by Sharp Instruments)

INCISED WOUND

An incised wound is produced by sharp cutting weapons, such as razors, knives, swords, axes etc.



Incised Wounds Dimensions of incisional skin wounds: (2.54 cm = 1 inch)

Wound 1: Length: 12.7 cm	Depth: 1.5 cm		
Wound 2: (most severe wound)	Length:25.4 cm	Width: 5.08 cm	Depth:3 cm
Wound 3: Length: 22.86 cm	Width:1.27 cm	Depth: 2cm	
Wound 4: Length: 22.86 cm	Width: 5.08 cm	Depth:1cm	
Wound 5: Length: 22.86 cm	Depth: 2cm		

Causative instrument

- Sharp edged instrument e.g. knife, razor, piece of glass, sharp axe etc.

Characters

- The edges are sharp and cleanly cut with acute angles
- Irregular edges may be present if:
  - The cut occurs in areas with redundant skin (axilla, scrotum, abdomen in obese persons). So that it simulates contused wound.
- The wound is caused by moderately sharp instrument (e.g. the edge of a broken glass)
- The length of the wound is usually longer than the depth.
- Gaping of the edges-Incised wounds tend to gape depending upon the tension in the surrounding tissue. The amount of gaping depends on the direction of muscle fibers (if the cut is across the direction of the fibers, gaping will be great).
- The base is sharp and cleanly cut.
- Bleeding is profuse (cut vessels)
- Liability to sepsis is minimal (any contamination will be washed by the profuse bleeding).
- Healing is rapid with thin scar (1^{st} intention).

Vetro-legal importance

- It indicates violence (except in surgical wounds).
- Gives an idea about the causative instruments.

STAB WOUNDS

Stab wounds are caused by sharp penetrating objects like nails, knives. The wound is deeper than wide caused by forcing a pointed sharp edged instrument inside the body by thrust.

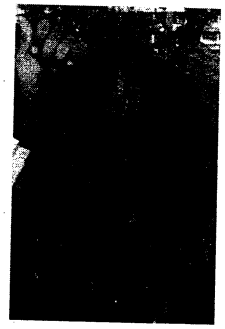
Causative instrument

- Knife
  - Uni-bladed knife leaving a wound with an acute angle
  - Bi-bladed knife leaving a wound with 2 acute angles (elliptical)
- Other knife –like weapons.
  - Scissors, open razors and sharp tools of many kinds like sharpened- screw drivers

Characters

- The wound is more deep than long. The depth of the stab wound is an important point to note, as it will give a clue to the length of the weapon used.
- The edges are sharply cut.

- Abrasions and contusions may be present on the edges of the punctured wounds.
- The shape of the wound usually take the shape of the causative instrument:
  - A bi-bladed weapon produces a wound with 2 acute angles
  - A uni-bladed weapon produces a wound with one acute angle while the other angle is rounded
  - A closed scissor will produce a rhomboid wound
  - A nail will produce a circular wound
- In stab wounds muscle and skin contracture around the wound often obscures the size of the knife blade.
- When the weapon passes through solid structure e.g. bone or cartilage, the wound produced will have the same size and shape of the cross section of the weapon.
- The shape of the wound may be changed if :
  - The victim moves during the act of stabbing
  - The assailant moves the weapon while he is dragging it out of the body of the victim
- The length of the wound equals the breadth of the weapon and a little smaller due to retraction of the tissues unless the wound is enlarged during withdrawal of the object.
- These types of wounds are dangerous as the external opening is small but the object may penetrate deep into the tissue, which may injure the vital organs resulting in profuse internal hemorrhage, sepsis and death of the animal
- A broken tip of the weapon may be found in the wound helping in the identification of the weapon and the assailant.



Stab wound on the forehead of the horse due to iron rod

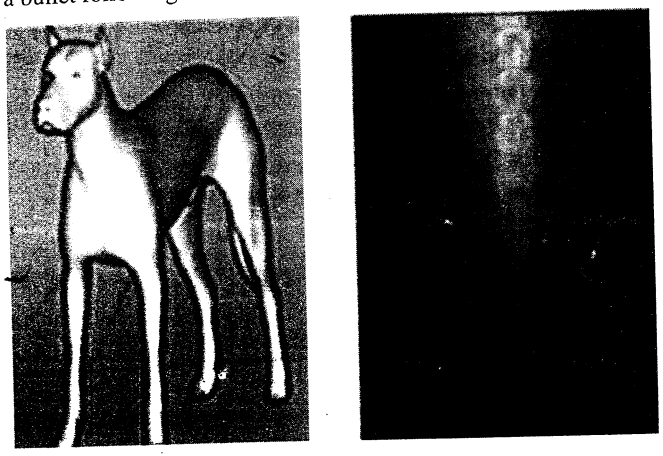
Types of stab wounds

- *Ordinary stab wounds* are produced by pointed sharp edged instrument e.g. knife or sword.
- *Punctured wounds* are produced by pointed end instrument, nail or poker.
- *Penetrating wounds* are stab or punctured wounds which reach a body cavity as pleural, peritoneal, dural or synovial cavities.
- *Transfixing wounds* are stab or punctured wounds which pass from one side of a limb to the other side.

GUNSHOT WOUNDS (FIREARM WOUNDS)

The gunshot wound is produced by various kinds of firearms. The appearance of these wounds depends upon the conditions of the individual case under examination.

For better understanding of bullet wound basics given below is the diagram that depicts the effects of a bullet following collision with a body of a bullet wound.



Gunshot wound : (i) External (ii) X-ray exam

When a weapon is fired, the bullet, hot gases from exploding gun powder and meta fragments from the bullet and the gun barrel are propelled out of the muzzle at the same time Gunshot wounds depend upon bullet size, velocity, shape, spin, distance from muzzle t target, and nature of tissue etc. Thus bullets produce tissue damage in three ways:

1. Laceration and crushing
2. Cavitation
3. Shock waves

Gunshot wounds are typically classified as:

1. Contact
2. Intermediate range
3. Distant range

In contact range wounds, the hot gases and particulate matter are blasted into the body a the same time as the bullet. The hot gases char the tissues, and the gun powder and meta fragments are deposited along the wound track or on the skin surface.

In the gunshot wounds the entrance wounds are differentiated from the exit wounds wit keeping in view the following points.

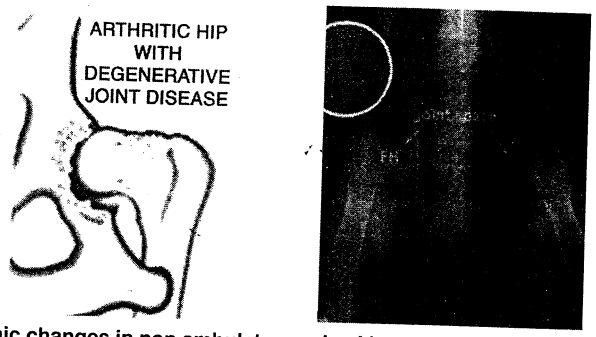
Entrance wounds

- Inverted and abraded margins

- A dirt ring around the wound
- A smaller defect than the diameter of the bullet due to elastic recoil of the skin
- Contact wounds characteristically have soot on the outside of the skin, and muzzle imprint, or laceration of the skin from effects of gases.
- Contact wounds of air guns usually lack these features.
- The area of powder stippling will depend upon the distance from the muzzle.
- Charring of the skin
- Distance entrance wounds are not charred, and there is no powder deposition or stippling. There is, however, a round entrance defect and an abrasion collar.
- Examination for gunshot residue (GSR) may aid in distinguishing entrance from exit wounds, for the entrance wound will have more than the exit, or the exit will have none.

Exit wounds

- Sometimes a bullets hit the target without exiting and imparts all the bullet's kinetic energy to the target and does the most damage. However, in many situations an exit wound will be present.
- Exit wounds are usually everted, without abrasion collars and larger than entrance wounds, due to the fact that the bullet has expanded or tumbled on its axis.



Chronic changes in non ambulatory animal leads to Soft tissue changes

- Exit wounds either do not exhibit gunshot residues or far less residues than associated entrance wounds.
- In bone, typical "beveling" may be present that is oriented away from the entrance wound.
- Fragmentation of the bullet may produce secondary missiles, one or more of which may have exit wounds.
- The bullet path may be altered by striking bone or other firm tissues, such that the bullet track may not be linear, and exit wounds may not appear directly opposite entrance wounds.

GENERAL INTRODUCTION OF TYPES OF FIREARMS, GUN COMPONENT AND AMMUNITION COMPONENT

Gunshot wounding is necessary for accurate evaluation and description of lesions. In order to properly assess gunshot wounds, it is necessary to have an understanding of the weapons and ammunition that commonly are used.

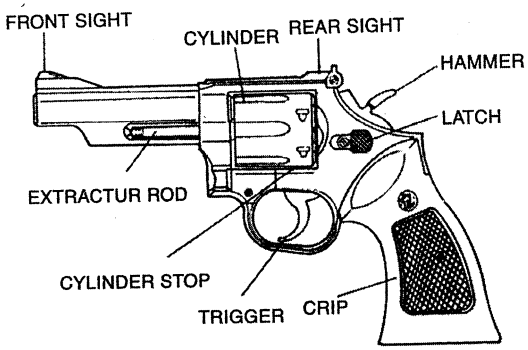
Guns can be divided into those that are fired hand-held and those that are braced against the shoulder for firing.

Handgun

A weapon designed to fire a small projectile from one or more barrels when held in one hand with a short stock designed to be gripped by one hand.

Revolver

A handgun that contains its ammunition in a revolving cylinder that typically holds five to nine cartridges, each within a separate chamber. Before a revolver fires, the cylinder rotates, and the next chamber is aligned with the barrel.



Pistol

Any handgun that does not contain its ammunition in a revolving cylinder. Pistols can be manually operated or semiautomatic. A semiautomatic pistol generally contains cartridges in a magazine located in the grip of the gun. When the semiautomatic pistol is fired, the spent cartridge that contained the bullet and propellant is ejected, the firing mechanism is cocked, and a new cartridge is chambered.

Derringer

A small single- or multiple-shot handgun other than a revolver or semiautomatic pistol.

Rifle

A rifle is a gun that is designed to be held in two hands and usually has a barrel over 18 inches long and a "stock" that rests up against the shooter's shoulder when the gun is fired. It is uses the energy of the explosive in a fixed metallic cartridge to fire only a single projectile through a rifled bore for each single pull of the trigger.

Shotgun

A shotgun is a long gun that looks somewhat like a traditional rifle on the outside. A weapon intended to be fired from the shoulder that uses the energy of the explosive in a fixed shotgun shell to fire through a smooth bore smoothbore that shoots cartridges that contain

"shot" or small metal pellets (of lead or steel) as the projectiles. Shotguns are found in hunting, target shooting, military, police, and self-defense applications.

Carbine

A carbine is usually a shorter, lighter rifle. It can also refer to pistol-caliber, shoulder-fired light arms.

Machine gun

A machine gun is usually a rifle-caliber or larger, crew-served, belt-fed automatic firearm.

Assault rifle

A true assault rifle is a small, rifle-sized, fully-automatic arm chambered for an intermediate-power rifle round such as 7.62 x 39mm (Soviet) or 5.56 x 45mm (NATO). Current examples include the AK-47, AK-74, M16, and Steyr AUG.

Cannon

Cannon: are automatic guns of calibers 20mm to about 40mm, mounted on vehicles such as aircraft and armored vehicles.

GUN COMPONENTS

Barrel

It is a tube through which the bullet is projected.

Double barrel

Two barrels side by side or one on top of the other, usually on a shotgun.

Bore

The inside of the barrel.

Chamber

It is the portion of the barrel or barrel extension which supports the cartridge case while it is in firing position.

Trigger

It is the user interface to the firing assembly which can be activated by finger pressure, or it can be an electro-mechanical device.

Sear

It is the portion of the trigger mechanism which directly holds and releases the bolt or striker. It interfaces directly or indirectly with the trigger.

Striker (Firing Pin)

The striker is usually a small rod or hammer which impacts the primer of the cartridge, setting off its percussion-sensitive charge and beginning the propellant ignition chain.

Butt or butt stock

The portion of the gun which is held or shouldered.

Hammer

A metal rod or plate that strikes the cartridge primer to detonate the powder.

Magazine

This is a device for storing cartridges in a repeating firearm for loading into the chamber. Also referred to as a "clip".

Sights

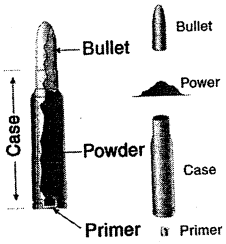
The device(s) on top of a barrel that allow the gun to be aimed.

Silencer

A device that fits over the muzzle of the barrel to muffle the sound of a gunshot. Most work by baffling the escape of gases.

Stock

A wood, metal, or plastic frame that holds the barrel and action and allows the gun to be held firmly.



Ammunition components

Cartridge

Cartridges have a case which holds bullet, propellant and primer in a single self-contained system. This complete unit and the bullet fired from it are also referred to as *a* round *or* shell.

Bullet

The bullet is the projectile driven down the barrel by the pressure of hot, burning propellant gases. They are shaped or composed differently for a variety of purposes.

Case

The case is the carrier which holds the propellant, primer and bullet securely. Cartridge cases are usually made of brass or steel, though some shotgun cases are made mostly or entirely of plastic.

Primer

The primer is cup-shaped and contains percussion (impact or pressure) sensitive explosive compounds. When struck, the primer expels hot burning particles onto the propellant (powder) contained in the cartridge.

Propellant (Powder)

Primer is the first part of the ignition chain. When struck, the primer detonates and begins to ignite the propellant (powder) which then burns at a controlled rate appropriate to the particular bore diameter, projectile mass, barrel length, etc. The burning propellant generates high pressure gases which accelerate the projectile down the barrel.

Black powder

The old form of gunpowder invented over a thousand years ago and consisting of nitrate, charcoal, and sulfur.

Smokeless powder

Refers to modern gunpowder, which is really not "powder" but flakes of nitrocellulose and other substances. Not really "smokeless" but much less so than black powder.

Rim fire

The cartridge has the primer distributed around the periphery of the base.



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- http://www.google.co.in

FRACTURES

Fracture is a breach in the continuity of a bone and are caused by any trauma due to:

- Accidents
- Fall from heights
- Jumping over walls
- Blows from sticks

It is of following types:

Open bone fracture

This type of fracture classified as when a broken bone protrudes to the exterior of the body giving rise to soft tissue injuries of the muscles, tendons and ligaments. There is a high risk of injection to the internal tissues.

Closed fracture

When there is a closed fracture there is no broken skin. The bones which broke do not penetrate the skin (but may be seen under the skin) and there is no contusion from external trauma.

Simple fracture

In this type there is only bone damage with little or no soft tissue damage and the broken bone ends do not penetrate the skin.

Multiple fractures

In this type of fractured bone there are several fracture lines on one bone.

Compound bone fracture

When this occurs, the bone breaks and fragments of the bone will penetrate through the internal soft tissue of the body and break through the skin from the inside. There is a high rise of infection if external pathogenic factors enter into the interior of the body.

Complex fracture

This type of fractured bone severely damages the soft tissue which surrounds the bone.

Fragmented fracture

During this fracture the trauma will result in many broken bones leaving many pieces of bone within the patient.

Comminuted bone fracture

A comminuted fracture has more than two fragments of bone which have broken off. It is a highly unstable type of bone fracture with many bone fragments.

Complete bone fracture

This is where the bone has been completely fractured through it's own width. This is opposite from a hairline fracture or incomplete bone fracture where there is only a "crack" and not a complete break.

Incomplete fracture

This occurs when the bone breaks but the ends do not completely separate leaving the bone with a "crack" which does not extend the complete width of the bone. This is opposite from a complete bone fracture where the broken bone ends are completely severed from each other.

Greenstick fracture

This is a incomplete fracture in which only one side of the bone has been broken. The bone usually is "bent" and only broken of the outside of the bend.

Hairline fracture or Fissure fracture

This bone fracture has minimal trauma to the bone and surrounding soft tissues. It is a incomplete fracture with no significant bone displacement and is considered a stable fracture. In this type the fracture the crack only extends into the outer layer of the bone but not completely through the entire bone.

Spiral fractures

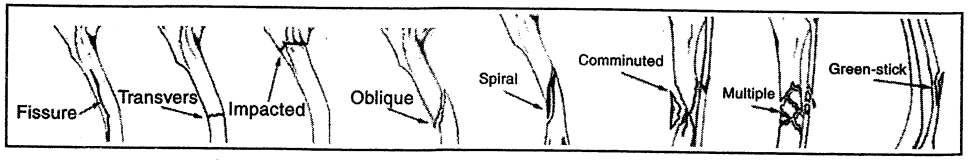
In this pattern a bone has been broken due to a twisting type motion. It is highly unstable and may be diagnosed as a oblique fracture unless a proper x-ray has been taken. The spiral fracture will look like a corkscrew type which runs parallel with the axis of the broken bone

Compression fracture or Impact fracture

This type of bone fracture generally occurs after a fall where the vertebral column is compressed and then under the extreme pressure cracks or breaks. This type of bone fracture may also be referred to as a Impact Fracture.

Fracture-dislocation

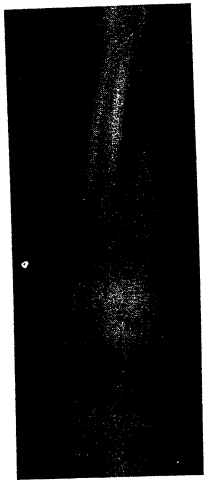
This type of fracture is complicated with a dislocation of the joint proximal to the fracture site.



SYMPTOMS OF FRACTURES

- There is generally local bruising and tenderness in the effected area as well as possible skin stretch marks, band marks, localized swelling and forming hematomas.
- Fractured limb can move in all directions.
- There may be crepitation caused by friction between the broken ends of the bone.
- An X-ray is the best diagnostic method available to confirm a broken or fractured bone.

Bone fracture



Healing of bone fractures

- *Ist stage:* Formation of cellular tissues between the fractured end of bone.
- *IInd stage:* Callus formation.

FABRICATED WOUND

These are self inflicted wounds to support a false charge or to afford suspicion from oneself.

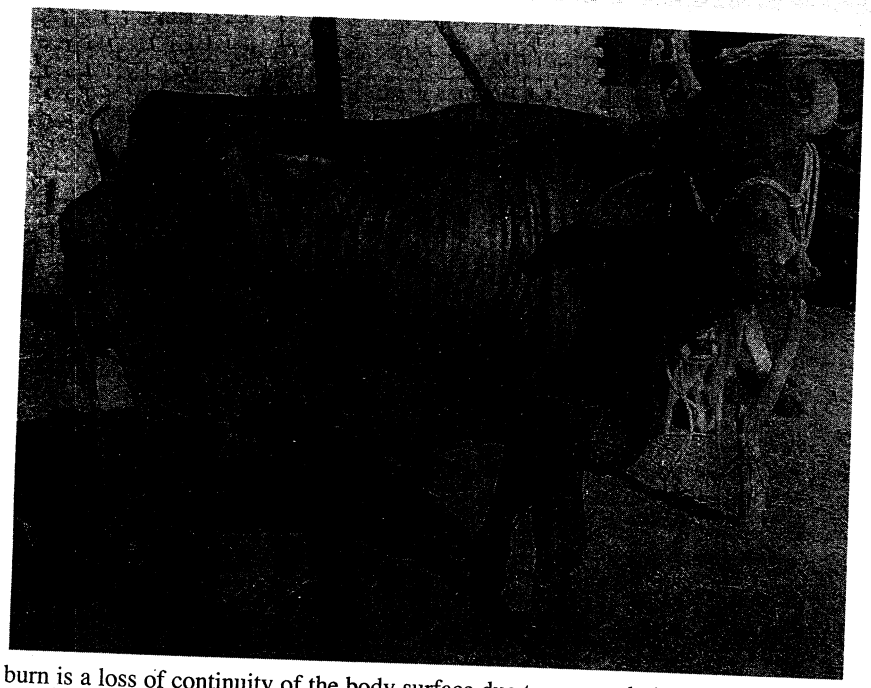
Causative instrument

- Usually sharp

Characters

- They are parallel lines or incisions
- The wound is usually superficial
- Age of wound generally doesn't coincide with the history given by the person

BURNS



A burn is a loss of continuity of the body surface due to a coagulation and destruction of skin and subcutaneous tissues by thermal changes, including both heat and cold, by chemicals, by electricity, and by radiation.

Pathogenesis of burns

- Excess heat causes rapid protein denaturation and cell damage,
- The depth of heat injury is dependent on the depth of heat penetration.
- Wet heat (scald) travels more rapidly into tissue than dry heat (flame).
- A surface temperature of over 60°C produces immediate cell death as well as vessel thrombosis.
- The dead skin tissue on the surface is known as eschar. The depth of burn is dependent on the temperature of the heat insult, the contact time and the medium (air-water).
- In addition, the depth of the skin layer is critical as the thinner the skin, the deeper the burn.

Metabolic response to burns

- As with any other major injury there is increased secretions of catecholamine, cortisone, ADH, aldosterone and glucagon.

- Burns will cause rapid loss of intravascular fluid and protein and the volume loss is greatest in first 6-8 hours
- There will be profound hyper metabolic state that requires excess nutrients and oxygen.
- There will be excess evaporative water and heat loss from burn wounds

Burns may be classified as:

THERMAL BURNS

Most common type of burn injury e.g. fires, hot liquids, and explosions

Scalds (Moist heat)

Two degrees of severity are usually recognized.

- The first degree with reddening (hyperemia).
- Second degree with blistering (vesiculation). Formation of vesicles and blisters are more common in human beings than in animals.

Scalding may be more severe than burns as hot liquids can penetrate deeper tissues.

Burns (Dry heat)

The burn injuries of the dry heat can be differentiated from the moist heat can be differentiated on the basis of

- Reddening
- Blistering
- Involvement of subcutaneous tissues
- Charring



In severe cases instead of producing blisters, it may result in firm drying of the skin with discolouration.

CHEMICAL BURNS

Thousands of chemicals can cause burn injury e.g. strong acids or alkalis. All will require some form of decontamination to stop the burning process. Only one chemical, requires a antidote. They usually don't cause blistering.

ELECTRICAL BURNS

Injuries may occur with either alternate current (AC) or direct current (DC).

- Current will follow the path of least resistance and cause injury in areas remote from the from the entry site

- External injury will not always indicate the degree of injury

They are of three types—

Contact burn

It is due to close contact with electrically live object and the degree varies from small and superficial to charring if contact is maintained.

Spark burn

It is due to pricked appearance with a central white zone.

Flash burn

Due to high voltage flash some kind of patterns will be observed.

RADIOLOGICAL BURNS

- Radiological burns can be caused by Alpha, Beta, and Gamma waves.
- The severity of the radiological burns depends upon the time of exposure to radiation, distance from the source, and extent of shielding
- It may require decontamination to stop the burning process.

In all burns the surface area involved is the most important and the degree of burns can be classified as:

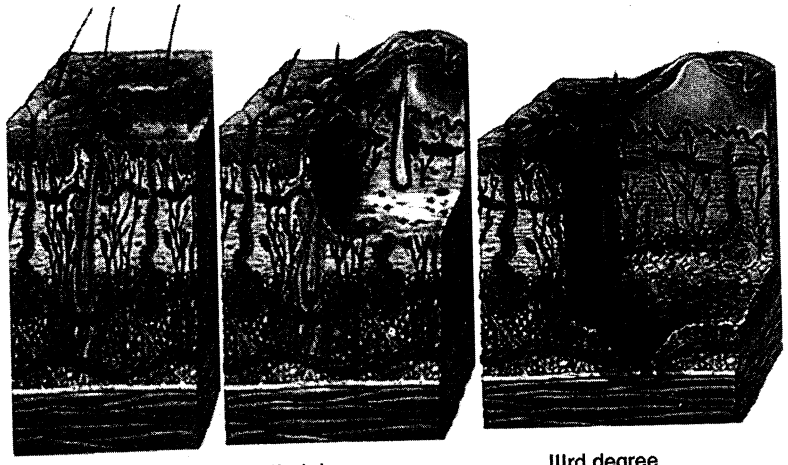
Assessment of the severity of burns

Assessing the severity of a burn is an important part of determining how to treat the burn,

- Look at the burn site: If the skin is red and painful but there are no blisters, chances are it's a superficial burn.
- Look for blistering and wetness and ask about degree of pain. If blistering is present and pain is severe, the burn is probably partial-thickness.
- Consider a full-thickness burn if the injured person reports no pain, or just a dull pain, in the center of the burned area. The skin may also look charred and grayish in color.
- Look at the injured person's palm: The surface area of the palm represents approximately 1 percent of the person's TBSA (total body surface area).
- Compare this area to the extent of the burn to arrive at a TBSA figure. Burns covering more than 15 percent TBSA are life-threatening, especially partial- and full-thickness burns.
  - The terminology of burn depth has changed: Superficial, partial-thickness and full-thickness used to be known as first-, second- and third-degree.
  - Blisters may take up to 24 hours to develop in partial-thickness burns, so lack of blisters doesn't necessarily mean the burn is only superficial. Degree of pain may be a more reliable immediate measure.

- Burns in certain areas are more dangerous than others: the face, neck, genitals and buttocks.

▫ First degree	In it, only epidermis is affected.
▫ Second degree	The whole skin thickness is involved.
▫ Third degree	In it, there is involvement of deeper tissue.



Ist degree **IInd degree** **IIIrd degree**

(www.burn-recovery.org)

A DESCRIPTION OF THE TRADITIONAL AND CURRENT CLASSIFICATIONS OF BURNS

	Nomenclature	Traditional nomenclature	Depth	Clinical findings
1	Superficial thickness	First-degree	Epidermis involvement	Erythema, minor pain, lack of blisters
2	Partial thickness — superficial	Second-degree	Superficial (papillary) dermis	Blisters, clear fluid, and pain
3	Partial thickness — deep	Second-degree	Deep (reticular) dermis	Whiter appearance, with decreased pain. Difficult to distinguish from full thickness
4	Full thickness	Third- or fourth-degree	Dermis and underlying tissue and possibly fascia, bone, or muscle	Hard, leather-like eschar, purple fluid, no sensation (insensate)

The percentage of burned body surface is determined by adapting a method used in human bodies (Person *et al* 1969).

Body part	Percent
Head	7
Back	7
Right side	24
Left side	24
Foreleg	4
Foreleg	4
Hind leg	6
Hind leg	6
Belly	7
Udder	4
Perineal area	6
Tail	1
Total	100

SCAR

Healing process of a wound results in scar formation.

- Scar tissue is usually devoid of hair and sweat glands.
- Presence or absence of a known scar from injury or operation is of importance in the identification of the living and dead animals.
- Shape of the scar differs with the type of wound.
- It is difficult to assess the age of the scar.

WOUND EXAMINATION

AGE OF INJURIES

Colour of the ecchymosis help in determining the age of the contused wound. The colour changes are due to extravasation of blood in tissues.

Age of bruises can be compared to the date of its infliction from the colour changes due to cellular infiltration and the action of tissue enzymes:

- 1st day — red in color (oxy Hb)
- After 1-3 days — blue (reduced Hb).
- After 2-5 days — green (biliverdin)
- After 5-8 days — yellow (bilirubin)
- Bruises fade away (heal) in 2-3 weeks

- Normally the change in colour of the blow commences from the periphery towards the centre.
- Generally the age of the injuries is decided on the basis of following points;

Haemorrhage

- Extensive hemorrhages or the marks of arterial spouting indicate whether the injury is during life or not more than three hours after death.
- The presence of coagulation at the injury site is suggestive that injury is during life or within ten minutes after death.

Inflammation

- Inflammatory swelling may appear within 36 hrs.
- Superficial cut may scale in 10 to 24 hours.
- The signs of inflammation around the injury and changes in colour suggest that injury is certainly before and probably 24 hours before death.

Wound healing

- Union of the edges of clean incised wounds may take place in 48 hours.
- Complete healing occurs in 4 to 7 days leaving a tender scar.
- Granulation tissue fills the gap in about five days.
- Retraction and eversion of the edges of the wound suggest that injury is during life or not more than three hours after death.
- To decide whether an injury took place just before, at the time of or just after death may be very difficult.



Wound healing after 24 hrs in horse (Union of edges of wound is taking place

Its age can be determined to know the time of its infliction by histologic examination of the wound as follows:

AGE OF INJURIES

Injury time	Changes in the tissue
30 minutes – 4 hours	Margination of polymorphnuclear leucocytes in dilated small vessels.
4 hours – 12 hours	Leukocyte infiltration Tissue edema and swelling of vascular endothelium occurs.
12-24 hours	Leucocytes tend to demarcate the area of the wound by forming a marginal palisade (mostly macrophage and mononuclear cells) Mitosis in fibroblast. Epidermis begins to spread across the surface of the scab and down the sides of a cut into the wound. Budding of capillary loops.
36 hours	complete capillary network
48 hours	New vessels grow from the deeper layers towards the surface. Pus may be present if sepsis occurs.
5 days 10-15 days	Obliteration of vessels occurs. Complete healing by primary intention if sepsis didn't occur
3 weeks	Red scar
3 months	Scar becomes coppery
6 months	Scar is thin and pale, sometimes it is even not detected.

In human forensic medicine for the determination of wound age including vitality, various biological factors such as cytokines and extracellular matrix components involved in wound healing are examined by histo-pathological methods. Interleukin (IL)-1_, IL-I b, IL-6, IL-10 and tumor necrosis factor-_ are possibly useful markers for wound age determination as well as cell-biological indicators of vitality. The mRNA of cytokines mentioned above can be histologically detected by reverse transcriptase-polymerase chain reaction or in situ hybridization.

ANTEMORTEM AND POSTMORTEUM INJURIES

- Antemortem injuries are those injuries a body has received before death. They may be a contributing factor in the death or even its cause.
- During anpostmorteum, the pathologist assesses the age of antemortem injuries, as well as distinguishing them from postmortem injuries—that is, injuries occurring after death.
- Postmortem injury can come from various sources such as deliberate mutilation of a body, predation by wild animals, or careless handling of the body.
- Postmortem injuries can cause confusion over the manner and cause of death.

- One major difference between an antemortem and a postmortem injury is the presence of signs of bleeding. While the animal is still alive, the blood is circulating and any injuries such as cuts or stabs will bleed. After death, the body usually does not bleed.
- It can be especially difficult to distinguish between injuries inflicted in the very last few minutes of life and those caused postmortem.
- After death, the blood stays liquid in the vessels and no longer clots. Careless handling of a cadaver may produce some post-mortem bruising which may need to be distinguished from antemortem bruising.
- Blood also tends to pool under gravity after death, causing a bruised appearance in the dependent parts.
- Some of the smaller vessels may even hemorrhage under the pressure of this pooled blood. These bruises could be confused with ante-mortem bruising.
- Antemortem injuries show signs of inflammation, while postmortem injuries do not.

DIFFERENCES BETWEEN ANTE-MORTEM AND POST-MORTEM WOUNDS

Signs	Ante-mortem	Post-mortem
Hemorrhage • Arterial hemorrhage in wounds • Clotting of blood • Spouting of blood from arteries	Copious	No hemorrhage, may be slight venous bleeding
	Clotted	Not clotted
	Yes	No
Inflammation • Signs of inflammation and reparative processes	Present	Absent
Wound healing • Retraction of edges of wound	Gaping of the edges	No gaping of the edges

- In human beings it has been reported that tissue from antemortem injuries contains a chemical involved in inflammation leukotriene B4 (LTB4). Postmortem injuries were found to have no LTB4. This could help the pathologist classify injuries more accurately.

ASSESSING THE SEVERITY OF INJURY WITH CODES

Code	Severity of injury	Description of injury
0	No definable injury	▪ There is no definable injury that can be detected by physical examination and with radiograph
1	Minor	▪ It includes small lacerations or abrasions. ▪ Simple metacarpal or metatarsal fractures ▪ Undisplaced pelvic fractures but animal could walk.

2	Moderate	▪ Extensive lacerations ▪ Skull or spinal fractures with neurological signs ▪ Rupture of ligaments ▪ Simple fracture of various bones like long bones, ribs, pelvis etc.
3.	Severe (Not life threatening)	▪ Multiple deep lacerations ▪ Multiple skull or spinal fractures with minimal neurological deficit ▪ Pnemothroax/ heamothorax/ lung contusions without respiratory embarrassment ▪ Multiple long bone fractures
4	Severe (life threatening)	▪ There is extensive and multiple lacerations with signs of hypovolemia. ▪ Thoracic injury with respiratory embarrassment. ▪ Abdominal trauma with signs of hypovolemia ▪ Rupture of urinary bladder or haemoperitonium ▪ Fracture of skull with loss of consciousness ▪ Fracture of spinal cord with cord severance ▪ Extensive soft tissue injury with pelvis disruption and signs of hypovolemia. ▪ Multiple and open long bone fractures
5	Fatal after 24 hrs	
6	Fatal within 24 hrs	

(From Kolata *et al.*, 1974)

When the severity of an injury is evaluated, always go for the adverse effects on the utility of the animal. It should be determined whether the said injury has diminished the usefulness of the animal or not.

CAUSES OF DEATH DUE TO WOUNDS



NEUROGENIC OR PRIMARY SHOCK

It is a reflex neurovascular disturbance which follows immediately after an injury. It results from parasympathetic inhibition of the circulation (vagal inhibition) or sympathoadrenal stimulation of the circulation. The clinical manifestation in the parasympathetic inhibition is bradycardia and sudden hypotension. The sympathoadrenal stimulation that generally results from severe pain or fright results in hypertension and dilation in pupil.

TRAUMATIC SHOCK (SECONDARY SHOCK)

It develops gradually after injury due to reduction of total circulating blood volume, with a secondary decline in venous return, cardiac output and blood pressure.

It occurs due to release of histamine like substance from the severely lacerated tissues that causes increase in the capillary permeability and loss of capillary tone, therefore a large number of capillaries are opened and dilated to accommodate most of the blood. The clinical manifestation are progressive prostration and weakness with apathy and progressive depression. Pupils are dilated.

HEMORRHAGE: (OLIGAEMIC SHOCK)

- It is the most common cause of death in wounds.
- Primary hemorrhage is directly due to the wound, it is either internal or external.
- Secondary hemorrhage is due to sepsis of the wound-dissolve the blood clot by the lytic enzymes of the organisms-patent blood vessels-bleeding.
- It occurs after a time of wound infliction (days, weeks or months).
- The loss of one third of the total blood volume is dangerous to life.
- Rapid loss of blood is more serious (sudden quick hemorrhage doesn't allow for compensation leading to shock).
- Internal hemorrhage is more serious than external as it carries the risk of inducing pressure over the organs e.g. blood in the pleural or peritoneal cavities and pericardial sac is fatal.
- Small intracranial hemorrhage is fatal (few cc of blood in the brain substance is fatal).
- Healthy adults can tolerate hemorrhage more than young ones.
- The clinical manifestations are
  - Rapid weak pulse
  - Low blood pressure
  - Subnormal temperature
  - Shallow rapid respiration
  - Cold clammy skin

THROMBOEMBOLISM

It is caused by prolonged recumbence in bed that results in deep vein thrombosis. The thrombus may be detached and may cause pulmonary embolism after about 10 days of the injury or may be earlier (2-3 days).

INFECTION

Contused and lacerated wounds are the most liable to severe infection particularly, tetanus and gangrene due to devitalized tissue of the wounds.

CRUSH SYNDROME

Severe crushing of muscles during injury is responsible for liberation of myoglobin. It may lead to blocking of renal tubules resulting in acute renal failure.



TYPES OF INJURIES AND ITS COMPLICATIONS

Type	Etiology	Example
Direct	Hemorrhage	Internal or external
	Injury to vital organ	Injury to lung or heart
	Shock	Severe blow on head or heart
Indirect	Inflammation, Septicemia	Tetanus infection gaining entry through wound

EXAMINATION OF BLOOD STAINS

Investigators often find blood stains during their examination of a crime scene. More often, it is in the form of fresh or dried bloodstains. They also find stains that could be either blood or some other similar substance, like reddish-brown paint So blood clots and bloodstains require careful examination.

Blood contains three components suspended within plasma which are erythrocytes, leukocytes, and platelets. Plasma is composed of water (92%), proteins (7%), and other materials such as salts, waste, and hormones, among others and makes up about 55% of blood. The remaining 45% is blood cells and platelets. On average, blood accounts for 7-8 % of total body weight in animals. A 40 percent blood volume loss, internally or/and externally, is required to produce irreversible shock (death).

VISUAL EXAMINATION OF BLOOD

It is the examination of the shapes, locations, and distribution patterns of bloodstains, in order to provide an interpretation of the physical events which gave rise to their origin. The determinations made from bloodstain patterns at the scene.

The body has a defense mechanism against excessive bleeding. As soon as bleeding starts in any great quantity, the blood pressure automatically drops. Consequently, the rate of bleeding slows. Upon death, blood pressure falls to zero and bleeding ceases.

- Was the bleeding animal standing still or walking?
- What distance did the blood drop fall?
- Did the blood spatter in all directions?

Colour of blood stains

- Blood, as it dries, darkens in color until, when completely dried, it turns reddish-brown or dark brown. An old, dried blood clot may become so dark that it is almost black.
- Blood may fall on porous material, like cotton, wool, blotting paper, porous brick, or soft wood. Should this happen, the original color may be changed by its being absorbed into the porous material.
- And mold, putrefaction, or chemical changes may cause bloodstains to appear to be black, green, or blue to grayish-white instead of the usual reddish-brown.
- A bloodstain on a dark background may be hard to see.

Pattern and shape of blood stains

The shape and pattern of blood drops can reveal important information about the nature of the wound from which the blood came.

- In many cases the height from which a drop of blood fell may be told by the appearance of the bloodstain.
- The surface on which blood falls influences its shape, as does the height from which it drops.
- On a smooth surface, if the height of the fall is short (6 to 12 inches), the bloodstains may appear as circular disks.
- If the height is from 12 to 60 inches, the edges of the bloodstain may be jagged. This jaggedness increases as the height increases. The greater the height, the more jagged the edges.
- If a drop falls from an even greater height (2 or 3 yards), it may splash on impact and form many small bloodstains. These are often concentrated around a large central bloodstain, giving a sunburst appearance.
- Drops of blood which strike a surface at an angle may bounce or splash. This leaves a large, main, teardrop-shaped blot with a series of smaller blots trailing off in the direction of fall. The pattern is similar in appearance to an exclamation point. Often the larger splash is made first and the smaller ones afterwards.
- The material on which blood falls may change the original shape of a drop as it strikes.
- Sometimes, blood may be identified on skin or a garment that has been washed, if the washing is not thorough.

Age of blood stains

- There is no way to judge the age of a bloodstain with any degree of certainty.
- Clotting time can be altered by many factors. Blood usually clots in 10 to 20 minutes. Examination of the clot may help in determining how much time has elapsed since the stain was made.
- Clotting is more rapid on a rough surface than on a smooth one. Oily substances may increase the clotting time. They can also alter the appearance of the blood.
- A single drop of blood that falls on a dry surface often dries in about an hour at room temperature. Blood that has collected in a pool dries slowly. The drying time depends on the size and depth of the pool. Temperature and humidity also affect the drying time.

SAMPLE PROCESSING PROCEDURES

The value of the information gained through the examination of bloodstain evidence depends mainly on use of proper methods in collecting, identifying, preserving, and shipping the evidence to the crime lab.

- Damp articles to be checked for trace evidence should not be packed or sent to the crime lab until they have thoroughly dried.
- A covering for the garments can be used to reduce any disturbance. Bloodstains must be allowed to dry naturally.
- Heat or fans should not be used. If heat is applied to a bloodstain, physical changes take place within the bloodstain. A fan may blow foreign material onto the bloodstain. And the airstream from a fan may remove hairs, fibers, or other microscopic particles that may have a bearing on the case.
- Use clean wrapping paper to pack bloodstained articles.
- Wrap each bloodstained article separately before it is boxed for shipment to the lab.
- Wrapping prevents stains or other microscopic evidence from being transferred from one article to another.
- When a bloodstain is on clothing, the entire garment, whenever possible, should be sent to the lab to ensure a complete analysis.
- When a bloodstain is on a large object, such as a rug or a drape, the bloodstained portion may have to be removed. A photo of the item detailing the stained area should accompany the sample.
- When the bloodstains are on fixed objects or objects too bulky to be sent easily, the part of the object bearing the stain should be removed and sent to the lab, if at all possible. Stains may be on objects which cannot be cut, such as concrete floors or metal safes. Objects such as these are scraped and the crusty portion of the stain

placed on a clean piece of paper. The paper is then folded and placed in a proper container. The remainder of the stain is taken up on a swab dampened with distilled water. Rub the swab on the stain, let the swab dry, and place it in a container. For control testing, an unstained area near the bloodstain should be swabbed, dried, placed in another container, and sent to the lab.

- If the bloodstain is on a porous material like wood or earth, send the bloodstain and a portion of the material the bloodstain is on. Thus, proper control tests can be made. Place the material in a clean container. Then label the container with identifying data and seal it to prevent leakage.

Liquid samples

- Sometimes, liquid blood samples are to be send to the lab with other evidence. Veterinarian may take two tubes of blood one with an anticoagulant, the other without in properly labeled, sterile, tightly sealed glass containers
- Liquid samples must be packed to prevent breakage. Do not package a liquid blood sample with other specimens. If the container breaks or leaks, it could contaminate other evidence in the package.
- Send blood samples to the lab by the fastest means to keep them from deteriorating If there is a delay in sending drawn blood to the lab, use refrigeration. But the sample must not be frozen.

LAB EXAMINATION

Presumptive screening test to know it is blood

Preliminary lab examinations of an alleged bloodstain use chemical tests to tell if the stain is a bloodstain. Blood contains an enzyme called catalase, which breaks down hydrogen peroxide into water and oxygen gas. When this reaction occurs, the oxygen gas is released as bubbles. If the results are positive, further examination and testing are required.

Benzidine test

- Take a piece of filter paper and press it on the blood stain
- Add few drops of of 10 percent benzidine solution in glacial acetic acid
- Add 4-5 drops of fresh 3 percent hydrogen peroxide
- Positive result = blue color or green colour
- This is not very specific test for blood because many oxidizing agents such as chromates, permanganates give strong reaction without addition of hydrogen peroxide.

Tolidine test

- It is similar to benzidine and the development of blue colour is positive. But this test not in much use.

Phenolphthalein test

- Mix 1 gm of phenolphthalein and 20 g of sodium hydroxide in 200 ml of distill water and boil it in reflux condenser. During the boiling add 20 g of granulated zinc slowly and keep boiling until the solution becomes colourless.
- Prepare 3 percent hydrogen peroxide.
- Take about 1 ml of saline suspension of the suspected blood in a test tube and boil it for about 30 seconds and then cool it.
- Add 4-5 drops of phenolphthalein reagent first and then few drops of hydrogen peroxide.
- Positive result = pink colour that does not last more than 3 minutes.
- This is also not very specific as many oxidizing agents such a copper, potassium, ferricynide and nickel give positive reaction.

Leucomalachite green (LMG)

- To 1 g of leucomalachite green add 100 ml of acetic acid and dissolve in 150 ml of distill water.
- To the blood stain on a filter paper add one drop of reagent and leave for 10 seconds. Then add a drop of hydrogen peroxide.
- Positive result is manifested by development of green colour.
- This test is not as sensitive as TMB.

Tetramethylbenzidine (TMB)

- It is a common test for detection of blood.
- Rub stain with moist swab.
- Add TMB solution and add peroxidase.
- Positive result is manifested by development of blue-green colour.

Chemiluminescence and fluorescence

- Chemiluminescence – light is emitted as a product of the chemical reaction
- Fluorescence – light is emitted when a substance is exposed to a shorter wavelength of light.
- More sensitive than colour tests.
- These tests may damage blood stain (no blood/DNA typing).
- These tests are used to locate and define areas of blood, old blood stains and cleaned floor

Luminol method (similar to colour test)

- Luminol is combined with oxidant and sprayed over area thought to contain blood.
- Emits a blue-white to yellow green glow.

Fluorescein

- Fluorescein is combined with oxidant and sprayed over area thought to contain blood.
- If testing shows that the stain is a bloodstain, it must be learned if the blood is human or from the animal. If the results are negative, the stain cannot be blood.
- Fluoresces when treated with a UV light.
- Fluorescein includes a thickener; this makes it more effective on vertical surfaces.

Other simple tests are better at detecting very dilute concentrations of blood – sometimes so dilute the human eye can longer see the stain. These tests (listed below), while more reliable, require more expensive chemicals.

- Benzidine
- Leucomalachite green
- Phenolphthalein
- Takayama test
- Tetra-methyl bezidine
- Luminol
- Spectrophotometric tests

Most of these tests rely on the activity of peroxidase enzymes in blood to react with a chemical stain causing it to change color, or in the case of luminol, glow in the dark.

CONFIRMATORY TESTS OF BLOOD

Due to the possibility of false positives with the presumptive tests, confirmatory tests are necessary that involve making crystals that detect the presence of hemoglobin.

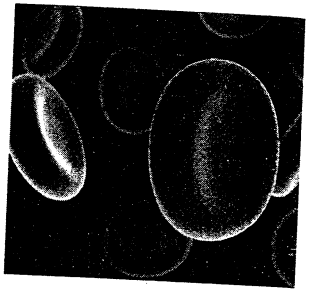
Teichmann test

- Small amount of blood or fragment of stain added to microscope slide.
- Add few crystals of sodium chloride and two drops of glacial acetic acid, mix it with glass rod, place a cover slip and heat gently on a flame to make it dry.
- Crystals viewed under microscope. Brown or yellowish-red rhombic crystals of haemin, arrange single or in cluster will be seen if the given sample is blood.
- Alternative reagent that give better results can be prepared by dissolving 0.1 g each of potassium iodide, chloride and bromide.

Takayama test

- Takyayama soloution is prepared by dissolving 3 ml of 10 percent sodium hydroxide, 3 ml pyridine, 3 ml of saturated solution of glucose and 7 ml of distill water.
- As in Teichmann test, add 2-3 drops of Tahyama reagent to the blood stain on the slide and dry it after putting the coverslip.

- A positive result is manifested by pink feathery crystals of hamochromogen which are formed in 10-30 minutes.



MICROSCOPIC EXAMINATION

Microscopic examination may disclose the origin of the blood. The RBC are circular, biconcave and non-nucleated in mammals whereas they are oval, biconvex and nucleated in birds, fish, reptiles and amphibians.

SPECTROSCOPIC EXAMINATION

This test is based on the principal that blood stains depends upon the fact that the hemoglobin and its derivatives have the faculty of absorbing the light of certain wavelength and when examined by means of a spectroscope, certain dark absorption bands are observed which are specific.

DETERMINATION THE SPECIES OF ORIGIN

Precipitation test

It depends upon the fact that certain antibodies develop in the blood of animal which receives repeated injections of blood serum from another animal. If a sample of horse blood is to be tested then rabbit anti-horse serum is used which are specific for horse. This test may not differentiate between closely related animals like horse and donkeys or sheep and goats because of similar antigenic structures in the blood.

Production of antisera

- Inject 2 ml of serum into the marginal ear vein of the rabbit 2-3 times at an interval of 5 days. The alternative site of injection is intra peritoneum of the rabbit where serum or whole blood can be given.
- Ten days following the last injection, a small quantity of blood is collected from the ear vein and serum is separated. A 0.1 ml of the antisera should give turbidity when combined with 1:1000 antigen.
- If the serum is not sufficiently strong, further injection should be given in the rabbit.
- If the titer is sufficient then animal is starved for 18 hrs before bleeding and serum is separated.

Procedure

- Dissolve the blood stain in normal saline and filter it.
- Take 0.1 ml of the antiserum and slowly add 0.2 ml of the stain extract
- Formation of white ring at the junction in 2-5 minutes indicate a positive test.

MAJOR BLOOD GROUPS OF LIVESTOCK

	Systems	Blood Groups	Factors
Dog		8	DEA 1.1, 1.2, 3, 4, 5, 6, 7, 8
Cat	1	3	A, B, AB
Horse	8	30	A, C, D, K, P, Q and U
Cattle	11		A, B, C, F, J, L, M, R, S, T and Z.
Sheep	7		(A, B, C, D, M, R and X).
Goat	5		A, B, C, M and J
Cat	1	3	A, B,AB

EXAMINATION OF BLOOD STAINS

Examination of blood stain	Possible cause
Blood streaks	Venous blood
Splashes	Projection of arterial blood
Pools of blood	Abundant hemorrhage
Circular stains	Drops of blood fall from a height
Smears	Blood is wiped off
Procedure of collection of blood stains	
Stains from persons and animals	Take a piece of filter paper soaked in normal saline solution. The paper is left in contact until it is coloured then removed and dried.
In case of garments and weapons	The articles should be allowed to dry, then carefully pack them.
Liquid stains	Collect the blood in dry test tubes with the help of a dropper. The test tubes are sealed and keep them in ice container.
Blood-soaked soil	Take it up completely and send it in a glass container.
If the stains lie on non-removable objects such as walls and floors	A representative section that contains the stain is removed by digging out and sent in a container. In exceptional cases a knife can scrap stains up.
Various tests for the confirmation of the blood stains	
(*i*) Chemical (*ii*) Microscopic (*iii*) Spectroscopic (*iv*) Serological	

FORENSIC PHOTOGRAPHY

Crime scene photography is documented using still/ video cameras. A good investigator would carefully photograph all blood stains from different angles both so that he could examine the pattern and to be able to present the evidence to a jury. Usually there are three types of crime scene photos.

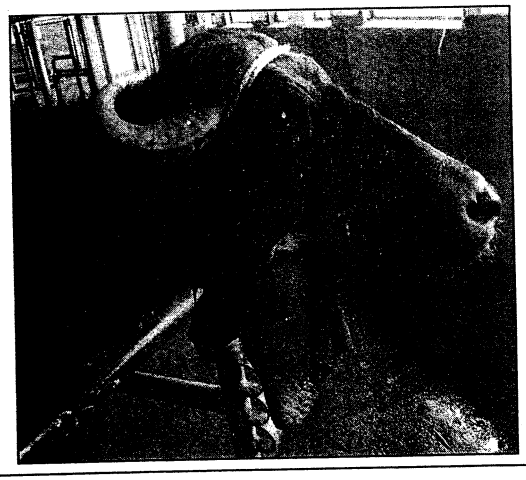
- *Overall* or wide-angle images which captures the scene as it is and depicts the overall layout of the scene.
- *Mid-range* – In it the images are in greater detail than the overall shots.
- *Close-up* – images taken with a macro lens giving the greatest amount of detail.

For better evaluation an appropriate sized scale should be in overall, mid-range, and close-up photography.

SUMMARY OF EXAMINATION OF WOUNDED ANIMAL

(*a*) Nature of injury	• Wound, bruise, burn etc.
(*b*) Description of wound	
Type	• Incised, lacerated, stab etc.
Number	• One, two or many
dSize	• Size of each injury in inches
Direction	• Explain the direction of the wound
Blood clots	• Present or absent
Condition of edges	• Presence of gaping or not
Inflammatory reaction	• Present (swelling, pus, etc) Or absent
Position of the wound in relation to fixed anatomical landmarks	• e.g. distance from the midline, below the clavicle etc
Height of the wound from the ground level	• this is particularly important in cases where animals have been struck by motor vehicles
(*c*) Fracture	• Present or not
Type of fracture	• If there is fracture then explain the type of fracture
(*d*) Foreign bodies	• Present or absent
(*e*) Nature of the weapon used	• The kind of weapon used and the nature of the powder used • The nature and velocity of the projectile • The direction and the range at which the weapon was fired • Part of the body struck
It is helpful to take a photograph of the wound with an indication of dimension (e.g. a tape measure placed next to the wound), and for measurements to be taken of the wound as it appears first, and then with wound edges drawn together (if it is a laceration etc).	
Remarks	

WOUND CERTIFICATE



Name of the party/police officer/magistrate (who has sent the animal).....

Number of letter ..... Date.....

Certificate No. ..... Date .....

Species..... Breed..... Sex..... Age.....

Identification marks

This is to certify that at the request of _____

I have this day examined _____

having the following identification marks _____

belonging to _____

The said animal has got the following injuries on its body

_____

(Write the nature of the injuries with exact measurement and position. Also mention that if it is a permanent injury or can be cured in a definite period)

I am of the opinion that _____

Place ..... Signature and Designation .....

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4

Post-Mortem Examination of Vetero-Legal Cases



CHAPTER OUTLINE

- **Forensic necropsy**
- **Death**
  - Cause of sudden death in animals
  - Death due to drowning in animals
  - Death due to lightning stroke and electrocution in animals
  - Death due to poisoning in animals
  - Death due to vehicle collisions in animals
  - Death due to snake bite in animals
- **Mechanism of death**
  - Coma
  - Syncope
  - Asphyxia
- **Estimate the post mortem interval**
  - Cessation of the circulation and respiration
  - Cooling of the body
  - Primary flaccidity
  - Changes in eye
  - Rigor mortis
  - Electrical stimulus
  - Secondary flaccidity
  - Putrefaction
  - Adipocere
  - Mummification
  - Consumption by insects
- **Post mortem examination**
  - Rules for post-mortem examination
  - General guidelines for post-mortem examination
  - Requirement of instruments
  - Procedure for post-mortem examination
- **Post-mortem artefacts**
- **Examination of decomposed animal**
- **Examination of mutilated cases**
- **Forensic radiology**
- **Case investigation**
- **Ascertain the cause of death**
  - Collection of specimens for examination
  - Procedure for dispatching of material for chemical examination
  - Photo documentation
  - Record of specimen collected for laboratory examination
- **Post mortem report**

FORENSIC NECROPSY

An examination of a body after death to determine the cause of death or the character and extent of changes produced by disease is called necropsy. The main difference between a necropsy and an autopsy is that a necropsy is performed on animals and an autopsy is performed on humans.

Necropsy is performed for either legal or medical purposes. The clinical or academic necropsy is performed to find the medical cause of death and is used in cases of unknown or uncertain death while forensic necropsy is carried out when the cause of death may be a criminal matter. The goals of a forensic necropsy is to determine :

CAUSE OF DEATH

The injury, disease, or combination of the two that initiates a train of physiological disturbances that, no matter how brief or prolonged, result in the fatal termination of an animal's life. For example-

- Poisoning
- Gunshot wound
- Stab wound

MANNER OF DEATH

Explains how the cause of death came about, and can be listed as either-

- Natural
- Accidental
- Non-accidental or unlawful
- Euthanasia
- Undetermined

Example: A deer that is hit by a motorist is an example of an accidental killing. A deer that is shot for trophy purposes or meat is an illegal killing.

The cause and manner of death are opinions based on the total case investigation with careful synthesis and analysis of the available information

CONTRIBUTORY CAUSES OF DEATH

- Diseases or injuries that significantly contributed to the cause of death
- One or more contributory causes may be present

MECHANISM OF DEATH

The physiological derangement produced by the cause of death that results in death e.g.

- Hemorrhage
- Septicemia

ESTIMATE THE POSTMORTEM INTERVAL

DEATH

The cessation of normal body functions (brain, heart and lungs) is called death. Sometimes animal is found dead without having been previously ill. A competent cause of the death should be etiological specific.

CAUSES OF SUDDEN DEATH IN ANIMALS

CAUSES OF SUDDEN DEATH IN SINGLE ANIMALS		
Etiology	**Condition**	**Species**
Spontaneous internal hemorrhage	Cardiac tamponade	Cattle
	Ruptured aorta or atrium	Horse
	Intestinal hemorrhagic syndrome	Pig
	Guttural pouch mycosis leading to rupture of blood vessels	Horse
Per acute toxemia	Rupture of stomach	Horse
(*i*) Endogenous	Rupture of colon (at foaling)	Mare
	Rupture of abomasum	Cow
(*ii*) Exogenous	Snake bite (poisonous)	All species
Trauma	Fighting, fall from height, collision.	All species
Gastrointestinal conditions	Gastric rupture	Horse
	Bloat	Cattle
Iaterogenic deaths	Rapid intravenous infusion of calcium	Cattle
	intravenous infusion of procaine penicillin and ivermectin.	Horse
CAUSES OF SUDDEN DEATH IN GROUP OF ANIMALS		
Lightning strike or electrocution	Thunder storm or Short circuiting of electric current	
Deficiency	Hypomagnesaemia	Cattle
Poisoning	Cyanide or nitrate poisoning	All species
Diseases caused by infectious agents	HS	Buffalo
	HS, BQ, Enterotoxaemia	Sheep
	Colitis	Horse
	Mulberry heart disease	Pig
	Colibacillosis	Calves
Anaphylaxis	Vaccination is done in a herd	Herd

Sudden death in racehorses is commonly due to massive hemorrhage into the lungs, abdomen or brain.

DEATH FROM DROWNING IN ANIMALS

When atmospheric air is prevented from entering the lungs, caused by the submersion of a body in water, it is called drowning.

In the vetero-legal cases the veterinarian may be asked to confirm whether the cause of death was drowning or if there were other factors responsible for the death of the animal. By examination of the carcass it can be decided whether the animal was alive at the time of drowning or the dead animal was thrown into the water.

CHAIN OF EVENTS DURING DROWNING

Drowning occurs when water comes into contact with the larynx.

- After an initial gasp, there is an initial voluntary breath holding.
- This is followed by spasm of the larynx and the development of hypoxemia.
- Lack of oxygen causes aerobic metabolism to stop, and the body becomes acidotic. If not corrected quickly, the lack of oxygen in combination with too much acid may lead to problems with the electrical conduction system of the heart and lack of blood supply to the brain.

SIGNS SUGGESTIVE OF DEATH BY DROWNING

Site	Lesions
External surface	The skin shows a corrugated appearance. If the animal was alive at the time of drowning, the injuries will have an inflammatory reaction.
Respiratory system	A fine white lathery froth is seen at the mouth, nostril, trachea and bronchi. The lungs are edematous and distended like balloons. Presence of water in the lungs.
GIT	Large amount of water in the stomach containing objects present in water at immersion, e.g. sand, mud, and algae.
Rigor mortis	Early
Mode of death	In drowning, death is due to • Asphyxia • Shock & • Fatal injuries

If the above-mentioned features are absent, the carcass should be carefully examined for death due to other causes, e.g., poisoning, violence, disease, etc.

The typical signs of drowning are seen in the body, only if it is removed from water within few hours after death and examined immediately. These signs are modified with the time and may disappear altogether when the body is removed from water after putrification.

DEATH FROM LIGHTNING STROKE AND ELECTROCUTION

THUNDERSTORMS AND LIGHTNING STROKE

Thunderstorms and lightning are most likely to develop on hot, humid days and it can be very dangerous, especially if animals are outdoors without proper protection. The common causes of lightning stroke are-

- Flashes of lightning during thunderstorms may prove fatal to animals.
- Big trees usually have well-developed root systems. During a thunderstorm, if the ground is damp; then electrification of the root system charges a wide surface area. Merely standing on electrified earth electrocutes animals. If the death has been caused by a lightning stroke, the following points should be taken into consideration. There are five ways in which lightning can severely injure or kill people or animals.

Direct strike

- It usually results in cardiac arrest and/or stoppage of breathing.

Side flash

- It may occur when the body of a person or animals provides an alternate or parallel path for the current. This means the person or animal may be another way for the current to reach the ground. If the current passes through the head or heart, death may result.

Conducted current

- Conducting current from a lightning flash may range from tingling shock to a massive current diverted from a poorly grounded electric power pole through the wiring system.

Step voltage

- It radiates out through the ground from a struck tree or pole. This results in many livestock deaths every year.

Fires, fallen tree, crushed cars

These are secondary effects. Injuries that occur from these are an indirect result of lightning

- History of thunderstorm in the locality.
- Evidence of the effects of lightning e.g. damage to houses or trees.
- Often, a lightning stroke will affect several animals in a herd.

ELECTROCUTION

The common causes of electrocution are-

- Defective electric circuits in cowsheds.

- Electric pole or water lines may be electrified due to a short circuit.
- The transmission lines may break and fall on the animals.
- Fallen transmission wires may electrify a pool of water and animals passing through it may be killed instantly.
- Animals may chew the electric cord and receive an electric shock.

Effect of electrocution on the body

The clinical symptoms due to electrocution depend upon-

- The strength of the current;
- The efficiency of the contact and earth;
- The length of exposure and the area in contact.

The death due to electrocution occurs due to-

- Ventricular fibrillation;
- Cardiac arrest; or
- Respiratory failure.
- Terminal hemorrhage at the base of the heart (reported in eagles) and muscle trauma may be observed due to violent contraction or subsequent falls

Clinical symptoms in case of electrocution

Grossly, burns may or may not be present. Focal burns are accompanied by singeing and curling of feathers. As these birds may fall from great heights, secondary trauma also may be present.

CLINICAL SYMPTOMS IN CASE OF ELECTROCUTION

Minor	• The animal will be restless, nervous and may be kicking. • Animals, which have received intermittent shock, may eat and drink with care.
Less severe	• The animal becomes unconscious and may recover completely after a few minutes. • Some animals may show nervous symptoms such as depression, paraplegia. • These symptoms may persist or disappear gradually.
Severe	• In most instances the animal may fall dead without struggle. • Singeing and burning marks occur in most of the cases of lightning. • The hairs have a brownish discolouration and abnormal kinking. • Half—chewed food in the mouth is a significant finding in the case of a lightning stroke. • Varying degrees of shock may occur.

POST—MORTEM CHANGES IN CASES OF ELECTROCUTION

System/ organ involved	Lesions
Circulatory system	• Bloody discharge from all natural orifices. • Blood is dark and tends to clot slowly. • Petechial hemorrhages throughout the body including endocardium, meninges and CNS.
Skin and Musculoskeletal system	• Extravasation of blood in muscles and superficial lymph nodes. • Longitudinal fractures of long bones. • Singeing or burning marks on the feet or muzzle.
GIT	• Distended rumen and swollen carcass.
Respiratory system	• Congested upper respiratory tract mucosae.
Rigor mortis	—Rigor mortis develops and passes quickly; early putrefaction.

DEATH DUE TO POISONING IN ANIMALS

It is the most common method of mischievous killing of an animal and is discussed in the next chapter.

DEATH DUE TO VEHICLE COLLISIONS

As roads encroach into almost every corner of the most of the countries, it is not surprising that farm animals, companion animals and wildlife frequently fall victim to vehicle collisions. It might be difficult to prove that someone intentionally ran down an animal

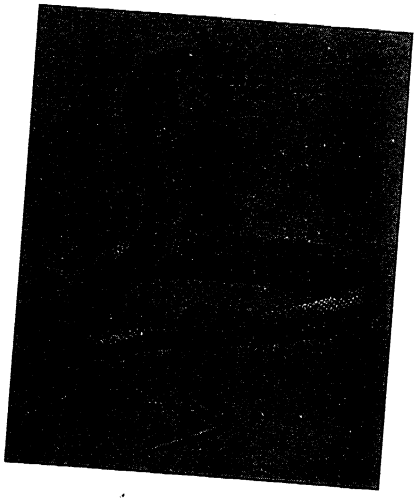
Necropsy findings with vehicle collisions

- On external examination, abrasions and hair loss may be evident from contact with the road surface.
- Victims usually have significant internal bleeding.
- Fractures may occur, but are not necessarily present.

Example: A pony is struck by an automobile, thus fracturing its mandible. The animal eventually dies from starvation. The cause of death is blunt trauma due to vehicle collision because this event precipitated all other processes.

DEATH DUE TO SNAKE BITE IN ANIMALS

- Fatal snakebites are common in dogs.
- Because of their size, horses and cattle seldom die due to direct result of snake venom but death may follow bites on muzzle, head or neck.



TYPES OF SNAKES AND CLINICAL SYMPTOMS PRODUCED BY THEIR BITES

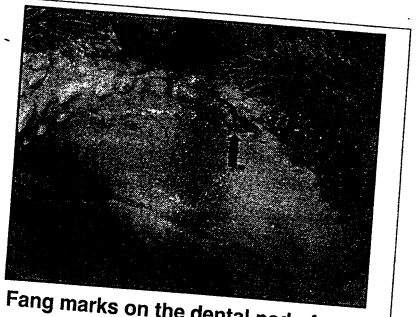
Type of Snake	Clinical symptoms
Elapines e.g. Cobra, coral snakes They have short fangs and produce neurotoxin that paralyses the respiratory center.	• Pain and swelling are minimal. • Systemic neurologic signs predominate. • Excitement with convulsions.
Viperines e.g. True vipers and pit vipers They have long fangs and produce hemotoxin, necrotizing and anticoagulant.	• Severe local tissue damage. • Tissue becomes discoloured within few minutes. • Dark bloody fluid may ooze out of the fang wounds and coagulability of blood is completely lost.

Diagnosis of Snake bite

- Clinical signs
- Identification of the snake.

Differential diagnosis of snake bite

- Fracture
- Abscess
- Spider envenomation
- Allergic reactions to insect bites



Fang marks on the dental pad of cow due to snake bite

MECHANISM OF DEATH

In all the diseases and injuries mentioned above initiates the sequence of functional disturbances that ends in death and which is usually caused by any one of the three ways:

- Coma (failure of brain)
- Syncope (failure of heart)
- Asphyxia (failure of lungs)

COMA

Coma, from the Greek word "koma," meaning deep sleep, is a state of extreme unresponsiveness, in which an animal exhibits no voluntary movement or behaviour. Usually coma is caused due to the following reasons.

Etiology

- Fracture of the skull compressing the brain, caused by a direct head injury by a blunt implement.
- Some poisons e.g. carbon monoxide, zinc phosphide.
- Some narcotic and hypnotic drugs e.g. sedatives, barbiturates, and anesthetics.
- Medical conditions e.g. cerebral hemorrhage.
- Due to the accumulation of metabolic waste products in certain disease conditions e.g. in uremia.

Clinical symptoms

Effect on nervous system

- Animal falls unconscious.
- It may be with or without convulsions.
- Cerebral shock.
- Paralysis of individual cranial nerves.
- Absence of the eye pupillary light reflexes.

Effect on cardio-pulmonary system

- Slow pulse
- Slow and irregular respiration
- Bleeding from nose and ears

Postmortem changes (in case of traumatic injury)

- Injuries to the skull bones.
- Blood in the cranial cavity.
- The brain and its membranes are congested.
- The right side of the heart is usually full and the left empty.
- However, there may be tumor or cyst or abscess in the cranial cavity.

SYNCOPE

It is defined as circulatory failure. An acute and progressive failure of the peripheral circulation is known as shock and the main etiological factors are:

- Natural heart failure caused by several degenerative diseases; or
- Some poisons; or
- Direct injury to heart.

There are three types of shock:

Hypovolemic shock-When blood volume deficiet is 15-25%.

Cardiogenic shock-Faliure of heart as a pump e.g. pulmonary emboli.

Distributive shock-Maldisribution of the blood flow away from central circulation.

CLINICAL SIGNS AND POSTMORTEM CHANGES IN SHOCK

System	Clinical signs	Postmortem changes
Cardio-vascular	• Reduced amplitude of the heart sounds • The pulse is faint while the rate is high • Veins are difficult to raise • Pale and cyanotic visible mucous membranes	• Generalized visceral congestion • Dark red fluid blood. • Petechial hemorrhages in the serous membranes
Respiratory	• Rapid and shallow respiration	• Edema of the lungs.
Urinary	• Oliguria and increased thirst	
Musculoskeletal	• Muscular weakness and recumbency	• Signs of severe injuries like fractures and crushing of the tissues
Others	• Hypothermia and Coldness of the skin • Dilated pupils	

ASPHYXIA

The term asphyxia generally refers to a condition in which there is lack of oxygen arising from an interference with the oxygen interchange in the lungs. Anoxia means "lack of oxygen" and it is of four types.

Anoxic anoxia (asphyxia)

- Breathing air that doesn't have enough oxygen.
- Obstruction of oxygen supply due to air passages being blocked or swollen.
- Paralysis of respiratory system by electric shock or some poisons.

Anemic anoxia

- Insufficient supply of oxygen to the body due to blood loss e.g. death due to bleeding.

Histotoxic anoxia

- It paralyses the body tissues preventing them from using oxygen e.g. cyanide poisoning.

Stagnant anoxia

- When the blood circulation is stopped e.g. shock or embolism.

SYMPTOMS OF ASPHYXIA

Stage	Symptoms
Ist (Dyspnea) • Due to increased CO_2 and decreased O_2 in blood	• Rapid and shallow respiratory movements • Rapid pulse and cyanosis
IInd (Convulsions)	• Clonic followed by tonic convulsions • Dilated pupil and bradycardia.
IIIrd (Apnea) • Due to depressed respiratory center	• Breathing becomes weaker and may almost cease. • The animal becomes unconscious • Involuntary defecation and urination can take place
IV (Exhaustion) • Due to complete respiratory paralysis	• The heart may continue to beat for a short while after respiration ceases

External changes in death due to asphyxia

- Tongue is often swollen and protrudes out.
- Blood stained froth may escape from mouth and nostrils.
- Conjunctiva is congested.

Internal changes in death due to asphyxia

Lungs: There is intense congestion in the lungs and petechial hemorrhages may show emphysematous patches on their surface.

Heart: The blood is generally dark in colour and is mostly fluid in the large veins. The right side of the heart is usually full with dark fluid blood and the left side is empty.

Brain: Brain is usually congested and may show petechiae in white matter.

Abdominal viscera: The abdominal viscera, liver, spleen, kidney etc. are usually deeply congested.

TIME OF DEATH (TOD) ESTIMATES IN ANIMALS

An assessment of the various changes in the body after death enables us to arrive at an approximate idea as to the length of time that has elapsed since death. It is impossible to fix the exact moment of death. However there are guidelines extrapolated from our human counterparts but more research is needed. In order to determine TOD we have to figure out the Post Mortem Interval. It is imperative that environmental conditions are recorded whenever a dead body is found as well as the condition of the body. The chief signs of death are as follows:

CESSATION OF THE CIRCULATION AND RESPIRATION

Complete cessation of the circulation and respiration are the only reliable signs of death

in the early post-mortem stages. When in doubt, the carcass should be left until some of the later signs appear which render the diagnosis absolute.

COOLING OF THE BODY

Body temperature

Body temperature may be a useful indicator of the post-mortem interval during the first 12 to 24 hours following death. After the vital functions of the body have ceased, body temperature adjusts to the environmental temperature. It may be possible to learn the approximate time of death by the rate of heat loss and the temperature of the area where the body is found. In mammalian species, intranasal temperature (measure at caudal extent of the nasal cavity) and temperature at the center of muscle mass in the hind leg usually are taken.

- In smaller mammals, rectal temperature is used (3 inch insertion).
- For avian species, measurements usually are taken by intra-thoracic or cloacal insertion (3 inch insertion for both).

Loss of body temperature is dependent on the following variables:

1. Initial body temperature

The initial body temperature is fairly constant for a given species and the information is published in various reference texts. However, body temperature may be elevated by pyrexia or hyperthermia as occurs with disease and physical exertion, respectively.

2. Ambient temperature and humidity

Ambient temperature and humidity greatly affect the cooling of a carcass. These parameters are relatively easy to measure. It is necessary to account for weather fluctuations over the relevant time period. Water temperature also may be a consideration, such as in the case of waterfowl.

3. Body surface area

Body surface area is relatively constant for a given species.

4. Body mass

Investigators may estimate body mass by measuring the girth of the thorax at the level of the heart (heart girth).

5. Carcass handling

The manner in which a carcass is handled during the post-mortem interval also will influence body temperature. If a carcass is field dressed, the body mass is greatly decreased by removal of the internal organs and the surface area is increased. These changes will increase the rate of body heat loss. Skinning a carcass will produce a similar effect.

If the carcass is transported in a vehicle, air flow will cool it much more quickly than exposure to still air. Typically, intranasal temperature drops faster than intramuscular temperature during transport. Finally, carcasses may be insulated, either by being piled with other carcasses or being kept at a higher ambient temperature.

Taking several temperatures over several hours may improve accuracy of the time of death estimate. The body surface will be cold in eight to twelve hours.

PRIMARY FLACCIDITY

General muscular flaccidity has been termed primary flaccidity to distinguish it from the condition of secondary flaccidity, which occurs after rigor mortis. The primary flaccidity immediately follows death and there is complete relaxation of the muscles. This condition persists for a few hours. Dilatation or contraction of the pupil will occur by atropine or physostigmine to the eye.

CHANGES IN EYE

Changes in eye take place soon after death; the intraoccular pressure falls and the cornea becomes glazed. The state of the pupil is variable; in some cases it is normal in others widely dilated and in some constricted. The general sequence of changes that have been reported in the eye is as follows.



Immediately after death in cattle



Thirty minutes after death in cattle

First 30 minutes following death

- The intraocular fluid and lens is transparent.
- Tapetum is brilliant luminous green.
- The pupil size is dependent on light response at the time of death and after a brief interval following death, the pupil is fully dilated.

From 30 minutes to 6 hours following death

- There is slight loss of colour and luminosity of the tapetum
- There is subtle wrinkling of cornea.
- The lens and fluid is transparent.

From 6 to 10 hours following death

- The lens and fluid opacity develops.
- Luminosity fades.
- Pupil narrows to one third or less of original vertical diameter.

From 11 to 18 hours following death

- Opacity increases.
- Luminosity fades away.
- Pupil narrows to one-third or less of original diameter.

After 30 hours following death

- Color and pupil diameter remain the same.
- Brown iris becomes a hazy blue after ~ 48 hours.

Freezing increases opacity, but halts pupil constriction.

LIVER MORTIS

This refers to the discoloration of the body due to gravitational blood settling after the heart stops. Lividity is not often seen in the external skin of dogs and cats. It is more likely to be seen on the buccal mucosa, internal organs and body walls. This can help determine the position of the body after death.

RIGOR MORTIS

Rigor mortis is a rigidity of the body caused by muscles contracting after death from chemical changes within muscle tissue. Under anaerobic conditions, lactic acid is produced from the glycogen stored in the muscles, which is responsible for coagulation of the myosin of the muscles.

Rigor mortis starts in all muscles at the same time. But it is first noticed in the small muscles of the head, neck, lower jaw, extending backwards to the body and limbs. Its time of onset and completion depends on environmental conditions and the onset of decomposition. The maximum rigidity is attained after 20 to 24 hours and then it gradually declines. The gradual disappearance of rigor mortis is due to the softening of the coagulated myosin by autolytic ferments.

There are many variables may affect the rate for rigor. The process occurs more slowly at cooler temperatures and is more rapid in animals that died following physical exertion. Rough handling of a carcass may delay or prevent the onset of rigor mortis. It is recommended to avoid the muscles adjacent to wounds and legs that are stretched when a carcass is hung. Also, freezing must be differentiated from rigor in some situations.

Approximate time of death estimates in animals (Dr. Annette Rauch, Tufts University)

- Warm, not stiff 0-3 hours
- Warm, stiff 3-8 hours
- Cold, stiff 8-36 hours
- Cold, not stiff >36 hours

ELECTRICAL STIMULUS

Electrical stimulation provides a less subjective method for measuring the availability of ATP; however, this technique is affected by the same processes as rigor mortis. The response

of various muscle groups are ranked as very good, good, fair, and poor. Responses usually remain good for 4 hours or less following death. As per Wildlife Forensic Manual 1992 muscle groups stimulated in the deer include the eye, muzzle, ear, proximal forelimb, epaxial muscles, tail, exposed inner thigh, tongue, exposed flank. This technique may be applied to waterfowl as well. If a reaction is detectable in the wing, it usually indicates that a duck has been dead for less than 1 hour.

SECONDARY FLACCIDITY

It is characterized by the relaxation of muscles, which is synchronous with the onset of putrefaction. The muscles do not respond to any electrical stimuli as in primary flaccidity.

PUTREFACTION

Putrefaction is a slow decomposition of the body. It is a chemical and bacterial change. It starts at death and continues until all soft tissue of the body is consumed. Temperature is important to the speed with which it happens. Heat speeds bacterial growth and action, while cold slows it. The presence of moisture in the air promotes putrefaction. Absence of moisture in the air promotes mummification.

Signs of putrefaction

As bacteria acts on inner organs, gases form. They bloat the body and facial features become vague. Thoracic and abdominal cavities burst, protruding out the stomach and intestines. Foul-smelling gases are produced. There may be bloodstained fluid from the mouth and nostrils. In putrefaction the tissues are converted into a semifluid mass and it can lead to liquefaction of the eyeballs.

ADIPOCERE

Adipocere is a yellowish-white substance formed due to gradual hydrogenation of preexisting fats. It is formed when the carcass is kept in moist conditions. Adipocere has a greasy feel and a strong and musty odor.

MUMMIFICATION

Mummification occurs when body tissue dehydrates. The skin takes on a leathery look The process only occurs in hot, dry climates, free from the moisture needed by bacteria.

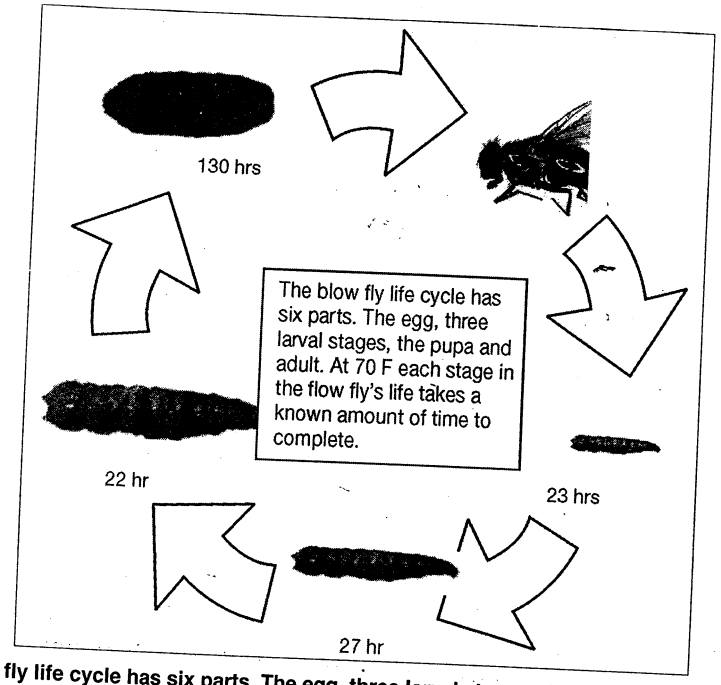
FORENSIC ENTOMOLOGY

Insect analysis is the most accurate method for determining TOD. Maggots can hel determine the time of death by providing the post mortem interval. Following death there i rapid decomposition of the body and the, the remains go through rapid physical, biologica and chemical changes. Different stages of the decomposition are attractive to different specie of insects. Certain species of insects are often the first witnesses to a crime. They usuall arrive within 24 h of death if the season is suitable and can arrive within minutes in th presence of blood or other body fluids. These first groups of insects are the *Calliphoridae* o blowflies and the *Sarcophagidae* (the flesh flies). They lay their eggs on the corpse, usuall

in a wound, if present, or if not, then in any of the natural orifices. Their development follows a set, predictable, cycle. Using maggot age and development can give a date of death accurately. It is important to note that in some cases, maggots may be found on live animals, known as myasis. This is usually due to fecal soiling or wound necrosis present on the animal that attracted the flies. A sample of all insects, pupae and pupa casings on the body should be collected noting the location on the body they were found. Other species are not interested in the corpse when the body is fresh, but are only attracted to the corpse later such as the *Piophilidae* or cheese skippers which arrive later, during protein fermentation. A knowledge of insect succession, together with regional, seasonal, habitat and meteorological variations, is required for this method to be successful.

Forensic entomology is the study of the insects associated with a corpse in an effort to determine elapsed time since death. It was first reported to have been used in 13th Century China however, in the last 20 years, forensic entomology has become more and more common in police investigations in human cases. This field has not been applied extensively in veterinary forensics.

In most of the cases that involve a forensic entomologist are 72 h or more old, as up until this time, other forensic methods are equally or more accurate than the insect evidence. After three days, insect evidence is often the most accurate and sometimes the only method of determining elapsed time since death.



The blow fly life cycle has six parts. The egg, three larval stages, the pupa and adult. At 70 F each stage in the flow fly's life takes a known amount of time to complete.

Many different techniques may be used to determine the time of death, but there is no no single accurate determinant of time of death. The body temperature loss and response to muscle stimulus are good indicators of time elapsed since the death of animal in early stages.

POST MORTEM EXAMINATION

The vetero-legal postmortem examination is made in order to ascertain the cause of death and is done after receiving inquest report.

Inquest:- (*from Latin in, into, and quaro, to seek or look for*)

An inquest is an enquiry or investigation into the cause of death where death has occurred under mysterious and suspicious circumstances. If death occurs under suspicious circumstances, a detailed enquiry becomes necessary to find out the true nature, cause and manner of death. Hence the necessity of inquest. Normally following two types of inquest, are prevalent in India.

- The Police inquest (conducted by a police officer not below the rank of a head constable). A police officer conducting an inquest is known as an investigating officer.
- The Magistrate's inquest (conducted by a magistrate). There are certain specific cases in which only the Magistrate shall hold an inquest, but the Magistrate reserves the right to conduct inquest in any other case which he deems fit.



RULES FOR POST-MORTEM EXAMINATION

- A vetero-legal post-mortem examination should be only undertaken after receiving inquest report (inquest is written orders from the police or the District Magistrate).
- Before conducting postmortem examination carefully read the inquest report on the situation and the description of the body.
- Inquest report should mention the place where the body was found and its surroundings.
- Record the time and date of arrival of carcass and there should not be unnecessary delay in conducting the postmortem examination.
- Veterinarian should have good knowledge of the normal and pathological appearances of the viscera.
- The post-mortem examination should be thorough, complete and done in daylight.

- There should not be any unauthorized person present at the time of post mortem examination. However investigating police officer may be present.
- All the details observed by the veterinary officer should be carefully noted in the post-mortem report on the spot of the post-mortem examination.
- All the relevant papers along with the inquest form should be sent back to the police along with the post mortem report. The veterinarian should keep a copy of report for further reference.

GENERAL GUIDELINES REGARDING FOR POST-MORTEM EXAMINATION

- A necropsy report generated for a forensic case is different from that of a standard necropsy. Here veterinarian concentrate on findings significant to animal crimes; however, general principles of a post-mortem examination apply.
- Data given on the evidence tag should be noted in the report including the name of the submitting officer and agency.
- History, age, nutritional state, concurrent disease or injury, etc. should be documented.
- All descriptions should be concise and non-technical terminology used when possible because necropsy report ultimately may have to be understood by non-medical people.
- All conclusions should be supported by relevant information and alternatives discussed when results are equivocal.
- All organ systems should be examined and all abnormalities described, even those usually regarded as incidental in a standard necropsy. Finally, normal findings should be described as well.
- These extra steps provide written support that a complete and thorough necropsy was performed.
- As you can see, forms such as these are an easy method to record findings, describing anatomic locations, measurements, etc.
- The record keeping system used by the forensic investigator is critical. The necropsy report, photographs, ancillary diagnostic reports, etc. all should be easily linked and traceable to a common source and withstand scrutiny.
- An important consideration in forensic necropsy is the use of experts in other disciplines to perform necessary analyses. For example, a pathologist would not want to make conclusions about ballistics or projectile character that would be better assessed by a forensic firearm specialist.
- A significant time period may occur between the submission of specimens and the prosecution of a case. Thus, if necropsy findings are documented meticulously and readily after examination, it will be easier for a Veterinarian to recall details about a case should his/her testimony be required.

REQUIREMENT OF INSTRUMENTS

The following instruments are generally required for conducting the postmortem examination.

- Scalpels and knives of various sizes
- Scissors
- Rib shears
- Forceps
- Chisels, hammer and saw
- Measuring tape
- Gloves
- Wide mouth bottles
- Glass slides
- Chemical like alcohol ,common salt, 10% formalin

PROCEDURE FOR POST-MORTEM EXAMINATION

External examination

- The identity of the body with identifying characteristics such as species, age, breed and sex, tattoo marks, scars etc.
- Note the general condition of the carcass whether it is fresh, decomposed or mutilated.
- Any external marks of violence or injury.
- Look for any discharges from the natural orifices.
- Examine the external genitalia.
- Bones should be examined for presence of fractures and joints for dislocation.
- In case of a decomposed animal, when the skin or epidermis has peeled off, the underlying tissue should be examined for any evidence of injury or any foreign body such as bullet, wire etc.
- In case of a mutilated carcass, it is very important to ascertain the species, sex and age of an animal and then the cause of death should be looked into.
- Observations depending upon the length of time which have elapsed since death such as temperature, presence or absence of rigor mortis.

Internal examination

- With the carcass in dorsal recumbency, make a ventral midline incision that extends from the mandibular symphysis to the pubis.
- Dorsally reflect the skin from the abdomen, thorax and cervical region to expose underlying tissues.

- Transect the muscles between the scapula and thorax.
- Locate and examine the regional lymph nodes.
- Methodically examine all viscera *in situ* and observe for correct anatomic size and position. Record any abnormal characteristics of fluids present in either the abdomen or thorax.

Abdomen

- To completely expose the abdominal viscera, make a ventral midline incision through the abdominal wall from the xiphoid process to the pubis.

Stomach and intestines

- Open, examine and rinse the mucosal surfaces of the distal esophagus, stomach and duodenum with physiologic saline.
- In ruminants, the rumen, reticulum, and omasum are opened *in situ*.
- Remove the contents and examine for parasites and lesions.
- Examine the reticulum for any foreign body.
- Also examine Liver and Spleen.

Urinary tract

- Free both kidneys from their attachment sites.
- On both kidneys, incise and reflect the renal capsule to the hilus and examine the ureter and renal vasculature.
- Examine the urinary bladder, urethra.

Reproductive system

- Examine the male genitalia.
- Examine the female genitalia. Use scissors to open the vulva, vestibule, vagina, cervix and uterus to the oviducts.
- Incise the mammary glands and examine aspect of the tissue. Collect representative specimens of milk and tissue.

Thorax

- Using bone cutters, remove the ventral one-third of the rib cage.
- Examine the mediastinum, pericardium and diaphragm.

Lungs

- Palpate the peripheral and hilar areas of all lung lobes.
- Dissect the lung lobes by opening all major bronchi.
- Squeeze the cut edges and examine for pus, blood or fluid.

Heart

- Incise the pericardial sac. Check for abnormal fluid accumulation.
- Reflect the pericardium over the base of the heart.
- Examine the great vessels and atria.
- Examine the epicardial surface and coronary arteries.
- Carefully dissect the heart and examine all endocardial surfaces.

Head and brain

- Remove the head.
- Examine the nasal cavities and the sinuses.
- Make a dorsal midline incision from the nose to the foramen magnum.
- Open up the calvarium and remove with the help of a chisel.
- The brain is lifted up from the front and removed.
- Examine the various parts of the brain for the presence of tumors, cysts, abscesses, hemorrhages, etc.
- Dissect the brain only if tissue is required for immediate laboratory testing, such as for rabies.

Vertebral column

- Examine the ventral surface of the vertebral column and record abnormalities in different vertebrae.

Bones and joints

- Open the hip, stifles, shoulder and elbow joints and examine for abnormal synovial fluid, ruptured or stretched ligaments, Describe all abnormalities.

POST-MORTEM ARTEFACTS

While conducting the post mortem it is very necessary to keep in mind the probability of developing the artefacts which can be introduced in the dead animals after their death. Due to these artefacts, there can be error in concluding the cause of death, which may result in injustice. These artefacts can be classified as follows:

Putrefaction

It includes changes in the carcass due to decomposition, which includes distension of thoraco-abdomen, protrusion of tongue, swelling of vulvar lips, eyelids and nose.

Environmental artifacts

Burning: Normally the location of burns is indicative of postmortem burns. Living animal may not tolerate the burning on back, body or face etc.

Corrosions: The exposure of liquids such as acids, caustic soda or industrial effluent etc may cause corrosions, which may be seen on the body surface of the animal touching the ground.

Maceration: When a carcass remains in contact with water etc. for a long time, there may be maceration of the in contact area.

Third party artifacts

- Damage to the carcass can be done by dogs, birds, rodents, maggots etc. Normally the first organs to be attacked are vulva, anus, udder, eyes, nose and mouth.
- Sometimes deliberate mutilation of the carcass is done to deceive the veterinary officer for getting the wrong claim from the insurance. Cutting of ear bearing tattoo mark, cutting of tail, damaging scar marks etc. are some of the examples of deliberate mutilation.
- Sometimes some surgery is attempted just before the death of the animal, which may leave some unnatural marks over the body resulting in misinterpretation of the cause of the death.

Miscellaneous artifacts

- Marks on the lower surface of the body due to dragging.
- There may be marks on the neck, fetlock or horns during dragging.
- Fracture of some bones.

EXAMINATION OF DECOMPOSED ANIMAL

There should be complete external and internal examination on the same lines as in fresh autopsies that includes looking for the fatal injuries or presence of any foreign body such as bullet, wire, wood etc.

EXAMINATION OF MUTILATED CASES

In all the mutilated cases first try to ascertain the species, sex and age of animal otherwise report it. Then look for colour and marks on the body and if the body is in the form of fragments, it should be from the same animal. If possible take the help of the specialized lab for examination for microscopic examination of blood, blood groups, hair and precipitation test for species identification.

FORENSIC RADIOLOGY

Radiological imaging plays a vital role in forensic medicine in many intersections identity, injury and postmortem examination.

Scope of Forensic radiology

- Fractures are easily detected on X-rays.
- In firearm injury cases radiology plays significant role. It helps in localization of bullet, caliber of bullet, direction and type of weapon.
- X-rays are helpful in detecting various pathological conditions.
- Radiographs of the teeth and joints for age estimation.

CASE INVESTIGATION

- It may be necessary for investigators to determine if a predator was responsible for the killing or if a predator was scavenging a carcass that died from some other etiology.
- Also, it may be necessary to determine what kind of animal(s) or even what individual was responsible.
- Investigators may examine pattern of attack, bite marks, hair samples, and saliva DNA to help identify the culprit.

CASE PRESENTATION

- A cow calf was found mauled at a park.
- Another animal fled when the owner approached, but he did not obtain a good enough look to identify the animal. It was to determine if these wounds were made while the calf was alive or after death.
- The edges of wounds inflicted before death would be engorged with blood.

Pattern of attack

Hunting behavior varies between predator species.

Canids (wolves, domestic dogs, etc.) often slow their prey by attacking the distal limbs.

- Another feature of the bite wounds of canids is that the lesions may be most apparent in the tissues underlying the skin, with little external evidence of trauma.
- Also, canids may hunt in groups while most cat species (lions, leopards) are solitary hunters,
- Felids, such as lions and leopards, frequently drag down larger prey by lunging onto the back. The final kill is made by a bite to the cervical region.

DISCUSSION

In human forensic medicine and to some extent in veterinary science in western countries there are incredible serologic and genetic techniques that contribute significantly to forensic science. If this knowledge can be extrapolated to veterinary science in this country, these techniques fulfill a crucial role in wildlife and other livestock forensic cases as well.

- For example, it may be necessary to identify meat samples stored in an individual's freezer or bloodstains in the bed of a truck.
- Antibody/antigen binding and electrophoresis techniques have been used to develop methods for identifying animal species and commonly are used to identify tissues in forensic cases.
- As mentioned under the toxicosis section, these methods also may be used to help clarify the sequence of toxin exposure in cases of poisoned wildlife.
- Various methods of DNA analysis also are used in wildlife forensics.
- Polymerase chain reaction (PCR) and DNA profiling are incredibly sensitive and specific methods of identifying animal species and individuals.
- Mitochondrial DNA is used for determining species and subspecies.
- Individual profiles often are based on nuclear DNA.

- An impression of the seal used in closing the bottle and description of seal is also sent in separate cover.
- The full details of the purpose for which tests are required.
- Send about 25 ml of alcohol or 25 g of salt in a separate bottle as sample preservative.
- A necropsy report is submitted separately.
- Submit a copy of inquest.
- List of articles forwarded and mode of transmission (by post, rail, road or constable).
- Note the reference number of your letter of advice to the chemical examiner on the labels of the bottles.

PHOTO DOCUMENTATION

Photo documentation is an important part of forensic necropsies. Throughout the entire necropsy, significant findings should be photographed. These photos could provide visual support as to the identity of this specimen.

RECORD OF SPECIMEN COLLECTED FOR LABORATORY EXAMINATION

Identification No..... Owner's name..... Address.....

Species.....Breed..... Sex..... Age.....

Disease suspected..... Date of necropsy conducted..... Date when sample taken

Description of specimen and preservative used.....

Forwarded to lab..... Date..... By mail/post/others.....

Post-mortem notes: (Attach necropsy report)

Place.....

Date.....

Signature.....

Designation.....

POST-MORTEM REPORT

Post mortem number..... Date .....

FIR number..... Date .....

Police station ..... District .....

Time ..... Address .....

Owner's name..... Address .....

Date and time of receipt of requestion.....

Date and time of start of postmortem.....

External examination

Species..... Breed..... Sex..... Age.....

Identification marks.....

- General condition of carcass.....
- Nature and position of injuries (number, nature, size, description, any weapon used, antemorteum/postmorteum)

  .....
- State of natural orifices.....
- Postmortem changes (Temp, rigor mortis,putrification etc.)

Report of internal examination

- *Head and Neck*
- *Cardiovascular system*
- *Respiratory system*
- *Gastrointestinal tract*
- *Urinary system*
- *Genital system (male/female)*
- *Udder and teats*
- *Skin and Musculature*
- *Bones and joints*
- *Any other*
  - Specimen collected for histopathological examination
  - Specimen collected for chemical analysis

Opinion (approximate time and the cause of death) .....

Reserved pending report from the forensic science laboratory .....

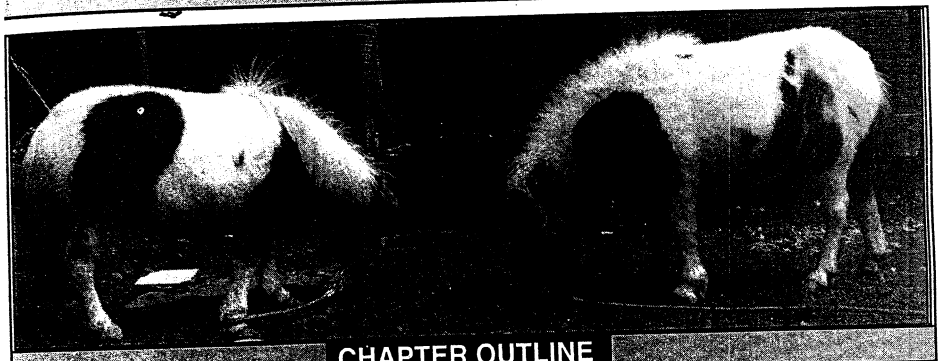
Place..... Signature .....

Date..... Qualification & Designation .....



5

Identification of Animals



CHAPTER OUTLINE

- **Identification of animals**
- **Identification of horses**
  - Colours of horses
  - Markings of horses
  - Whorls
  - Age of horses
  - Height of the horses
  - Weight of the horses
- **Glossary**
- **Identification of cattle**
  - Age of cattle
- **Identification of dogs**
  - Dog coat colours
  - Dog coat patterns
  - Dog age
- **Other means of animal identification**
  - Birth certificates
  - Numbering systems
  - Ear tags
  - Neck chains
  - Tattooing
  - Freeze branding
  - Microchip identification
  - Nose printing
  - Blood typing
- **DNA fingerprinting**
  - Introduction to DNA basics
  - Procedure for DNA finger printing
  - Types of DNA finger printing
  - Practical applications of DNA fingerprinting
  - Glossary
  - Summary

IDENTIFICATION OF ANIMALS

Animal identification is the basis for keeping accurate production records of the herd/flock. Individual animal identification allows producers to keep records on an animal's parentage, birth date, production records, health history, and a host of other important management information. Animal identification includes breed, colour, identification marks and age. Besides this the other means of identification are birth certificate, numbering system, tattooing, blood typing and microchip system which are discussed as below.

IDENTIFICATION OF HORSES



COLOURS OF HORSES

There are various colours of horses and ponies.

Bay

The body is brown although the shade of brown may vary from very pale brown to very dark. The mane and tail are black. The legs are black from above the knee downwards. Bay is the most common colour in the horse.

Brown

The body is dark brown with the same coloured mane and tail.

Black

The body, mane and tail is black. Some black horse may lighten during the summer in the sun and show some brown tint.

Chestnut

The body and legs are golden or ginger although the shade can vary from very light gold to a dark brownish ginger. The mane and tail are the same colour as the body.

Grey

There are various types of grey with some horses being very pale, almost white with very little grey showing to others being very dark and obvious grey. The mane and tail are grey. Grey horses are born solid coloured e.g. black, brown, etc and the coat develops into grey as it becomes mature.

Piebald

Piebald is a black and white patched horse. The amount of white and black can vary immensely and the patterning on each horse is unique. The mane and tail may be either black, white or both black and white. The black patches on some Piebalds may lighten in the summer due to the sun.

Skewbald

Skewbald is a coloured and white patched horse. The amount of white and coloured patches can vary immensely and the patterning on each horse is unique. The coloured patches can be any colour other than black eg Dun, Chestnut, brown, etc.

Dun

The body is creamy golden although it may vary from very pale to a rich creamy gold. The mane and tail are black and there is a black line running down the back.

Roan

The body is coloured with white hairs ticked through the coat. The colouring on the body can be any colour and different names are often given depending on the base colour. For example a Chestnut Roan is referred to as "Strawberry Roan" and a Grey Roan is referred to as "Blue Roan".

MARKINGS OF HORSES

Head

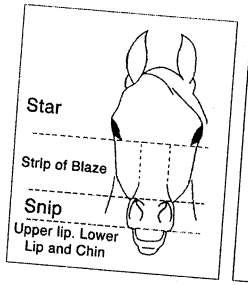
Star, stripe, snip, blaze, white muzzle, and wall eye

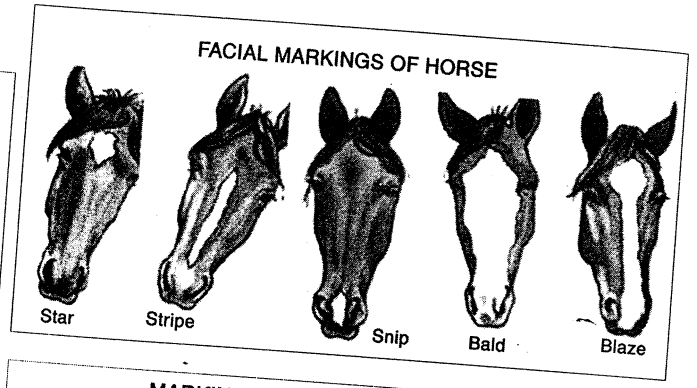
Body

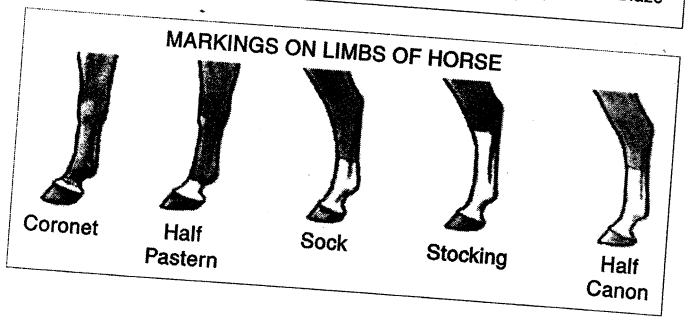
Grey ticked, flecked, black marks, spots, patches, etc.

Limbs

White coronet, white heel, white pastern, white fetlock etc.

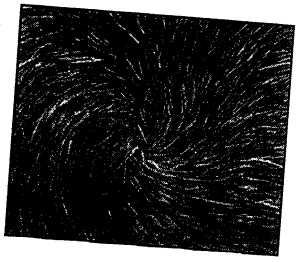






WHORLS

They are formed by changes in direction of flow of the hair and may take various forms depending on the interface at which two or more flows of hair meet.



Simple whorls: A focal point from which the hairs diverge.

Linear whorls: Two opposing sweeps of hair meet from opposite directions along a line, with or without forming a crest.

Feathered whorls: Two sweeps of hair diverge along a line but the direction of flow of each sweep is at an angle to the other so that together they form a feathered pattern.

The whorls can be on Head, neck or other parts of the body. The anatomical position of any whorl should be stated and indicated as accurately as possible.

AGE OF HORSES

Age of the horse may be estimated with reasonable accuracy by the following methods:

TEETH OF HORSE

Type	Deciduous	Permanent	General Remarks	
I 1	Birth to 1 week	$2\frac{1}{2}$ years	• The incisor meet at right angle at six years of age. • They commence to incline in a forward direction progressively until at 20 years of age and meet at an acute angle. • They are almost horizontally placed at 20 to 30 years of age. • As the crown of the incisor wears away a central mark appears in the table. • At 8 year it appears in the central incisor. • At 9 year it appears in the lateral incisors. • At 10—12 years it appears in all incisors. • At 8 years the infundibulum (a dark depressed ring on the table of incisor) disappears from all incisors. • Galvayne groove is a longitudinal groove in the labial surface of upper I 3. • At 10 years, it makes its appearance. • At 15 years it reaches half way down • At 20 years it reaches bottom of the tooth. • At 25 years, it disappears from upper half of the tooth. At 30 years it disappears completely.	 1 YEAR
I 2	4 to 6 weeks	$3\frac{1}{2}$ years		
I 3	6-9 months	$4\frac{1}{2}$ years		 5 YEARS
C		$3\frac{1}{2}$ to 5 years		
P 1	Birth to 2 weeks			
P 2	-do-	$2\frac{1}{2}$ years		 10 YEARS
P 3	-do-	3 years		
P 4		4 years (may be)		
M 1		9-12 months		 15 YEARS
M 2		2 years		
M 3		$3\frac{1}{2}$ to 4 years		
Dental formula (Deciduous teeth) 2 (Di 3/3 Dc0/0 Dp3/3) = 24 **Dental Formula (Permanent Teeth)** 2 (I 3/3 C 1/1 P 3-4/3 M 3/3) = 40-42				 20 YEARS

Teeth

Age can be determined by noting the time of appearance and degree of wear of the temporary and permanent teeth. Temporary teeth are smaller and whiter than the permanent teeth. For determining the age of any animal, one must know the dental formulae of deciduous and permanent teeth, along with the table of eruption of teeth for that particular species.

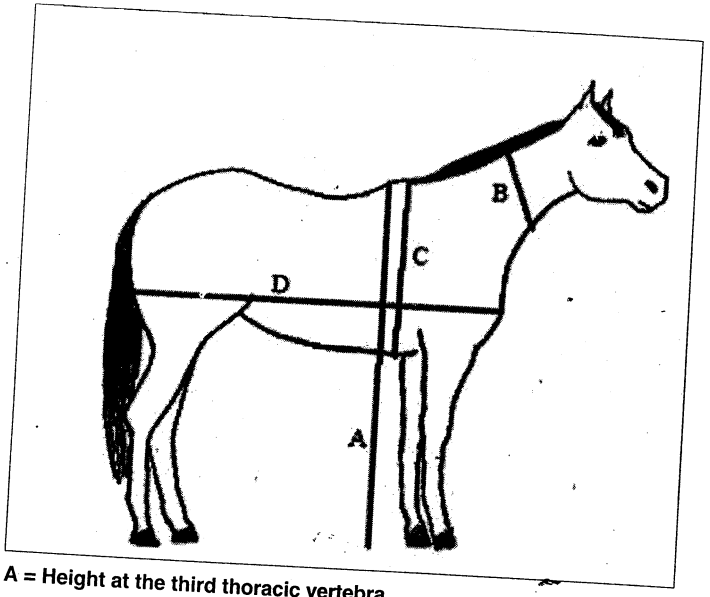
HEIGHT OF THE HORSES

A horse's height is expresses in "hands". It is measured from the ground to the highest point of the withers.

1 Hand = 4 inches (10 cm)

WEIGHT OF THE HORSES

The approximation of the weight of a horse can be done by measuring the heart girth and length of the horse from the chest to the rump, then applying these measurements to the formula:



A = Height at the third thoracic vertebra

B = Neck circumference located half way between the poll and withers

C = Girth circumference at the base of the mane hairs

D = Body length from point of shoulder to the point of the buttock

Weight of horse (pounds) = C × C × D (inches)

- Horses come in many colours and with many different markings.
- Colours and markings are a useful to identify horses and are used on registration papers,
- Some breeds of horses, regardless of their date of birth, change their age on January 1st.

GLOSSARY



Foal: the offspring of horses, either male or female, up to one year old

Colt: male offspring, up to four years old, or until gelded

Filly: female offspring, up to four years old, or until the first breeding

Mare: mature female horse over four years of age, or younger if bred

Yeld mare: mature female horse that has never given birth, barren

Stallion: male horse, that has not been castrated (gelded)

Gelding: male horse of any age that has been castrated

Yearling: one year old up to two years old

Weanling: a foal that has been weaned - no longer has access to its

Dam: a foal's female parent

Sire: a foal's male parent

Aged: any horse, any sex, over 9 or 10 years old

Far side or the off-side: When working around horses, the right side of the horse is referred to as the Far side or the off-side

Near side: The left side of the horse is referred to as the near side. Most activities (catching, mounting, saddling, leading, etc.) are done from the near side of the horse.

Hindquarters or the haunches: The back of the horse is referred to as the hindquarters or the haunches. The hindquarters includes all parts behind and below the loin. The front of the horse is referred to as the forehand.

IDENTIFICATION OF CATTLE



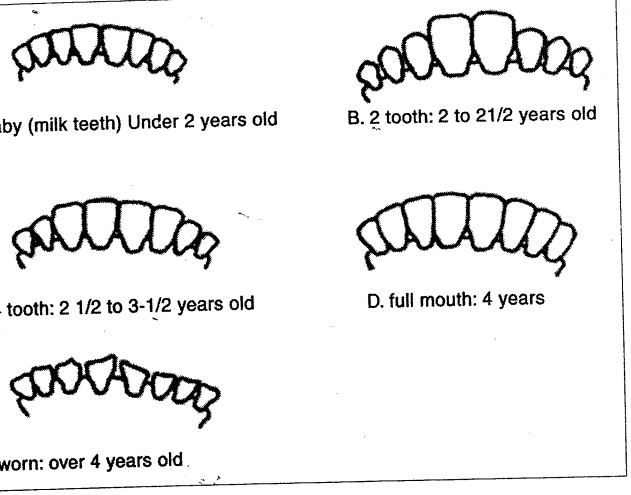
AGE OF CATTLE

TEETH OF CATTLE

Type	Deciduous	Permanent	General Remarks
I 1	Before birth	$1\frac{1}{2}$ - 2 years	At 1 year 9 months, eruption of first pair of incisors.
I 2	Before birth	2 - $2\frac{1}{2}$ years	At $3\frac{1}{2}$ years all the eight permanent incisors are in full wear.
I 3	Birth to 1 week	3 years	At 4—5 years the teeth are slightly worn along their cutting edges.
I 4	Birth to 2 weeks	$3\frac{1}{2}$ - 4 years	At 6years I 1 is level and the neck has emerged from the gums.
P 1	Birth to 3 weeks	2 - 2 $\frac{1}{2}$ years	At 7 years I 2 is level and neck is visible.
P 2	-do-	$1\frac{1}{2}$ - $2\frac{1}{2}$ years	At 8 years I 3 is level and neck is visible.
P 3	-do-	$2\frac{1}{2}$ - 3 years	At 9 years I 4 is level and neck is visible.
M 1		5 - 6 months	**Dental formula (Deciduous teeth)**
M 2		1 – $1\frac{1}{2}$ years	2 (Di 0/3 Dc0/1 Dp3/3) = 20
M 3		2 - $2\frac{1}{2}$ years	**Dental Formula (Permanent Teeth)** 2 (I 0/3 C 0/1 P 3/3 M 3/3) = 32

A prominent feature of ruminant dental anatomy is that they lack upper incisors, having instead a "dental pad". To a first approximation, the dental anatomy of all ruminants is similar.

DENTITION IN COW



RINGS IN THE HORN

- The rings in the horns of cows and buffaloes are sometimes used to determine their age.
- In cows the first ring appears at the age of 3 years, whereas in buffaloes it appears at about 4 years (at the time of their first calving, because the horns become thick at the time of calving).
- Subsequently one ring is added every year if the cows and buffaloes are regular in calving (once a year). So the age of the animal will be 2 + number of rings.
- Although it may not give a true picture but gives a rough idea.
- When the spaces between rings are uneven and show wide differences, then it is assumed that the animal is an irregular breeder.

EXTERNAL APPEARANCE

It is difficult to judge the age of a cow accurately by this method.

- Straight back and tight udder are seen in young cows.
- Reduced brightness of eye, curved back and pendulous udder are the signs of old age.

EXAMINATION OF HOOF

- This is also not a reliable method for determination of age. The hoof of a young animal is smooth and small while in old animals it becomes long and rough.

OSSIFICATION OF BONES

- In animals the idea about age can be made from the centres of ossification e.g. in young growing animals a radiograph of joints of limbs will depict the approximate age of the animal.

IDENTIFICATION OF DOGS

DOG COAT COLOURS



Black

It is usually pure.

Blue

A dark metallic gray, otherwise known as slate; diluted black pigment.

Brown

Brown and its variants, including mahogany, mid tone brown, and very dark brown

Red

A coat colour having reminiscent of reddish woods such as cherry or mahogany; also tawny, chestnut, orange, rusty, and red-gold.

Roan

An even mixture of colored and white hairs.

Sable

A light background coat (usually gold, silver or tan) with black tips – often accompanied by a black mask.

Gold

Rich reddish-yellow, as in a Golden Retriever; often includes colours such as yellow-gold, lion-coloured, fawn, apricot, yellow-red, straw etc

Grey

Pale to dark grey, including silver; can be mixed with other colours or various shades to create sandy pepper, pepper, grizzle, blue-black grey, or silver-fawn

Yellow

Yellows may range in colour from fox-red to light cream; with variations in shading on the ears, back and underparts of the dog; yellowish-gold tan, as in a yellow Labrador Retriever

White

Such a light cream that it is seen and described as pure white. A white dog, as opposed to an albino one, has dark pigment around the eye rims and nose, often coupled with dark-coloured eyes.

DOG COAT PATTERNS

Two-colour coats

Such as black and tan, red and white. The coat has both colors but in clearly defined and separated areas; usually the top and sides are darker and lower legs and underside are the lighter color.

Tricolor

A coat with three distinct colors usually black, tan, and white or liver, tan, and white.

Blenheim

It is a name for red coat colour with white markings.

Brindle

A lighter background with a fine and fairly even mix of black stripes usually in a "tiger stripe" pattern.

Harlequin

Large black or blue splotches on a white background coat.

Merle

Marbled blue, grey and black.

Particolor

It is a two-colored coat with the colors appearing in patches in roughly equal quantities.

Tuxedo

Black dog with white pattern on chest, chin and feet resembling a tuxedo and spats. e.g. Boston Terrier.

DOG AGE

At times, there is need to determine the age of dog whose date of birth is not known e.g. adopted dog. Here are some general guidelines that can help in estimating the dog's age by examining the teeth of the dog.

DETERMINATION OF AGE OF DOG BASED ON TEETH

Type	Deciduous	Permanent	General Remarks
I 1	4-5 weeks	2-5 months	— At 3-4 weeks the temporary canines erupt.
I 2	4 to 5 weeks	2-5 months	— At 4-5 weeks temporary incisors and temporary molars cut through gums.
I 3	5 to 6 weeks	4-5 months	• **By 8 weeks:** All baby teeth are in.
I 4	3-4weeks	5-6 months	— At 4 months the central and lateral permanent incisors appear.
P 1	4-6 weeks	4-5 months	— At 5-6 months the corner permanent incisor and the canine appear.
P 2	-do-	5-6 months	• **By 7 months:** All permanent teeth are in and are white and clean.
P 3	6-8 weeks	5-6 months	— At 1 year the incisor are in full wear.
P 4		4-5 months	— At 2 year the end of the crown appears uniform in outline.
M 1		5-6 months	• **By 3-5 years:** All teeth may have tartar build-up and some tooth wear.
M 2		6-7 months	— At 4 years the incisors show line of wear.
M 3		6-7 months	— At 6 years cusps of lower I 3 worn off.
Dental formula (Deciduous teeth) 2 (Di 3/3 Dc1/1 Dp3/3) = 28			— At 8 years occlusal surface of lower I 1 is inclined forward.
Dental formula (Permanent teeth) 2 (I 3/3 C 1/1 P 4/4 M 2/3) = 42			• **By 10-15 years:** Teeth are worn, and heavy tartar build-up is likely with the possibility of some teeth missing.

Dog's age can also be estimated based on a complete physical exam or tests looking at the bones, joints, muscles, and internal organs. In older dogs, signs of aging may show up in a variety of ways, including:

- Cloudy appearance in the eyes
- Graying hair, especially around the muzzle at first, and spreading to other areas of the face, head, and body
- Less skin elasticity
- Stiffness

TRANSLATING DOG YEARS INTO HUMAN YEARS

BREED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	DOG YEARS
SMALL (<20 lbs)	15	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	HUMAN YEARS
MEDIUM (20-50 lbs)	15	24	28	32	36	42	47	51	56	60	65	69	74	78	83	87	
LARGE (>50 lbs)	15	24	28	32	36	45	50	55	61	66	72	77	82	88	93	120	

OTHER MEANS OF ANIMAL IDENTIFICATION

BIRTH CERTIFICATES

The methods of registering pedigree animals of all species are accurate and reliable, and reference to pedigree certificates or to stud or herd books can readily be made to ascertain the age of any animal.

NUMBERING SYSTEMS

There are many numbering systems that can be used to identify animals in a herd. One of the most commonly used and highly recommended systems uses a combination of letters and numbers, designating birth year and birth order.

EAR TAGS

Ear tags are another common form of identification used in all species. A number of companies make and sell ear tags and corresponding applicators. The flexible, plastic tags can be bought pre-numbered or they can be purchased as blank tags. The producer can use ear tag ink to number them accordingly.

NECK CHAINS

Neck chains, or ropes, are used as a common method of identification in dairy cattle. The neck chains have a numbered tag attached that corresponds to that animal's identification number

TATTOOING

Tattooing is another form of permanent identification that is commonly used in all species and involves imprinting an identification number/letter combination into the skin of the animal using indelible ink.

In horses, many a times the tattoo consists of a letter which corresponds to the year the horse was born and a number which matches the registration number of the horse. The tattoo may be placed in several areas, but the upper lip is the most common site.

FREEZE BRANDING

Freeze branding is another method of animal identification that allows for animals to be identified from a greater distance than with ear tags. Freeze branding, similar to hot branding, involves the use of branding irons, with letters and numbers, being chilled in liquid nitrogen or dry ice and alcohol. A freeze brand produces minimal changes in the hide, is more distinct and legible, does not produce an open wound, and is relatively painless as compared to fire branding. . In horses the brand is most commonly applied to an area approximately 2" x 7" midway on the neck, underneath the mane.

MICROCHIP IDENTIFICATION

Micro chipping is widely accepted as a safe, quick, permanent and effective means of identifying animals, in addition to the normal passport markings check. The standard site for microchip implantation is embedded in, or adjacent to, the nuchal ligament at the top of the left mid crest in horses.

NOSE PRINTING

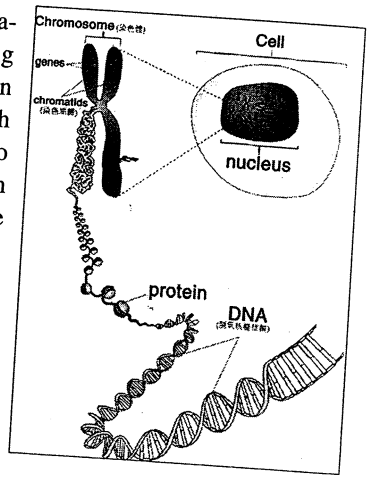
Nose printing like the finger printing in human beings is taking the impression smear of the nose of cattle or sheep and is specific for each animal. Nose printing is performed by restraining the animal's head, and placing a minimal amount of ink on the animal's dried nose. The ink is then transferred to an index card, supported by a wooden block or stiff backing, by pressing the card against the animal's nose. If too much ink is used or excess of moisture on the animal nose or animal is not restrained properly, it can result in a smeared, unreadable print

BLOOD TYPING

In the blood typing serologists test for the most common blood antigens and serum proteins for identification.

DNA FINGERPRINTING

DNA fingerprinting is one of the greatest identification systems to recognize an individual or living organism. Every living creature is genetically different in its own way, except for identical twins, triplets etc. Each individual contains a unique sequence that is specific to that one organism. Unlike traditional fingerprints which can be altered, the DNA sequence cannot easily be changed once the material is left at a crime scene,



INTRODUCTION TO DNA BASICS

DNA, also known as deoxyribonucleic acid, found in almost every cell of every living organism. It contains a specific sequence of bases called nucleotides which contain the information of all the characteristics of living organisms. The four nucleotides that constitute the sequences of DNA are adenine (A) which bonds exclusively with thymine (T), and guanine (G) which bonds exclusively with cytosine (C). This information was inherited through the DNA of their parents.

The chemical structure of everyone's DNA is the same. The only difference between

people (or any animal) is the order of the base pairs. There are so many millions of base pairs in each person's DNA that every person has a different sequence. Using these sequences, every person could be identified solely by the sequence of their base pairs

A chromosome is the visible state of genetic material during the division phase of a cell. Humans have 23 pairs of chromosomes, which makes 46 individual chromosomes. Half of the chromosomes of an individual come from the mother and the other half from the father. Chromosomes are found in the nucleus, and contain a linear strand of DNA. The DNA molecule is twisted onto itself and the super-coiled molecule is enclosed in proteins which help maintain its shape. The chromosomes carry the genes that make each individual.

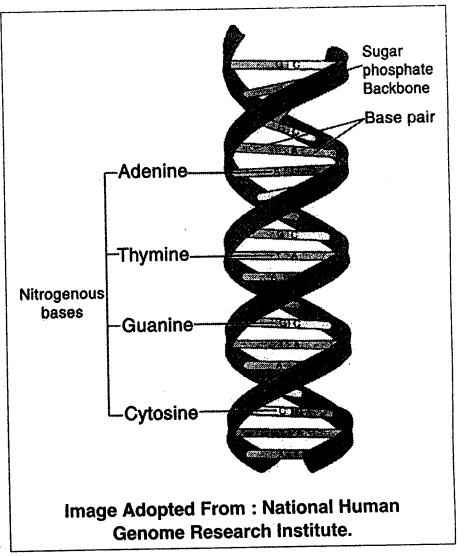


Image Adopted From : National Human Genome Research Institute.

PRINCIPLE

Human genome contains 3 billion base pairs which are arranged in a particular sequence that gives us a unique identity. But still the DNA is every human is almost similar. 90% of the DNA is same in every human beings (about 99.9% nucleotide bases are exactly same in human beings). DNA fingerprinting is based upon the rest 10% difference in the human DNA. This method is done by matching the uncommon sequence of humans with the suspect's unique sequence.

SAMPLES FOR DNA FINGER PRINTING

DNA fingerprinting requires the use of several biotechnological techniques, and can vary among different DNA fingerprinting protocols. Preparation of a good quality DNA sample is prerequisite for any DNA fingerprinting method. The source of DNA sample may be blood, semen traces/vaginal swab from cloths, saliva, hair, skin/tissue etc.

PROCEDURE FOR DNA FINGER PRINTING

- Obtain and isolate the DNA from almost any of the cells or tissues in the living organism.
- The DNA is cut into a various array of pieces using restriction enzymes which cuts DNA at a specific base sequence.
- The sections of DNA that are cut out are called restriction fragments.
- This yields thousands of restriction fragments of all different sizes because the base sequences being cut may be far apart (long fragment) or close together (short fragment).

- Fragments are separated on the basis of size using a process called gel electrophoresis.
- DNA fragments are injected into wells and an electric current is applied along the gel.
- The DNA is negatively charged due to its phosphate groups, so it migrates towards the positive electrode or anode.
- DNA is negatively charged so it is attracted to the positive end of the gel.
- The shorter DNA fragments move faster than the longer fragments.
- DNA is separated on basis of size.
- The band pattern that the DNA creates in the agarose gel is then transferred to a nylon sheet.
- To complete this transfer a nylon sheet is placed on the gel and left to soak overnight in a high salt solution.
- After the soaking procedure is completed, the nylon membrane contains the same pattern of DNA as occurred in the original gel.
- The membrane is now prepared to undergo its probing phase
- A radioactive material or fluorescently labeled probes are hybridized onto the nylon membrane which combines with the DNA fragments to produce a fluorescent image.
- A photographic copy of the DNA bands is obtained.
- The pattern of fragment distribution is then analysed.

TYPES OF DNA FINGER PRINTING

The main types of DNA fingerprinting methods in use at this time are –

- Restriction fragment length polymorphisms (RFLPs)
- Polymerase Chain Reaction (PCR)
- Amplified fragment length polymorphism (AFLP) and
- The short tandem repeat (STR)

Restriction fragment length polymorphisms (RFLPs)

RFLPs, were the first type of DNA fingerprinting which came onto the scene in the mid-1980's and focus on the size differences of certain genetic locations. Restriction enzymes are a special class of proteins that recognize specific sequences of DNA base pairs and cut DNA at those specific sites. Because DNA from any two individuals is unique, the digestion of every individual's DNA (be it a bacterial or human cell) will result in a unique set of restriction fragments (pieces of DNA produced by digestion with a given restriction enzyme). These restriction fragments can be compared between individuals to identify restriction fragment length polymorphisms (RFLPs). Although the name sounds complicated, it is descriptive; polymorphisms (poly- many; -morphos- shapes) of different lengths are created when DNA is digested by a given restriction enzyme. These RFLPs are the basis of one type of DNA fingerprint.

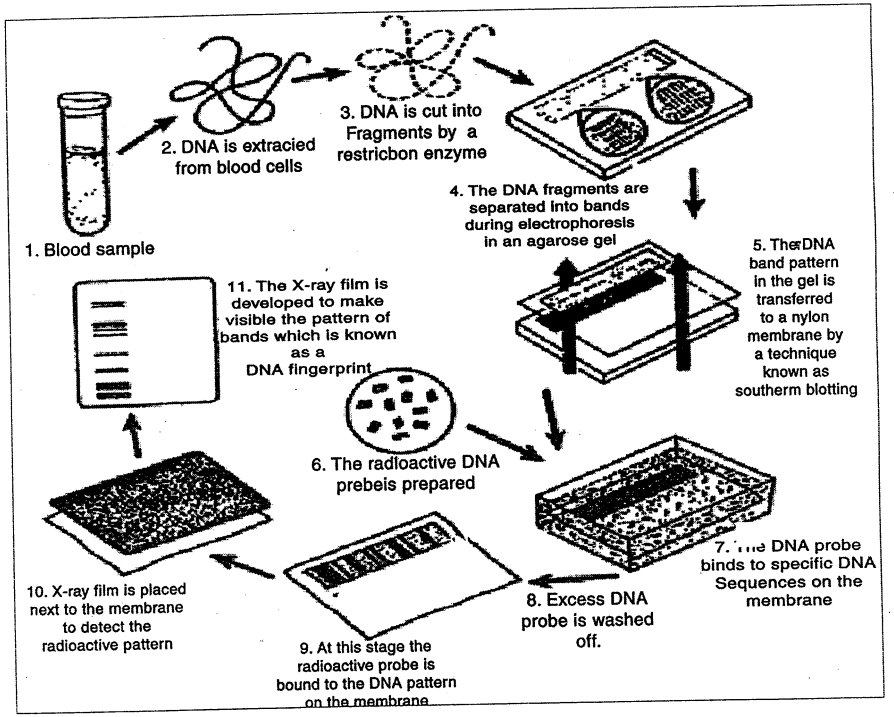
In forensic laboratories the most commonly used restriction enzymes are *Hin* f1 and *Hae* III. This generates the VNTR fragments of different lengths depending on the number of repeats present in the concerned alleles. These fragments migrate to different positions in the

electrophoretic gel. The band pattern that the DNA creates in the agarose gel is then transferred to a nylon membrane. The location of the bands on the nylon membrane is detected by using the VNTR sequence as probe and the pattern of fragment distribution is then analyzed.

Polymerase Chain Reaction (PCR)

PCR (developed by Karry Mullis in 1983) is a process whereby a researcher may easily and inexpensively produce millions of copies of DNA from a single molecule of DNA. The method relies on thermal cycling, consisting of cycles of repeated heating and cooling of the reaction for DNA melting and enzymatic replication of the DNA. Primers (short DNA fragments) containing sequences complementary to the target region along with a DNA polymerase (after which the method is named) are key components to enable selective and repeated amplification. As PCR progresses, the DNA generated is itself used as a template for replication, setting in motion a chain reaction in which the DNA template is exponentially amplified. The amplified DNA fragments are then detected following agarose gel electrophoresis.

On the forensic front, the PCR found to be useful in identifying DNA fingerprints in criminal matters and in paternity tests because it requires less amounts of DNA sample. The main drawback of PCR based fingerprinting method is that it is not as discriminating as the RFLP.



Amplified fragment length polymorphism (AFLP)

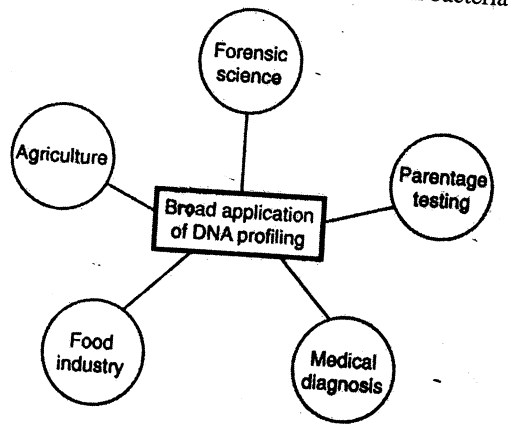
AFLP-PCR or just **AFLP** is a PCR-based tool used in genetics research, DNA fingerprinting, and in the practice of genetic engineering. AFLP uses restriction enzymes to digest genomic DNA, followed by ligation of adaptors to the sticky ends of the restriction fragments. Amplified fragment length polymorphism is still popular in the smaller countries involved in the process of DNA fingerprinting. It remains attractive because of its relatively less complicated operation and the cost-effectiveness of the procedure.

Short Tandem Repeat (STR)

The short tandem repeat (STR) methodology is the most widely used form of DNA fingerprinting. This system is based on the features of PCR, as it utilizes specific areas that have short sequential repeat DNA. The advantage of STR analysis is that the STR repeats are short enough to be amplified by PCR and the DNA comparisons can match the possibilities into an almost endless range. This STR analysis method assures quality control, increases the statistical confidence levels in the results, and lowers the risk of error when analyzing DNA

PRACTICAL APPLICATIONS OF DNA FINGERPRINTING

- This procedure is mostly used in forensic to identify the criminals.
- It is also used for the paternity test.
- It is used in the study of breeding patterns of animals facing the danger of extinction.
- It is also used in determining lineages of humans and other animals to ascertain the process of evolution by checking the **"genetic markers"** which are passed from the ancestors.
- It is used to diagnose the genetic disorders and hereditary disorders like hemophilia, sickle cell anemia, cystic fibrosis etc.
- It is also used to determine about the antibiotics to which bacteria is resistant.



GLOSSARY

Base pairs: A set of two bonded nucleotides on opposite strands of DNA. There are two possible base pairs: C-G and A-T.

Chromosome: A rod-like structure of tightly coiled DNA found in the cell nucleus of plants and animals. Chromosomes are normally found in pairs; human beings typically have 23 pairs of chromosomes.

DNA polymerase: An enzyme which repairs DNA by facilitating the formation of hydrogen bond between a nucleotide on a broken piece of DNA, such as a nicked or single-stranded piece of DNA as created in the laboratory, and the individual nucleotide it needs to form a complete and stable base pair.

Gene: A section of a chromosome, made up of DNA. A given gene provides the information a cell needs to create a specific protein. Collectively, the genes of an organism inform, to some extent, nearly every aspect of the development and formation of that organism. Genes do not, however, dictate behaviors or traits, and neither are genetically informed behaviors and traits incapable of being modified or supplanted; environmental factors also play a very important part in influencing the organism's development and formation.

Homology: The degree to which two pieces of DNA match, or complement each other (two pieces of DNA are complementary if their respective nucleotides, in their current order, match C to G and A to T). If one piece of DNA is 100% complementary to another piece of DNA, they demonstrate very high homology; if the pieces are only able to form a handful of base pairs between their corresponding nucleotides, they demonstrate very low homology.

Hybridization reaction: A process in which a probe binds to a Southern Blot if the probe's DNA sequence and the DNA on the Southern Blot match.

Nucleus: The center of a cell, where all of the DNA, packaged in chromosomes, is contained.

Probe: A radioactive strand of DNA often used to find particular sequences in a Southern Blot.

Restriction enzyme: An enzyme normally found in bacteria which cuts DNA at specific sites (i.e. each time a specific nucleotide pattern occurs). Because a restriction enzyme always acts upon DNA in the same manner, a map can be made of a restriction enzymes actions on a known set of nucleotides.

Trait: The physical manifestation of the information on a gene. If a gene contains the information needed by the organism to create purple eyes, for example, the fact that the organism did indeed have purple eyes is considered a trait of that organism.

SUMMARY

Animal identification methods differ, and each has its own benefits. All methods can be useful when used in the correct manner and under the right conditions. Often times, more than one method is used for maximum accuracy. With these stipulations in mind, it is best to determine the needs and expected uses of animal identification on an operation, before choosing the best method(s) of identification.

SOURCE:

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SUPPLEMENTARY READING

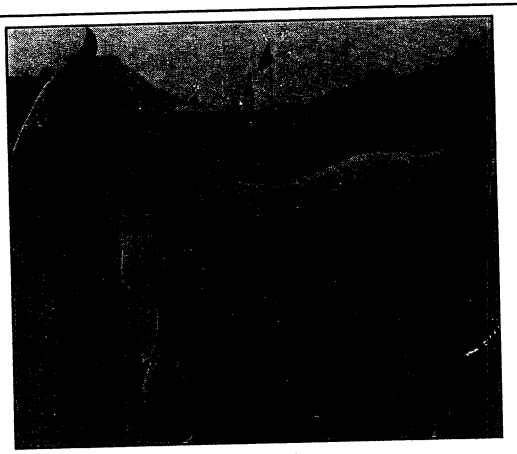
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6

Examination of Animals Prior to Sale



CHAPTER OUTLINE

- Examination of animals prior to sale
- Examination of horses for soundness
- Conditions considered unsound in horses for certain purposes
- Desirable conformation of horse
- Examination of dairy cattle for soundness
- Examination of bulls for soundness
- Frauds in the sale of livestock
- Examination of dogs and cats for soundness
- Certificate of identification
- Certificate of soundness

EXAMINATION OF ANIMALS PRIOR TO SALE

Examination of the animals is required for purchase, export, registration, insurance, confirming soundness and prior to slaughter. A good physical examination can detect minor abnormalities before they become serious problems and it includes the following.

Signalment and history

- Complete description of the animal.
- Species, Breed, Age, Sex, Reproductive status.
- Feeding and the use of any supplements or drugs.
- Past medical history, breeding history, vaccination and deworming schedules.

General appearance

Observe animal from a distance and up close before any handling. The animal needs to be able to see, eat, smell, and move around comfortably. Any factor that lowers the efficiency of these activities will have a negative effect on the animal's performance.

Body condition

In general, the animal is too thin if his ribs are easily seen.

if they are readily felt without a layer of fat lying over them, they are considered normal and obese if it is difficult to feel them at all.

Mentation (Level of consciousness – attentiveness / reaction to environment).

Normal healthy animal's mentation is often bright, alert and responsive

- Alert and responsive
- Depressed
- Uncontrolled hyper-excitability
- Stupor
- Coma

Posture and gait

Watch the animal walk to exam area or. Look for

- Limping
- In-coordination or unsteadiness
- Abnormal limb placement.

EXAMINATION OF HORSES FOR SOUNDNESS

The examination protocol for horses varies from country to country. It is a four to five stage vetting procedure as mentioned below.

- The first part is observing the horse in the stall.
- The second part includes observing the horse on a lead strap at a walk, a trot on a straight line, doing flexion tests, and in a circle with a long line.
- The third part of the examination involves observation of the horse while it is being ridden.
- The fourth part includes diagnostic procedures such as radiography and ultrasound.

First stage

It incorporates examination of the external structures of the horse in addition to identification, colour, marks, general appearance and vital signs.

- Pulse, respiration and body temperature
- The heart and lungs
- The nostrils, ears and eyes
- Limb and body conformation
- The body and limbs for signs of previous injuries or disease
- Blood samples for diseases such as equine infectious anemia, or for overall health
- The teeth and mouth
- The animal feet, both visually and with hoof testers
- The animal behavior

Second stage

It involves assessing the horse's soundness at walk and trot on a hard flat surface.

- Joint flexibility and response of the limbs to flexion testing
- Flexion tests of the limbs can be undertaken at this stage; this involves the vet manually flexing the horse's limbs and joints.
- The horse will also be circled in hand and backed up.

Third stage

It involves the horse in strenuous exercise, the degree which depends on his fitness and could range from a dozen laps of an indoor school at canter to fast work on gallops. During this stage of the examination the horse's soundness at faster paces, and his cardiovascular and respiratory systems can all be tested.

Fourth stage

It follows a period of rest, often after completion of identification silhouette drawings on the standard pre-purchase form. The vet watches the horse trot-up to ensure it is sound after both exercise and rest.

Final stage

It consists of a thorough examination of the horse's feet. In addition, a blood sample may be taken to test whether the horse has been given anti-inflammatory drugs which can mask lameness.

CONDITIONS CONSIDERED UNSOUND IN HORSES FOR CERTAIN PURPOSES

Head and neck

- *Cataract:* Opacity of the eye lens.
- *Parrot mouth:* The upper incisors overlap the lower incisors.
- *Roaring:* Paralysis of the intrinsic muscles of the larynx.

Thoraco-abodomen

- *Cryptorchidism:* A condition in which one or both testes fail to descend into the scrotum.
- *Heaves:* Chronic obstructive pulmonary disease of horses characterized by a double expiratory effort.
- *Hernia:* When abdominal contents protrude through natural or abnormal opening in the body wall.

Musculoskeltal system

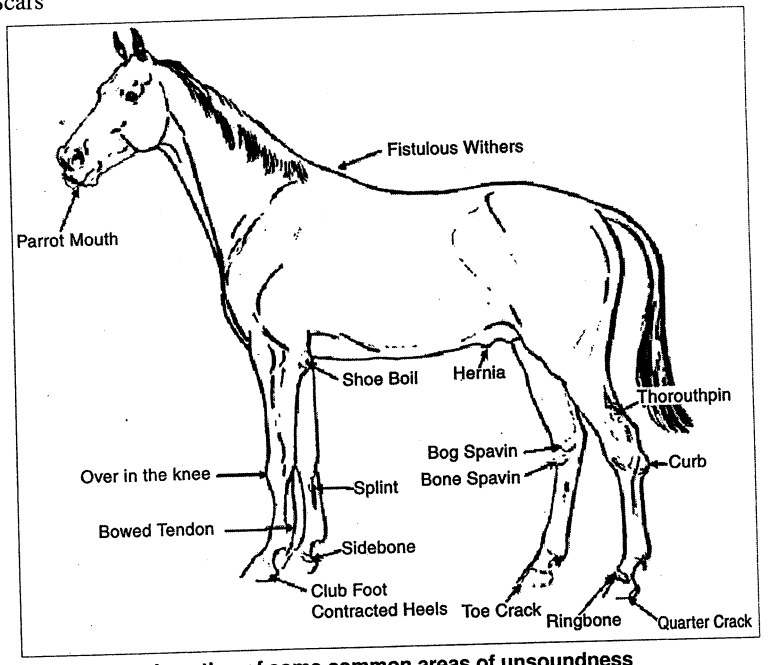
- *Bone spavin:* It is osteoarthritis or osteitis of the hock joint.
- *Bog spavin:* A chronic synovitis of tibio- tarsal (hock) joint.
- *Bowed tendon:* An inflammation of deep and/or superficial flexor tendons and their associated tendon sheath.
- *Curb:* It is thickening or bowing of the plantar tarsal ligament due to strain.
- *Canker:* A chronic hypertrophy of the horn-producing tissues of the foot involving frog and shoe.
- *Corn:* Involvement of the sensitive and insensitive tissues of the sole at the angle formed by the wall and the bar.
- *Capped elbow and hock:* Inflammatory swelling of bursa of the elbow joint and hock
- *Capped Hock:* Bursitis of the hock joint.
- *Dropped sole:* The sole is dropped to, or beyond the level of the bearing surface of the hoof wall.
- *Knee sprung:* An anterior deviation of the carpus.
- *Laminitis:* Inflammation or edema of the laminae of the foot.
- *Navicular disease:* A chronic degenerative condition of navicular bursa.
- *Over-reaching:* A form of limb interference.
- *Quitter:* A chronic, purulent inflammation of the alar cartilage of the third phalanx.

- *Ringbone:* A new bony growth on the first, second, and third phalanges.
- *Splints:* An exostosis on the large metacarpal or metatarsal bone.
- *Side bones:* Ossification of the alar cartilage of the third phalanx.
- *Shivering:* An involuntary muscular movement of the limbs and tail.
- *Stringhalt:* Spasmodic over flexion of one or more limbs during progression.
- *Sand cracks:* Cracks in the wall of the hoof begins at coronet and runs parallel to the horn tubules.
- *Sweeny:* It is disuse or neurogenic atrophy of supraspinatus and infra-spinatous muscles.
- *Thorough-pin:* Distension of the tarsal sheath of the deep digital flexor tendon just above the hock.
- *Thrush:* It is degeneration of the frog with secondary bacterial infection
- *Wind galls:* Distension of the synovial capsule of the fetlock joint.

Miscellaneous conditions

The horse should also be examined for the following conditions-

- Broken/Decayed teeth
- Blindness
- Scars
- Firing marks
- Venereal diseases
- Saddle sores



Location of some common areas of unsoundness
(http://jeremyrenners.blogspot.in)

Common vices

The following vices may also reduce the utility of animals for certain purposes-

- Biting
- Backing
- Wind sucking
- Kicking
- Tail rubbing

Signs of equine dental disease - idle horse

- Quidding (loss of food when chewing)
- Inefficient chewing
- Excessive salivation
- Weight loss/rough hair
- Foul odor - mouth/nostrils
- Head tilted
- Head shaking
- Cheek sensitivity
- Pain when drinking water
- Bleeding mouth

Signs of equine dental disease - under saddle

- Poor performance
- Sensitivity to bit
- Head throwing
- Bracing against bit
- Tail wringing
- Refusal to stop/turn
- Unwilling to collect
- Poor head carriage

Reproductive exams

Stallions and mares being purchased for breeding often require special tests to determine their reproductive status. For example, a stallion's libido and fertility should be tested by observing his response to a mare and collecting a sample of semen. The collected semen should then be evaluated for sperm count, motility and viability.

A prospective brood mare should undergo rectal palpation so that the veterinarian can evaluate the mare's reproductive tract for signs of normal activity or for the presence of structural problems.

The veterinarian may also recommend additional testing, such as ultrasound or a uterine biopsy and culture. Such tests help determine the health of the mare's uterus and help establish probability of her conceiving and carrying a healthy foal to term.

At the end of the examination, the vet completes the form by stating that the horse is, or is not, fit to undertake certain disciplines.

Specific examination

If the veterinarian suspects something that may interfere with the horse's intended use, he or she may recommend additional tests. These tests, such as

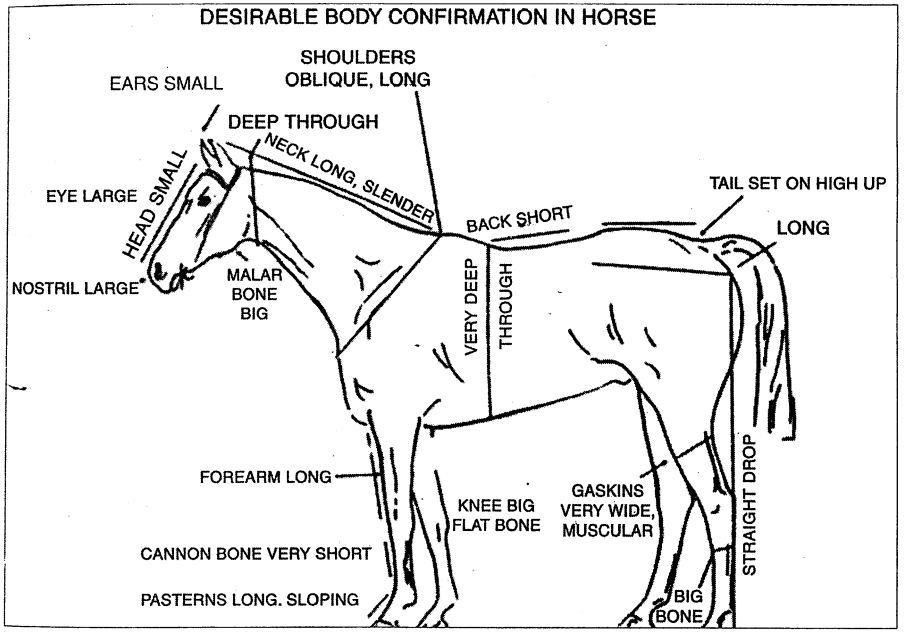
- X-rays.
- Nerve blocks.

- Urine and blood analysis
- Serological tests for detection of certain infectious diseases.
- Endoscopic and ultrasonic examinations.
- *Mallein test* should be conducted for detection of glanders in equines.

Such additional tests provide a clearer picture of the seriousness of the problem.

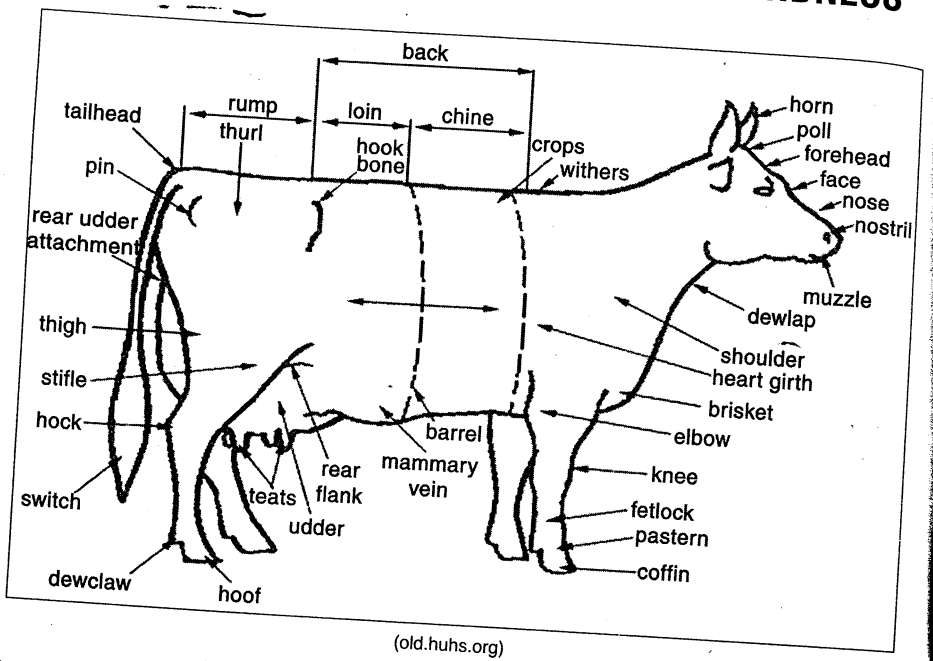
DESIRABLE CONFORMATION OF HORSE

- A bright, alert head and eye, a long neck, and a deep heart girth makes horses more athletic and attractive.
- Short, strong-backed horses, horses with good angle to the shoulder, horses with long hips and strong hind quarters are desired.
- Straight legs, especially through the knees and hocks, suggest that the horse will not breakdown as soon as a horse with crooked legs.



(https://www.extension.purdue.edu/extmedia)

EXAMINATION OF DAIRY CATTLE FOR SOUNDNESS



(old.huhs.org)

Musculoskeletal system

- Examine the skin coat for the presence of conditions like mange, eczema, ringworm, etc.
- Examine the limbs and joints for bony enlargements or synovial distensions.
- Determine the presence or absence of lameness.
- Examine the ribs for fracture and the abdominal wall for the presence of ventral or umbilical hernia.
- In cows possessing horns, the shape, number of horn rings and any difference in the direction or appearance of the two 'horns should also be recorded.
- Examine the superficial lymph nodes for swelling.

Cardio-pulmonary system

- Examine the lungs by auscultation and percussion for bronchitis, heaves and chronic pneumonia.
- Examine the heart by auscultation.
- Examine the jugular vein for venous pulsation.

Digestive system

- Examination of the mouth for purpose of age or any abnormal teeth.
- Left flank should be examined for ruminal tympany and impaction.
- The consistency, colour and odour of faeces should be examined.

Urinary system

- In large animals the kidney and bladder should be examined by rectal examination.

Reproductive system

- In female, the vulva, vagina, uterus and ovaries should be examined for any abnormalities.
- Check the animal for pregnancy.
- In case of male animals, the genital organs (penis, sheathe testicles and epididymis) should be examined.
- The prepuce should be free from swelling and the preputial orifice should not be constricted.
- Bulls having infantile or broken penis should be declared unsound.
- Both testicles must have descended and the testicles with their epididymis and attached cords should fill the scrotum.
- Both the testicles should be firm and free from fibrosis.
- There should not be any sign of orchitis.

Udder

- Examine teats' size, shape, placement and presence of supernumerary teats.
- Check for any leakage from teats
- Examine the teats for any abrasions, warts, pox lesions etc.
- Examine the teat canal for fibrosis
- Palpate each quarter in order to discover swelling, atrophy or fibrous induration.
- The physical examination of milk should be done from individual quarter.
- Check the udder and teats after milking the cow.

Specific examination

It includes the specific tests to detect the following conditions

- Brucellosis
- TB testing
- JD testing

EXAMINATION OF BULLS FOR SOUNDNESS



A basic breeding soundness evaluation consists of:

- Physical examination of the animal.
- Examination of reproductive organs.
- Measurement of scrotal size and testicular tone
- Sheath size and shape
- Pelvic opening
- Semen evaluation
- Mating ability
- Trichomoniasis testing.

Physical examination

- Bulls should have enough condition to be strong and a body condition score of 7 is desirable for range bulls entering the breeding season.
- The animal should not undershot or overshot and there should not be severely worn or lost teeth.
- All four legs and all joints should be clean and free from any swelling or evidence of old injuries.
- Both hooves should be of suitable size to weight bear with the claws of approximately equal size and shape.
- Hind legs should be sound as they are very important to the mating ability of bulls.
- The gait should be well coordinated smooth without overstepping or under stepping.

Reproductive organ examination

- The internal organs are examined by rectal palpation. The common abnormal finding is seminal vesiculitis.

- The vesicular glands, ampullae, and prostate are examined for evidence of inflammation, adhesions, or fibrosis.
- The testicles should be firm, equal in size, and adequate to large for the bull's age.
- Testicular hypoplasia is heritable in which one or both testicles are one-third of normal size.
- The spermatic cord, scrotum, testicles, and epididymides are examined for evidence of abscess, injury, or tumors.
- The penis and sheath should be examined for any sores, lacerations, abscesses, scar tissue, or adhesions.
- On erection with the electro-ejaculator, the penis should come from the sheath in a straight line with the body of the bull.
- Persistent penile frenulum (tied back penis) is occasionally found during this part of the examination.
- Old lacerations and adhesions usually prevent the penis from being fully extended or cause pain during breeding.
- Warts on the tip of the penis are a relatively common finding in young bulls.
- The prepuce should be free from swelling and the preputial orifice should not be constricted.
- Bulls having infantile or broken penis should be declared unsound.

Scrotal circumference and testicular tone

- Scrotal circumference is a measure of the daily and total sperm production of a bull.
- Testicular tone is an approximate indicator of testicular function.
- Bulls with bigger testicles produce more semen and sire sons with bigger testicles.
- Bulls with larger testicles will reach puberty at an earlier age and will sire heifers that reach puberty at an earlier age also.
- Zebu cattle (*Bos indicus*) tend to have small testicle size for age (28 cm at 2 years) compared to *Bos taurus* (32-33 cm at 2 years) breeds.

Sheath size and shape

- Large pendulous sheaths are not uncommon in *Bos indicus* breeds and will predispose the bull to prolapse and preputial damage.

Pelvic opening

- A small pelvic opening, which is heritable can predispose the herd to subsequent calving difficulty and may therefore be considered as an important selection trait.

Semen evaluation

- A semen sample is usually collected from bulls by electro-ejaculation under normal field conditions and is equal to that of any other collection method.
- Failure to obtain sperm cells from a single attempt does not automatically place the bull in the unsatisfactory category.

- A bull can be normal on general physical and reproductive organ examination and still have low fertility due to poor semen quality.

Semen quality

Sperm cell concentration, motility, and morphology evaluations are the basis for the scoring system developed by the Society of Theriogenology.

Mating ability

Libido, or sex drive, is important in the bull's ability to settle a large number of cows however there is no practical way is now known to estimate a bull's potential mating ability except to observe the bull with cows in heat.

Trichomoniasis testing

Trichomoniansis infection in the bulls is responsible for causing frequent abortions in the herd and the bulls testing positive should immediately by culled.

Classification of breeding bulls

Satisfactory Potential Breeder requires a satisfactory physical examination and minimum values for scrotal circumference, motility, and morphology.

Any bull not meeting minimum is classified either as Unsatisfactory Potential Breeder, or classification may be Deferred at the evaluator's discretion.

http://www.thebeefsite.com/articles/719/selecting-bulls-for-structural-soundness-in-beef-cattle

FRAUDS IN THE SALE OF LIVESTOCK

ALTERATION OF DESCRIPTION

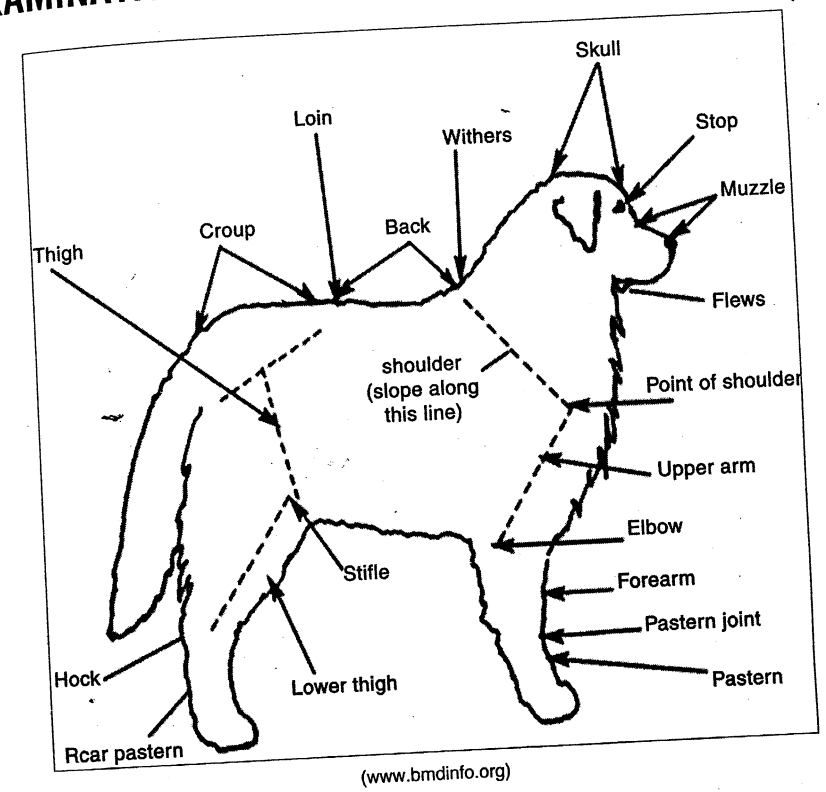
Alteration of the description in animals is usually done either to conceal the identity of the stolen animal or the signs of an unhealthy animal. It is usually done to make animals appear young with the following methods.

- Colouring of white patches with dye
- Clipping of mane and tail
- Docking
- Castration
- Bishoping
  - Making small holes in the table of incisors and filling them with some black substance such as marking nut.
  - Air is blown under the skin of supra orbital fossa of animals.
  - The chronic ulcers and fistulae are often covered with coloured mud.

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* *Frauds in the sale of livestock are punishable under section 420 IPC*

EXAMINATION OF DOGS AND CATS FOR SOUNDNESS



(www.bmdinfo.org)

Head and neck

- Compare both sides of face and head for symmetry.
- Assess eyes for size, position, discharge – lids, conjunctiva, sclera, pupil, cornea, lens
- Note discharge, inflammation, redness, uneven/abnormal pupil size, corneal clouding squinting.
- Evaluate nose and nares for symmetry, conformation, and evidence of discharge.
- Examine oral cavity - lips, mucous membranes, teeth, hard and soft palate, tongue pharynx, tonsils.
- Evaluate carriage and position of ears, thickness/malleability of pinnae an cleanliness of ear canals.
- Palpate the submandibular lymph nodes.
- Palpate salivary glands (normally palpable), larynx and thyroid gland (not normal palpable).
- Palpate the trachea – note coughing, swelling.

Trunk and limbs

- Inspect body for symmetry, masses, tenderness, etc.
- Palpate each limb and joint: Note abnormalities in angulation, deformities, swelling, bleeding, bony protrusions, obvious fractures or joint luxations, range of motion, atrophy, knuckling, crepitus, etc.
- Assess all limbs in weight-bearing and non-weight-bearing positions.
- Note the condition of the feet, nails or hooves.
- Evaluate muscle mass and tone.
- Examine skin and haircoat for alopecia, masses, parasites, dryness, excessive oil, matting, etc.
- Include identification of ectoparasites (fleas, ticks, lice).
- Palpate pelvic region for conformation and symmetry.
- Palpate vertebral column to assess for deviations and pain.
- Palpate peripheral lymph nodes : submandibular, prescapular, axillary, inguinal and popliteal.
- Normal lymph nodes should be firm, and freely moveable. Enlarged or asymmetric lymph nodes may indicate a local or systemic infection, allergy or neoplastic disease.

Thorax

- Observe and palpate the thorax for conformation, symmetry, masses, etc.
- Cardiac auscultation.
- Palpate the area between the fourth and sixth intercostal spaces on both sides of the thorax for the point of maximum intensity of the heartbeat and any cardiac thrills.
- Evaluate heart rate and rhythm.

Respiratory auscultation

- Listen for noisy breathing at mouth and nares without stethoscope, then auscult at least four different areas of the chest, including right and left ventral and right and left dorsal lung fields.

Abdomen

- Inspect for distention, deformity, displacement, symmetry, and bruising.
- Auscultate abdomen to detect intestinal hypermotility or hypomotility.
- Abdominal palpation.
- Using 1 or 2 hands, begin at the spine and move ventrally, allowing the abdominal viscera to slip through the fingers. Repeat throughout abdomen, noting organ size and location and the presence of, fluid, gas, fetuses, masses or feces. Note any pain or guarding of the abdomen.

External genitalia and perineum

- Always verify sex and reproductive status.
- Inspect perianal area for hair mats, hernias, feces, masses and evidence of discharge.
- In dogs - palpate for impacted or abscessed anal sacs.

Male

- Inspect prepuce and penis-noting any discharge, inflammation, tumors.
- Expose penis and look for masses and evidence of trauma, note any color abnormalities.
- If intact – inspect both testicles for symmetry, size, location (both descended) and conformation.

Female

- Palpate and visually assess mammary glands for tumors, cysts, swelling, heat or discharge.
- Inspect vulva for size, inflammation, discharge (blood, pus), polyps, tumors or structural defects.

CERTIFICATE OF IDENTIFICATION



No..... Date.....

This is to certify that I have this day ..... examined the below mentioned animal at the request of Mr..... *S/o*..... *R/o*..... said property of Mr..... *R/o*.....

for the purpose of identification.

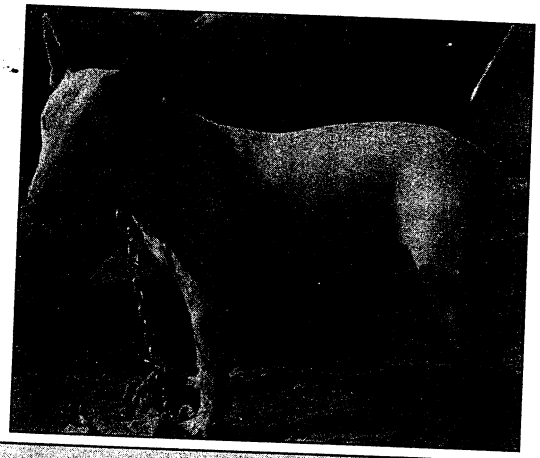
Kind of the animal..... Breed..... Age..... Sex..... Colour..... Height.....

Identification mark (natural) ..... Brand Marks .....

Place:_____ Signature _____

Qualification &Designation _____

CERTIFICATE OF SOUNDNESS



No.....

Date.....

This is to certify that I have this day ..... examined the below mentioned animal at the request of Mr. ..... *S/o* .....

R/o .....

Mr. ..... *R/o* ..... said property of for the purpose of identification

Kind of the animal ..... Breed ..... Age ..... Sex ..... Colour ..... Height .....

Identification marks .....

Defects .....

Opinion .....

Place: _____

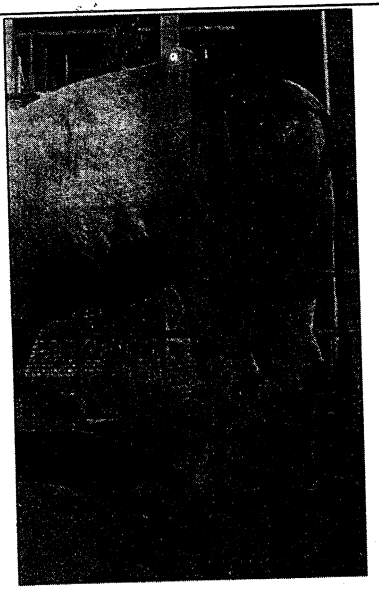
Signature _____

Qualification & Designation _____



7

Common Offences Against Animals



Injury due to sharp edged weapon

CHAPTER OUTLINE

- **Mischief**
  - Maiming
  - Poisoning
  - Killing
- **Bestiality**
- **Cruelty**

COMMON OFFENCES AGAINST ANIMALS

Offence against animals or animal cruelty is no longer a simple issue and categorically cannot be ignored. There are reports that persons indulged in animal cruelty or animal abusing are more likely to commit violent crimes against people. The American Psychiatric Association considers animal cruelty as one of the diagnostic criteria of conduct disorder which is found in those who abuse animals and abuse people. It is considered that deviant behaviors such as animal abuse generally originate from a traumatic childhood. Across the spectrum of animal abuse there are two kinds of animal cruelty.

Active cruelty

It is cruelty inflicted (with deliberate intent to harm an animal creating immediate pain and suffering)

Passive cruelty

It is the harm inflicted via willful neglect creating prolonged suffering

COMMON OFFENCES AGAINST ANIMALS

1	Mischief	• Maiming • Poisoning • Killing
2	Bestiality	
3	Cruelty	

MISCHIEF

MAIMING

It means to mutilate, cripple, or disable a part of the body of a animal. This type of offence is committed with an aim of revenge from the owner when an animal damages crop etc. The maimers were and are seen as perverted and inexplicably cruel. The common forms of maiming are:

- Deliberately drowning the sheep
- Suffocating of animals by stuff wool down sheep's throats, or block the windpipes with large stones, or construct a complex series of nooses in the stalls which would eventually hang the beasts.
- Horses are invariably the victims of the tongue-cutting which was carried out in a number of ways. It varied from the slitting of tongues up the middle, the cutting of the tongues in half, to the even more painful wrenching out of the complete tongue.

- Hamstringing which is, as the name suggests, the cutting of the leg muscles of horses and cattle so as to make them lame.
- Breaking of leg and neck bones
- Stab wounds
- Injury to udder in milch animals
- Injury to the vagina or rectum by introducing sharp or blunt objects

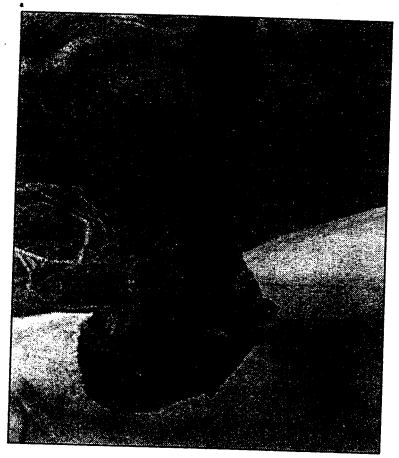
In a study by the MSPCA and Northeastern University, USA the following observation pertaining to the cruelty to animals and other crimes were observed.

ANIMAL VICTIMS

	Animals	Numbers	Percentage
1.	Dogs	155	57.8
2.	Cats	72	26.9
3.	Wild life	14	5.2
4.	Farm animals	8	13
5.	Birds	6	2.2
6.	Horses	3	1.1
7.	Others	10	3.7

METHODS OF CRUELTY

	Method	Number	Percentage
1.	Beating	84	31.3
2.	Shooting	70	26.1
3.	Stabing	29	10.8
4.	Throwing	15	5.6
5.	Burning	10	3.7
6.	Ear/tail cutting	9	3.4
7.	Strangulating	8	3.0
8.	Stone/Crush	8	3.0
9.	Vehicular	8	3.0
10.	Dog attack	6	2.2
11.	Decapitate	5	1.9
12.	Bait	3	1.1
13.	Poison	2	0.7
14.	Castrate	2	0.7
15.	Hanging	1	0.4

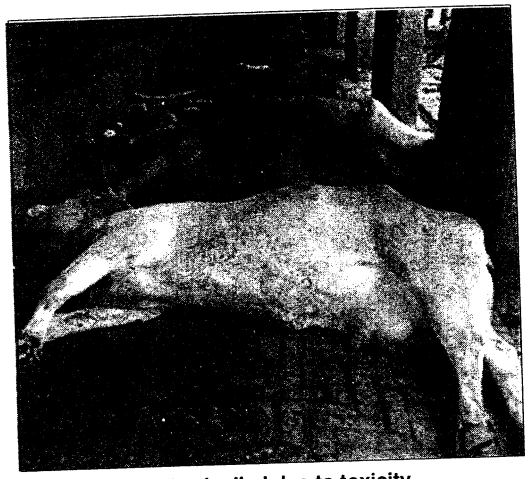


DIFFERENT METHODS OF MAIMING AND NUMBERS OF ANIMALS MAIMED IN EAST ANGLIA

(BY J E ARCHER, 1982)

Method of maiming	Horses and Assess	Cattle	Sheep	Dogs	Cats	Pigs	Poultry	Game
Poison	56	23		21	1	65	19	112
Stabbing & throat slitting	42	23		1	0			
Tails cut	44	9				15		
Drowning			51					
Shooting	8	5		1				
Tongue cutting	7		1					
Hamstringing	2	6						
Stick thrusting	5	1	1					
Suffocation	3	2	1					
Run over			22					
Beaten	2		38					
Bones broken	1		3					
Ear cut off	2							
Burnt alive				1				
Decapitation			1					
Innards drawn			1					
Unspecified	20	7	6			1	4	

DEATH DUE TO POISONING IN ANIMALS



Animals died due to toxicity

It is the most common method of mischievous killing of an animal. Cases of malicious poisoning are common in livestock due to personal enmity in the villages. Common poisons are-

- Datura leaves
- Aconite root
- Arsenic
- Snake venom
- Seeds of yellow oleander and *Abrus precatorius*
- Accidental poisoning may occur in animals by nitrate poisoning, linseed or jowar poisoning.

The forensic investigator may encounter cases that range from intentional poisoning of pest species and secondary exposure of non-target species, to accidental exposure of animals by labeled use of pesticides. Investigators must a have an idea of likely suspect toxins based on history, previous cases for a given region, and post-mortem examination.

In this section there is more discussion on compounds used to intentionally poison animals rather than cases of industrial pollution. Toxins most commonly used include carbamates, organophosphates (OP's), strychnine, anticoagulant rodenticides, thallium, and cyanide. Carbamates and OP's comprise the greatest percentage of toxicosis cases. Many of these chemicals are or have been used in agriculture and are available through distributors as well as other sources.

There are many plants which contain chemicals or which accumulate chemicals that are poisonous to livestock. Out of which accidental nitrate poisoning is very common. It is usually associated with animals ingesting forage or feed with a high nitrate content. Acute poisoning usually occurs between half an hour to four hours after consuming toxic levels of nitrate. Ruminants are more susceptible to poisoning than non-ruminant species because microbes in their digestive tract favor the conversion of nitrate to nitrite which is ten times (10 x) as toxic to cattle as nitrate. Nitrite is absorbed into red blood cells and combines with hemoglobin to form methemoglobin which cannot transport oxygen resulting in increase in the heart and respiration rate of the animal. The blood and tissues of the animal take on a blue to chocolate brown tinge, muscle tremors can develop, staggering occurs, and the animal eventually suffocates.

The majority of nitrate poisoning cases occur with drought-stressed fodder resulting in increased levels of nitrate in plants. Soils high in nitrogen readily supply nitrate to plants. Acidity, sulfur or phosphorus deficiencies, low molybdenum, and low temperatures are known to increase nitrate uptake by plants. Nitrate decreases as plants mature. Young plants have higher nitrate concentrations than mature plants. Acute nitrate poisoning may occur if livestock consume nitrate fertilizer. Avoid grazing immediately after spreading fertilizer. Areas where the fertilizer spreader turns or areas where filling (and consequently spilling) take place may have excessive quantities of nitrate freely available to animals.

PROCEDURES ON SUSPICION

Several factors may clue investigators into a suspicion of toxicosis. For example, a dead animal or localized group of dead animals in an apparently good nutritional state is highly suspicious of a toxin, especially if multiple species are involved.

In some cases, investigators may locate a poisoned bait or have a good indication of agricultural pesticides commonly used in a given area.

- Take careful history, which may indicate changes of feed composition, exposure to poison or administration of potentially toxic preparation.
- Make a careful examination of the environment to look for the potential pathogens.
- Note the symptoms carefully and the time of their occurrence.
- When there is illness of large number of animals at a time and showing the same symptoms and post-mortem lesions.
- Carefully examine dead animals for signs of struggling, frothy nasal discharge etc.

PRIMARY POISONINGS VS. SECONDARY POISONING

Identification of crop or stomach contents may help determine whether a case was caused by primary or secondary toxicosis. Gross comparison of ingested tissues with other carcasses found in the vicinity may help determine the sequence of toxicosis.

It may be necessary to separate the contents from different organs (i.e. crop from proventriculus) and analyze portions or food items separately. There are many keys available for identification of animal hair, and tissues can be positively identified by serologic methods. Also, with today's technology, animals can be positively linked by DNA analysis.

TOXICOLOGIC ANALYSES

As stated above, there is no effective broad-screen method for identifying toxins. The range of possibilities should be narrowed by the history, physical signs, use of pesticides in a given region, and previous cases in an area.

Brain cholinesterase activities can be determined as a screening test for anticholinesterase toxins (carbamates and organophosphates). Brain cholinesterase suppression of 50% or greater is considered diagnostic for death by anticholinesterase poisoning; however, levels frequently exceed 70% under experimental conditions. Wide variation occurs in brain cholinesterase activities under field conditions. This may be confounded by the absence of "normal" reference values for many species.

SUBMISSION OF SPECIMENS IN SUSPECTED CASES OF POISONING

Suspected poison	Material required in order of importance
Antimony	Liver, thyroid, kidney, urine, milk, stomach and gut content
Arsenic (acute)	Liver, kidneys, stomach and gut contents, urine, feed
Arsenic (chronic)	Hair, liver, urine, spleen, altered organs
Alkaloids	Liver, urine, brain, stomach and gut contents
Ammonia	Whole blood or serum, urine, rumen contents (*Send frozen samples) **In rumen contents, may add 1-2 drops of saturated $HgCl_3$*
Barbiturates	Blood, brain, liver, adipose tissue
Cadmium	Kidney, liver, hair
Copper	Liver, blood, kidney, feces, urine
Cyanide (HCN)	Stomach and gut contents, liver, muscles, oxalated blood, brain, suspected feed. **Should be rushed to laboratory in frozen airtight container.* **Liver HCN decreases rapidly, so many times muscle analysis gives good results)*
Fluorides	Altered parts of bone, teeth, urine, stomach contents, liver, kidney, feed and/or drinking water.
Insecticides (chlorinated)	Fat, liver, stomach contents, brain (*Use only glass containers*)
Insecticides (organophosphorus)	Oxalated blood, whole blood, liver, stomach and gut contents
Lead (acute)	Kidneys, liver, urine, whole blood.
Lead (chronic)	Hair, liver, kidneys, bone, feces, urine
Mercury	Liver, kidneys, intestinal contents, stomach contents, muscle, brain, feces
Molybdenum	Feed, liver, kidneys, altered organs (bone), hair **The feed is examined/analysed for its Mo: Cu contents. Liver contains low amount of copper)*

Nitrate and Nitrite	Stomach and gut contents, whole blood, urine, suspected feed *Should be dispatched soon as both nitrate and nitrite alter rapidly and escape detection
Oxalates	Fresh forage, kidneys (*Do not macerate; freeze. fixed in formalin*).
Phenol and cresol	Liver, kidneys, stomach and gut contents
Phosphide	Stomach and gut contents, suspected material (grain, flour etc) (*Dispatch as soon as possible as phosphide breaks down rapidly and hydrogen phosphide produced may escape*)
Phosphorus	Stomach and gut contents, liver, oxalated blood, altered organs (lungs), vomitus, feces
Rodenticides	Stomach contents, liver, urine
Selenium	Suspected feed, altered organs, whole blood, liver, hair
Sodium chloride	Oxalated and whole blood, brain
Sodium fluoro- acetate	Stomach contents, liver
Strychnine	Stomach, gut contents, urine, liver, kidney and brain
Urea	Feed, stomach contents (See ammonia)
Warfarin	Whole blood, liver, feed.
Zinc	Liver, kidney, pancreas, feces, bone (humerus)
Zinc phosphide	Liver, gastric contents, feed (See phosphide)

INTERPRETING RESULTS

Following exposure to a toxin, many processes may affect subsequent post-mortem analyses. The amount of a toxin quantitated in the laboratory is what is left following absorption into tissues, dilution in ingesta, and decomposition of the compound.

Also, vomition or regurgitation will diminish the amount of a compound remaining in the carcass. The lack of poison-laced ingested material does not preclude toxin exposure, as water and percutaneous exposure also may occur. For these reasons, thorough evaluation of toxicosis cases includes ruling out other possible causes of death.

PRECAUTIONS

Always remember that human exposure is a risk with any possible toxicosis case. Adequate protective wear and disposal of tissues and materials is critical. In addition, investigators must familiarize themselves with shipping regulations and follow standards set for hazardous materials. For correct diagnosis, it is essential to have the proper collection, preservation and chemical analysis from a forensic laboratory. The following table gives the summary of the samples to be collected in different suspected conditions. A thorough sampling of tissues in suspected toxicosis cases includes stomach contents, small intestine contents, liver, kidney, brain, and fat.

BESTIALITY

Bestiality means carnal intercourse with man, woman or animal against the order of nature. This type of crime is more frequently found in India due to the following reasons:

- Excessive sexual desire with less opportunity for natural intercourse.
- People having some mental abnormalities.
- Young village boys who go out to graze cattle in fields far away from general public are incited, owing to loneliness and the proximity of the animals, to commit this crime.
- Myth among some people that gonorrhea can be cured by intercourse with a she-donkey.
- In bestiality the human male is generally the active agent and the passive agent is a she-goat, donkey, mare or cow.

EXAMINATION OF ANIMAL BESTIALITY

- The examination of the accused in a sexual offence be performed as soon after the alleged incident as is possible because the signs of commission of the act tend to disappear rapidly for a multiplicity of reasons.
- The usual information that precedes any medico-legal examination i.e. name of the accused, his father's/guardian's name, address, and his stated age; and details of the requisition for examination:
  - number and date of requisition;
  - police officer/magistrate issuing the request;
- The place, date, and time of commencement of the examination are also to be noted.

EXAMINATION OF OFFENDER

- If the offender is caught red-handed or
- The presence of injury marks on the accused caused by kicks, teeth or claws of the animal.
- The presence of smell of urine or feces of animal from the clothes or there may be damage to clothes which may signify struggle or resistance to the act offered by the victim e.g. tears, loss of buttons.
- The local (genital) examination is to secure evidence of sexual intercourse: that includes test for vaginal epithelial cells over glans penis.
- A general examination is then performed to observe, assess, and record –
  - The general demeanour of the accused;
  - His mental state;
  - Signs of intoxication, if any.

EXAMINATION OF ANIMAL

- The vagina of the animal should be examined for evidence of injury.

- Detection of foreign hair and or human spermatozoa in a smear from the vagina of the animal and that from the discharge adhering to the surrounding hairs is suggestive of the offence.
- The presence of organisms of gonorrhea in the vagina of the animal is a sure sign of bestiality.

COLLECTION OF SAMPLES

For circumstantial evidence

- Clothing for debris, blood and semen
- Pubic hair combings for foreign hairs and sample of pubic hair from either party

For DNA, blood grouping

- Clothing for debris, blood and semen
- Swabs of saliva from the mouth and from bites
- Nail scrapings from both parties for blood / tissue from other party
- Saliva and blood for grouping obtained from either party
- Pubic hair

For semen

- Semen stains on the skin
- Vulvar swab
- Upper and lower vaginal swabs
- Anal swab
- Pipette collection of fluid in the vagina for microscopy

For bacteriology / virology: to exclude infections

- Blood for viral studies and for bacterial infections
- Vaginal swab

For alcohol / drugs

- Urine
- Blood

Take the photograph of all the samples collected and of the crime scene.

CRUELTY AGAINST ANIMALS

This offence includes causing suffering and pain to animals which are punishable under Prevention of Cruelty to Animals Act, 1960.

**Bestiality is punishable under Section 377 I.P.C.; Mischief is punishable under Sections 428 & 429 I.P.C.*



8

Animal Welfare



CHAPTER OUTLINE

- Animal welfare
- Animal welfare concerns in India
- Improvement in animal welfare
- Assessment of animal welfare
- The role of the veterinarian in ensuring good animal welfare
- Human and animal welfare in relation to ecosystem and environmental factors
- Animal welfare during disasters
- Types of disasters
  - Effects of disasters on livestock
  - Disaster management in livestock
- Conclusions
- Animal welfare organizations
  - At national level
  - Global

ANIMAL WELFARE

Organized animal welfare can be traced back to philosophical teachings of Pythagoras (6th century) who taught respect for animals believing that transmigration occurred between the souls of humans and animals.

It was because of the recent increased awareness generated by certain animal welfare organizations and establishment of the animal welfare board by the Government of India that led to work in the direction of improvement of animal welfare. Cruelty to animals such as horses, donkeys, elephants, bears, circus animals lab and experimental animals has largely been prevented through the efforts of animal welfare organizations. But so far their efforts are too limited.

Most of the animal owners are not intentionally cruel; rather they live in suboptimal environments and equine husbandry information and outreach are rare commodities. In some cases, it is the limitation of their financial resources that prevents them firm doing more for their animals, hut in many cases, it is simply a lack of knowledge on their parts.

Animal welfare is the physical and psychological well-being of animals. The term *animal welfare* can also mean human concern for animal welfare. Welfare is not just absence of cruelty or unnecessary suffering. It includes the three different states:-

Physical state

Animal copes with its environment. Coping is essentially a reflection of the physical condition of the animal, although mental states may have contributed to this condition.

Mental State

"... neither health nor lack of stress nor fitness is necessary and/or sufficient to conclude that an animal had good welfare. Welfare is dependent upon what animals feel." Duncan, 1993.

Naturalness

It refers to the ability of the animal to fulfill its natural needs and desires. The frustration of these harms its welfare

ANIMAL WELFARE CONCERNS IN INDIA

Human population growth, increasing urbanization and rising incomes are fueling a massive increase in demand and growth for food of animal origin (milk, meat, eggs) in developing countries. In the present capitalistic setup, monetary gains are getting more emphasis then the ethical values. Producers can economically raise livestock and poultry in intensive confinement systems that cause potential problems with animal welfare. These concerns can include how animals are raised for production, transported, and killed for food, how they are used for scientific research, how they are kept as pets, and how human activities affect the survival of endangered species. Poverty, illiteracy, lack of resources and inadequate implementation of animal welfare laws are the major factors contributing towards animal welfare. Some are the common animal welfare concerns in India are:

Poor nutrition

A large number of India's livestock, particularly in the arid and semi-arid environments, suffer from inadequate feeding. The feed and fodder shortages, in fact, have been the main limiting factors in raising livestock productivity. Animal husbandry in India is practiced largely by the poor and is dependent on availability of grazing lands, which have been deteriorating in terms of both quantity and quality.

Poor housing

Concern for farm animals is mainly focused on factory farming, where farm animals are raised in confinement at high stocking density.

Inadequate animal health coverage

In India many diseases such as foot and mouth disease, hemorrhagic septicemia, and black quarter are major threats to profitable livestock production. Livestock disease control has undergone a paradigm shift in recent years. The main limitations to effective livestock health management are an inadequate focus on preventive measures, lack of medicines and equipment in the veterinary clinics, and ignorance among the farmers about the diseases and preventive measures.

Increased incidence of production diseases

In the intensive animal husbandry practices, increased incidence of production diseases. Examples are liver and ruminal abscesses resulting from feeding cattle too much grain, rather that roughage. Other examples are confinement-induced environmental mastitis in dairy cattle.

Loss of workers who are 'animal smart'

In large production units the workers are minimum-wage, often migratory workers with little animal knowledge. Confinement agriculturalists will boast that 'the intelligence is in the system' and thus the historically collective wisdom of husbandry is lost, as is the concept of the historical shepherd, now transmuted into cheap, labour.

Lack of individual attention

Under husbandry systems, each animal is valuable. In intensive animal husbandry practices, the individuals are worth little. When this is coupled with the fact that workers are no longer caretakers, the result is obvious.

The lack of attention to animal needs determined by their physiological and psychological natures

As mentioned earlier, 'technological sanders' allow us to keep animals under condition that violate their natures, thus severing productivity from assured well-being.

Absence of culling policy

India has the largest population of the livestock in the world and due to the financi constraints, unproductive animals are thrown out on the streets and are in pathetic condition

The stray cattle and the continued uninhibited multiplication of dogs are responsible for causing crop damages, many road accidents and dog bites.

Use of animals for draft purpose

In India there are approximately 73 million draught animals, which are responsible for cultivating 85-93 million hectare of land that is 60-65% of the total cultivated area. There are about 35 million animal drawn vehicles out of which 14.4 million are animal carts. Overloading, use of yoke, harnesses and other inefficient form of agricultural equipments of draught animals are the main concerns for the animal for draft purposes.

Poor transport facility for animals

The single most important transportation issue is having a physically fit animal for transport. The greatest welfare problems during transport were caused by death losses of stressed animals and downer animals. This is especially problematic with old cull breeding animals that have little economic value. Over 145 million meat animals and 1800 million poultry also undergo significant suffering from the time they are dispatched for slaughter till they die. Slaughter animals are transported in overcrowded trucks and trains or made to walk long distances.

Poorly maintained and monitored slaughter houses

At the slaughterhouses, rough handling of animals, non-adoption of stunning and slaughtering in sight of other animals are common practices.

Wild animals

India has wide variety of wild animals in different parts of the country. Poaching of wild animals and injuries of the wild animals that stray into urban areas is a serious concern. Besides this catching of birds for export or sale purpose are the major concerns of animal welfare.

Performing and experimental animals

Due to the implementation of the prevention to the cruelty to animals act 1960, there is improvement in the performing animals along with lab and experimental animals for research purpose, still we need to go a long way.

ASSESSMENT IN ANIMAL WELFARE

Welfare is measured by indicators including animal based standards, behavior, physiology, longevity, and reproduction. A welfare indicator that is relevant for inclusion in an operational welfare assessment system should have the following qualities:

- Basis in scientific knowledge and ability to express development over time.
- Measurable on a commercial farm within a realistic framework.
- Relevant as decision support system for the farmer. To fulfill this requirement the welfare indicators must provide information on potential welfare problems and caused of impaired welfare.

Animal-based measures of welfare problems that can be directly observed by a person when he visits a farm, can be very effective for improving welfare. Directly observable conditions are easy for the observer to score and quantify. Some examples are

- Body condition scoring (BCS)
- Lameness scoring
- Falling during handling
- Animal cleanliness scoring.

ANIMAL-BASED MEASURES FOR ON-FARM WELFARE ASSESSMENT CAN BE ROUGHLY DIVIDED IN BEHAVIOUR AND PATHOLOGICAL PARAMETERS

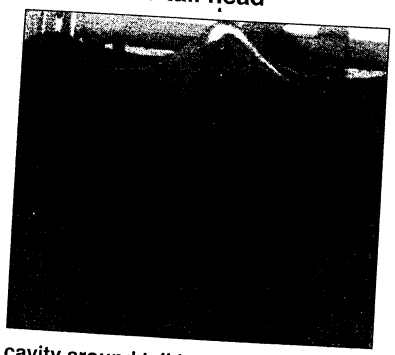
Pathological parameters	Body condition Lameness Injuries Disease incidence Cleanliness
Ethological parameters :	Behavior around resting Agonistic social behaviour Abnormal behaviours Animal-human relationship
Other parameters	Positive indicators Integrity of the animal

Body condition score

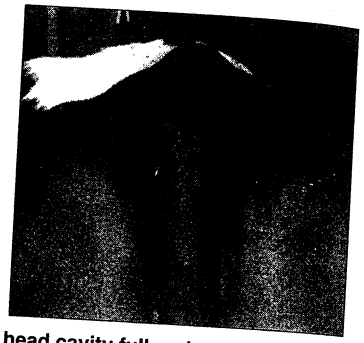
- View the animal from behind and from the side in the loin and tail head area and assess the animals' body condition. Animals must not be touched but only observed.



Cavity around the tail head



Deep cavity around tail head—very lean



Tail head cavity full and presence of folds of fatty tissue—very fat

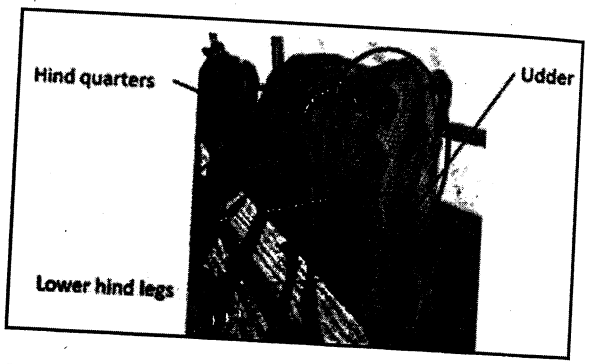
Inspect the four body regions and are scored accordingly

- Tail head
- Hip bones (tuber coxae)
- Spine
- Ribs

Cleanliness scoring

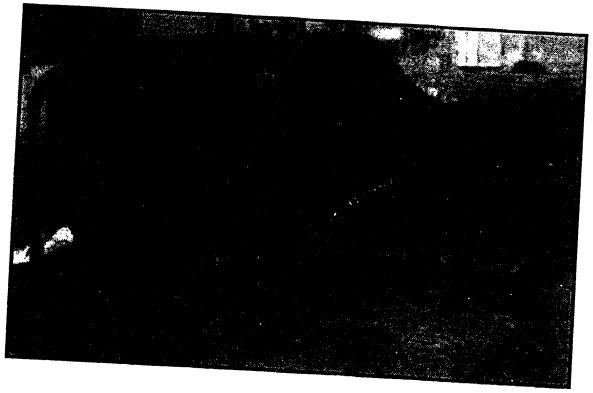
Three areas to be considered

- Hind quarters
- Udder
- Lower hind legs



Main health elements

- Reproduction
- Lameness
- Mastitis
- Metabolic conditions
- Infectious and parasitic disease(TB, JD, Brucellosis etc)
- Injury
- Nutrition
- Culling reasons
- Young stock
- Biosecurity



From a distance not exceeding 2 m, five body regions on one side of the focal animal have to be examined with regard to the criteria listed above.

- Coughing
- Ocular discharge
- Diarrhea
- Milk somatic count
- Dystocia
- Nasal discharge
- Hampered respiration
- Vulvar discharge
- Mortality
- Downer cows

Agonistic social behavior

The agricultural industry has created some housing systems in which animals are not able to behave naturally. Their drive to perform natural behaviors is thwarted and as a result they develop a higher level of frustration in their housing, manifested in various ways but particularly in their expression of behavior. An animal's need to express certain behaviors (e.g. dust bathing, nesting, locomotion, social interaction, seeking, etc.) is blocked in some confinement livestock production systems.

The animals are never going to be able to 'tell' us how they feel and therefore we must try to understand them in a different manner (i.e. through their behavior). When animals are observed in confinement captivity, some of these stereotypical and displacement behaviors are often seen:

- A chicken performing dust-bathing behaviors with no dust
- A sow in a gestation crate bar biting
- A chained-up dog licking its paw repetitively
- A zoo jaguar pacing the perimeter of its cage

The presence of these abnormal behaviors is an indicator that the animal's needs are not being fulfilled. Steps should be taken to provide environmental enrichment to prevent these behaviors.

COMMON STEREOTYPICAL REPETITIVE ABNORMAL BEHAVIORS AND OTHER ABNORMAL BEHAVIORS

Behavior	Species	Description of the behavior
Bar biting	Sows	Animal rhythmically bites or mouths a bar or other object
Tongue rolling	Cattle	Tongue is extended and rapidly moved back and forth
Feather pecking	Layer hens	Pecking at another hen that damages feathers or causes injury
Weaving	Horses	Animal sways back and forth
Cribbing (wind sucking)	Horses	Upper jaw is placed on a fence and the animal rhythmically bites and sucks wind
Pacing	Minks and foxes	Animal circles the cage in a pattern that seldom changes
Wool, hair eating	Sheep, antelope	Pulling wool or hair out of another animal
Belly nosing	Pigs	Animal roots and rubs its nose on other animals
Non-nutritive sucking	Calves	Sucking navels or urine
Tail and ear biting	Pigs	Injures the tail or ears of other animals

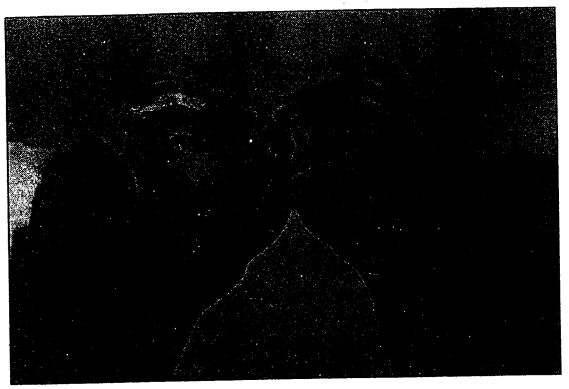
Animal welfare assessment at the slaughter house

- People who handle and stun hundreds or even thousands of animals in slaughter plants often become numb and desensitized to animal suffering. So handling transport and stunning procedures have a tendency to become rough and careless unless they are continuously monitored.
- At the slaughter plant, directly observable animal-based conditions that would be detrimental to welfare can be easily assessed. A few examples are-
- Bruises
- Death losses during transport
- Broken wings on poultry
- Hock burn on poultry
- Disease conditions
- Poor body condition
- Lameness
- Injuries
- Animals covered with manure

INDICATORS OF ANIMAL WELFARE PROBLEMS THAT CAN BE EASILY MEASURED AT THE SLAUGHTER PLANT

Outcomes of rough handling transport problems and abuse	Outcomes of housing problems	Outcomes of poor management, genetic or neglected health problems
• Bruises • Broken wings — poultry • Number dead on arrival • Number non-ambulatory • Injuries such as broken horns or legs • Broken tails • Injuries from specific abusive practices such as poked out eyes, puncture wounds from nails or cut tendons	• Animal covered with manure • Hock burn - poultry • Swellings on the legs of dairy cattle • Pressure sores on sows • Serious wounds from fights • Foot pad lesions — poultry • Eye and lung pathology due to high ammonia levels • Breast blisters on poultry • Hoof problems • Fin erosion on fish	• Body condition • Lameness • Coat/feather condition • Difficult to handle wild animals • Weak animals • Cancer eye • External parasites • Internal parasites • Tail biting • Twisted legs — poultry • Poor leg conformation • Prohibited practices and mutilations • Disease conditions • Dehydration • Horns cut on mature cattle • Liver abscesses — grain fed

IMPROVEMENT IN ANIMAL WELFARE

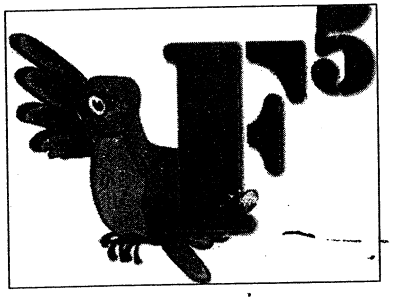


To address the problems of animal welfare in the developing countries, it would be inappropriate to adopt international standards implemented in the developed countries. Each developing country should evolve its own standards based on their own individual priorities. Governments have taken initiatives to establish animal welfare boards and enact laws for the prevention of cruelty to animals, but their efforts are far too limited to be of any significance. So when welfare assessment reveal poor performance, management must determine the exact cause of the problem and there should be all the efforts to improve the animal welfare.

The five freedom concept

An animal welfare code of practice is the application of sensible and sensitive animal husbandry practices to the livestock present on the farm. Welfare codes usually list five basic freedoms that should underpin animal welfare best practice at farm level.

1. Freedom from thirst, hunger and malnutrition
2. Freedom from discomfort
3. Freedom from pain, injury and disease
4. Freedom to express normal patterns of behaviour
5. Freedom from fear and distress.

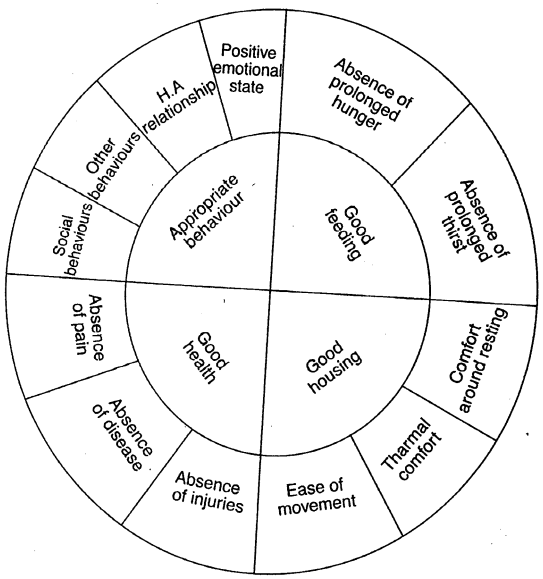


WELFARE QUALITY: CRITERIA AND SUBCRITERIA

Welfare criteria	Welfare subcriteria
Good feeding	Absence of prolonged hunger
	Absence of prolonged thirst
Good housing	Comfort around resting
	Thermal comfort
	Ease of movement
Good health	Absence of injuries
	Absence of disease
	Absence of pain induced by management procedures
Appropriate behaviour	Expression of social behaviours
	Expression of other behaviours
	Good human-animal relationship
	Absence of general fear

At the farm farmer should be able to

- Recognize whether or not the animals are in good health (signs of ill health include: loss of appetite, listlessness, cessation of cudding, abnormal discharge from eyes or nostrils, dribbling, persistent coughing, lameness, swollen joints, scouring, rapid loss of condition or emaciation, excessive scratching, abnormal skin conditions or other unusual conditions)
- Understand the significance of a change in the behavior of the animals.
- Know when veterinary treatment is required.

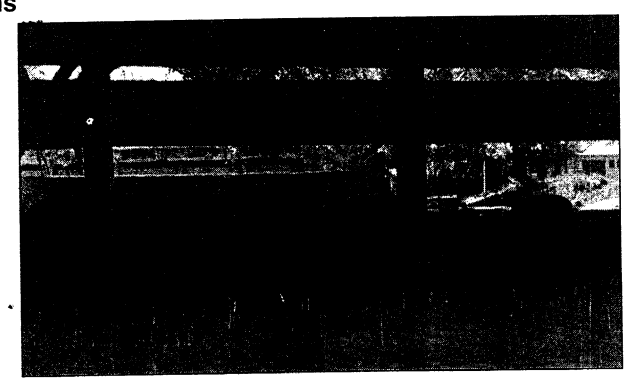


- Implement a planned herd health programme (e.g. preventative treatments, vaccination programmes.
- Implement appropriate animal feeding and grassland management programmes.
- Recognize if the general environment (indoors or outdoors) is adequate for the promotion of good health and welfare.
- Have management skills appropriate to the scale and technical requirements of the production system.
- Handle animals with care, avoiding undue stress.

Draft animals

The welfare of working draft animals can be greatly improved with simple improvements such as providing plenty of water and fitting the harness correctly by providing enough clean padding on harnesses so the animals do not have to work with open sores.

Animal Sheds



- Sheds should be designed to ensure there is plenty of space for the animals to exercise, socialize and rest.
- Sheds must be compliant with, the 'Five Freedoms'

Herd health checks

- Develop health plans for herd
- Vaccinations
- Deworming
- Mineral supplementation
- Proper treatments of diseases
- Regular review of the health plan

Welfare during transport of livestock and poultry

- Good management combined with well-designed equipment must be used together to insure adequate animal welfare during transport and slaughter.
- Improving the Fitness of Animals for Transport

- Design of truck loading ramps, and methods to prevent bruises and climatic stress
- Do not overload trucks.
- Avoid sudden braking and acceleration.

ADVANTAGES OF THE ANIMAL WELFARE

• For the animals	• improved productivity *and* welfare
• For the consumers	• greater trust • greater satisfaction ("feel good" factor)
• For the farmers	• more pride • survival

CONCLUSIONS

In India, the health and welfare of dairy cows should be farmers' priority. All dairy farmers must make an effort for the 'Five freedom's for their animals. Herd health checks, veterinarians and animal nutritionists all contribute to ensuring a good standard of health for the dairy cows. To maintain an adequate level of animal welfare requires constant assessment of the welfare standards.

Under the present conditions it is really difficult to adopt and implement the international standards laid by the developed countries and India has to evolve its own standards and make progress with simple strategies. The concept of animal welfare can be built with the emphasis on the benefits accruing to the people as well as to the animals.

Successful technology transfer of behavioral and animal welfare research to the farm and slaughter plant along with economic incentives and accountability for losses will also improve welfare. Today it is a significant focus of interest or activity in veterinary science, in ethics, and in animal welfare organizations.

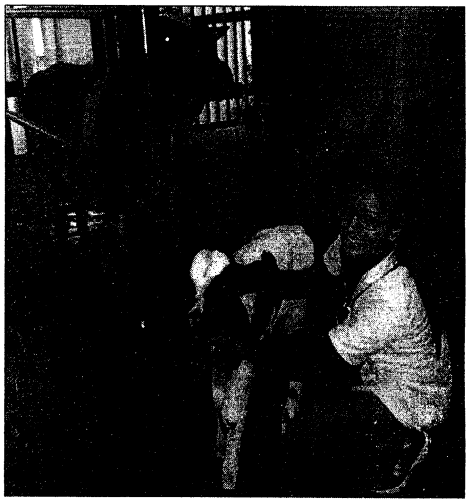
THE ROLE OF THE VETERINARIAN IN ENSURING GOOD ANIMAL WELFARE

Over the years veterinary professionals have played significant and contributory roles in animal and human health and welfare, food quality, food safety, food security, ecology, ethology, epidemiology, physiology, psychology, development of drugs and pharmaceuticals, biomedical research, as educators, trainers, and policymakers, and in wildlife conservation, and the protection of the environment and biodiversity.

Veterinarians have unique attributes that make them valuable partners and effective advocates in serving animals and society. Among these are:

- Strong science-based knowledge about animal health and husbandry, and proficiency in the technical and practical application of that information;
- Empathy, which encourages veterinarians to ensure uses of animals are necessary and appropriate;
- Direct practitioner access to animals, the environments in which they are housed, and the people who own and care for them;

- Regular interactions with other individuals indirectly responsible for the welfare of animals (e.g., other scientists, policy makers, advocates in the industry and humane communities, the public); and
- Long-standing credibility earned through public service and adherence to high ethical and professional standards.



All veterinarians have an opportunity to provide education and knowledge that can promote welfare-friendly animal care practices. Veterinarians must not only work to implement existing standards, but must also contribute to ensuring continual improvement of those standards.

Veterinarians in different types of practices may have unique roles:

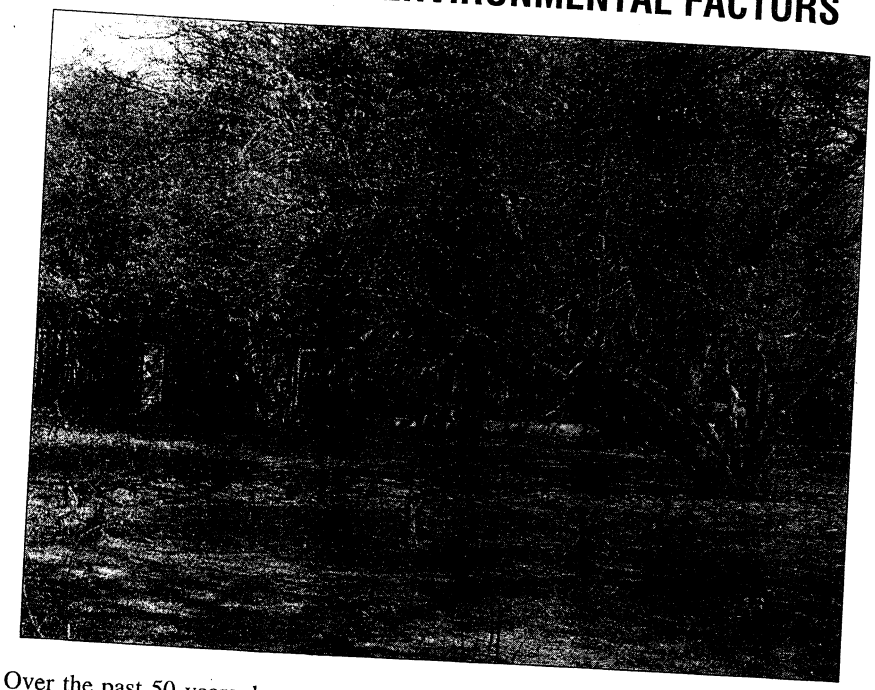
- Private clinical practitioners provide direct-to-owner/caretaker assistance in assessing regularly the welfare of animals and in ensuring good animal welfare.
- Consulting veterinarians may complete in-depth evaluations of facilities and recommend standard operating procedures and best practices.
- Veterinary educators school future generations of veterinarians and paraprofessionals in the scientific and ethical bases behind the development and adoption of appropriate animal care practices.
- Veterinary researchers promote good animal welfare within existing animal care systems and propose alternatives that may better accommodate animal needs. Veterinarians employed in governmental and nongovernmental organizations develop, certify, and enforce animal care standards.
- Veterinarians with species-specific animal welfare expertise can serve as highly qualified, independent evaluators for assurance schemes.

Veterinarians are, and must continually strive to be, the leading advocates for the good welfare of animals in a continually evolving society."

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The Roles of Veterinarians in Ensuring Good Animal Welfare-www.avma.org/issues/policy/roles-veterinarians-ensuring-good-AW.asp.

HUMAN AND ANIMAL WELFARE IN RELATION TO ECOSYSTEM AND ENVIRONMENTAL FACTORS



Over the past 50 years, humans have changed ecosystems faster and more extensively than in any period in human history. This has been due largely to rapidly growing demands for food, freshwater, timber, fiber, and fuel.

Habitat loss, as a result of human demand, is widely considered to be the most important cause of animal extinction. Rainforests are the main habitats for tropical animals. Tropical rainforests are cleared for wood / timber resources, development of petroleum mineral resources, for cash-crop plantations and subsistence farming. The process of habitat destruction is incremental. Each piece of habitat may not seem important individually, but there are cumulative effects.

The larger, wide-ranging species, such as large carnivores, suffer first. Because those groups often contribute to healthy ecosystem processes, a wave of secondary losses may follow their decline. Animals that conflict with humans are also the victims of concerted eradication efforts. When habitat is fragmented, some species die as a direct result of lost resources. Other species survive in reduced numbers in the habitat fragments, but their vulnerability to extinction increases. Populations existing in fragments become susceptible to genetic disorders, demographic problems, environmental variability, and catastrophic events. Fragmented populations are especially vulnerable to deterministic events, such as

susceptibility to poaching, as border areas become population sinks, where population death rates exceed birth rates. In estimated it was calculated that roughly, when 90% of the habitat is eliminated, 50% of the species will be lost.

The changes made to ecosystems have contributed to substantial gains in human well-being and economic development, but these gains have been achieved at growing costs through increases in freshwater use, carbon dioxide emissions, and fertilizer use.

Animal agriculture—the raising of animals for food, clothing, and draught power—is a major contributor to climate change, responsible for 18% of greenhouse gas (GHG) emissions (9 % CO_2, 37 % methane and 65 % N_2O). The increased use of chemical-based agricultural inputs, including artificial fertilizers, pesticides, and herbicides, and their impact on soil and water quality will likely exacerbate the effects of climate change by further degrading other ecosystems such as coral reefs and rivers decreasing the land's ability to produce food. Animals are intrinsically dependent on the environment, and any fluctuations in weather and climate can affect them through water and land changes, such as desertification, and feed and water availability, access, and appropriateness. Climatic changes will have a negative impact on all animals, but particularly livestock who are associated with certain activities that directly contribute to climate change. Warmer and wetter weather (particularly warmer winters) will increase the risk and occurrence of animal diseases, as certain species who serve as disease vectors, such as biting flies and ticks, are more likely to survive year-round. Certain existing parasitic diseases may also become more prevalent, or their geographical range may spread, if rainfall increases. This may contribute to an increase in disease spread including zoonotic diseases.

Such disturbances reduce the abundance of some organisms, cause population growth in others, modify the interactions among organisms, and alter the interactions between organisms and their physical and chemical environments. Patterns of infectious diseases are sensitive to these disturbances.

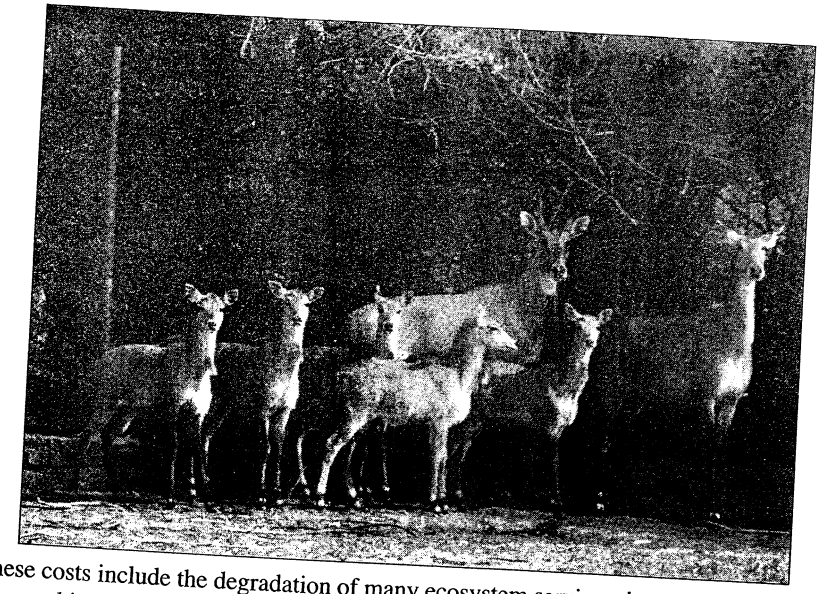
Major processes affecting infectious disease reservoirs and transmission include deforestation; land-use change; water management e.g. through dam construction, irrigation uncontrolled urbanization or urban sprawl; resistance to pesticide chemicals used to control certain disease vectors; climate variability and change; migration and international travel and trade; and the accidental or intentional human introduction of pathogens.

It may be due to this reason that many animal and plant populations have declined in numbers, geographical spread, or both. For instance, a quarter of mammal species are currently threatened by extinction. Human activity has caused between 50 and 1000 times more extinctions in the last 100 years than would have happened due to natural processes. Increasingly, the same species are found at different locations on the planet and the overall biodiversity is decreasing, because some rare species are lost and common ones spread to new areas. Overall, the range of genetic differences within species has declined, particularly for crops and livestock.

Climate change will not only impact the health and welfare of animals, but also the more than billion people who depend on them. Desertification and climate change are inextricably linked through feedbacks between land degradation and precipitation: less rain leads to so

compaction and hardening, making the land unable to absorb rainwater. This could have disastrous effects as rain becomes less frequent but heavier

Climate change is also expected to cause an increase in weather-related disasters and extreme weather events, such as droughts, heat waves, storms, desertification, and increases in insect infestations. It is therefore imperative that animal agriculture practices and the welfare of animals be considered when developing climate change policies and programmes, both as potential victims and causes.

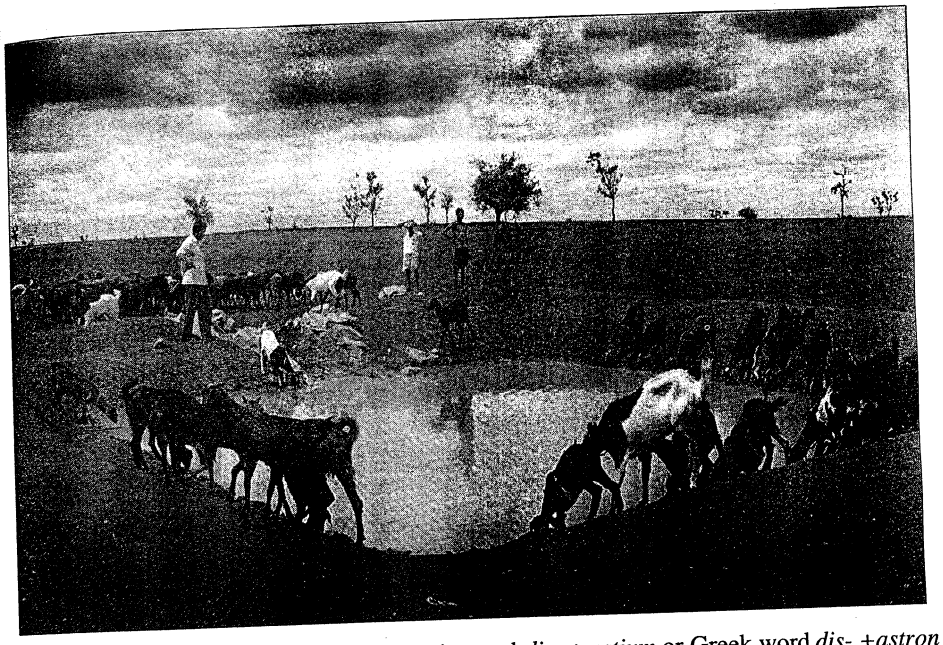


These costs include the degradation of many ecosystem services, increased risks of abrupt changes, and increased poverty for some groups of people. These problems, unless addressed, will substantially reduce the benefits that future generations get from ecosystems.

This degradation of ecosystem services could get significantly worse during the next 50 years. It is a barrier to the achievement of the Millennium Development Goals. Working through these concerns requires a pragmatic approach to ethical analysis, one that is able to make trade-offs among the many goods at stake (e.g., animal welfare, species viability, and ecological integrity) as we strive to protect species from further decline and extinction in this century

Reversing the degradation of ecosystems while meeting increasing demands for their services is a challenge. This challenge can be partially met in the future under scenarios involving significant changes to policies, institutions, and practices. However, these required actions will have to be substantial when compared to the actions currently taken.

ANIMAL WELFARE DURING DISASTERS



The word 'disaster' comes from the Latin word *dis-* + *ostium* or Greek word *dis-* +*astron* meaning something of star-origin i.e. beyond the imagination of humans. Disaster is a sudden, calamitous event bringing great damage, loss, and destruction and devastation to life and property. The damage caused by disasters is immeasurable and varies with the geographical location, climate and the type of the earth surface/degree of vulnerability. Generally, disaster completely disrupts the functioning of society, causing widespread human, animal, material or environmental losses which exceed the ability of the affected society to cope using its own resources. Thus, a disaster may have features like unpredictability, unfamiliarity, speed, urgency, uncertainty and threat. Disasters are of following types.

The continent of Asia is particularly vulnerable to disaster strikes. Within Asia, 24 percent of deaths due to disasters occur in India which is traditionally vulnerable to natural disasters on account of its unique geo-climatic conditions.

Floods, droughts, cyclones, earthquakes and landslides have been recurrent phenomena. The animal causalities in various earthquakes in India were 3096 in Uttarakashi (1991 AD), 15800 in Latur (1993 AD) and 20,000 in Bhuj (2001 AD).

TYPES OF DISASTERS

Natural Disasters	
Major disasters	**Minor disasters**
• Flood	• Cold wave
• Cyclone	• Thunderstorms
• Drought	• Heat waves
• Earthquake	• Land slides
	• Storm
Manmade Disasters	
Major disasters	**Minor disasters**
• Setting of fires	• Road / train accidents, riots
• Epidemic	• Food poisoning
• Deforestation	• Industrial disaster/ crisis
• Pollution due to Chemical pollution,	• Environmental pollution
• Wars	

EFFECTS OF DISASTERS ON LIVESTOCK

Direct effects of disasters

- High incidence of livestock mortality.
- Tethered animals may pull at the neck ropes and try to get free and injured.
- Attacks by poisonous insects, snakes, other rodents, leeches etc.
- Starvation due to inaccessibility to feed and fodder.
- Respiratory problems due to exposure to wet and windy condition especially young ones.

Indirect effects of disasters

- Outbreak of diseases
- Epidemics like FMD, HS, BQ
- Reduction or total loss of production of milk, work, egg etc.

DISASTER MANAGEMENT IN LIVESTOCK

At the global level, there has been considerable concern over natural disasters. Even as substantial scientific and material progress is made, the loss of lives and property due to disasters has not decreased. Disaster management involves preparing for disaster before it occurs, disaster response and supporting, and rebuilding society after the event. Effective emergency management relies on thorough integration of emergency plans at all levels of

government and non-government involvement. Activities at any level affect the other levels. The nature of management depends on local economic and social conditions. In order to deal with the above functional areas, the key responsibilities of agencies include:

PLANNING

It involves the analysis of requirements and the development of strategies for resource utilization.

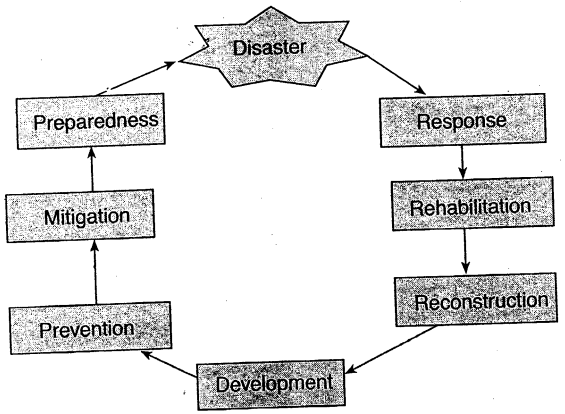
PREPAREDNESS

It involves the establishment of structures; development of systems and testing; and evaluation by organizations of their capacity to perform their allotted roles.

CO-ORDINATION

Bringing together of organizations and resources to ensure effective disaster management.

DISASTER MANAGEMENT CYCLE



PLANNING AND PREPARATIONS

While planning for the disaster management the responsibilities of various persons or institutions are as follows

Responsibilities of animal owners

- To provide care for their animals at all times, including during emergencies, disasters and evacuations.
- To ensure that their animals are not a threat to public health.
- To ensure that their animals do not harm other persons' property, including animals, and limit the spread of contagious disease to other animals.
- Most owners affected by disasters or having to evacuate take their animals stay with friends and family.

Responsibilities of the animal care committee with respect to the care of animals in disasters and evacuations

- To be the principal resource to emergency management to provide care of animals affected by emergencies, disasters and evacuations.
- To familiarize its members with the local emergency operations procedures.
- To identify legislated and/or qualified groups or persons who will care for animals in emergencies, disasters and evacuations.
- To identify resources in the community that is needed to plan and respond to the needs of animals in emergencies, disasters and evacuations, such as housing.
- To care for animals in emergencies, disasters and evacuations.
- To develop with emergency management methods for liability protection and resource funding.

Responsibilities of animal care professionals

- Examples of animal care professionals include: veterinarians, veterinary pharmacists, veterinary technicians, and breeders.
- To provide care for injured and diseased animals in a capacity with which the animal care professional is qualified.
- To monitor animal health in the state.
- To ensure that certain reportable diseases are contained and/or eradicated.

Responsibilities of the state animal husbandry department

- To capture and provide temporary housing of animals stray animals and to ensure that public safety is not endangered by these animals.
- To offer adoption of animals that has been housed for a statutory limit of time.
- To euthanize and dispose of animals, which cannot be adopted for any reason, including injuries, disease, inappropriate behavior, or other undesirable traits.
- To enforce the Animal Welfare Act.
- To ensure that certain reportable diseases are contained and/or eradicated.

Responsibilities of department of health

- Most state departments of health employ a veterinarian to deal with veterinary public health issues. This responsibility should include public health aspects of animal care in disasters.

Responsibilities of the department of forestry

- To manage all aspects of care of native wildlife (dead and alive).
- To certify and license wildlife rehabilitators.

Responsibilities of other groups and persons that provide animal care

- Many of these groups provide charitable services for animals.
- The services provided by these groups should be specified in advance.

Develop an emergency plan and consider the following

- Check whether local arrangements cater for relocation of livestock.
- Coordinate relocation of domestic animals and livestock with neighbors, friends or livestock associations as early as possible.
- Mark exit points and water locations on a map of your property. Have this map available in case someone has to move stock for you.
- If an emergency warning is current, or on days of high risk, consider moving stock into a safe area before leaving your property for any length of time.
- In a bushfire, move animals to a closely grazed or ploughed paddock with drinking water, steel fencing and preferably shade.
- Poultry etc. can be placed in a temporary pen.
- In a flood, move animals to high ground with adequate natural feed. Additional feed may be required for stock stranded for extended periods.
- In a severe storm (including hail) or a cyclone, place animals under solid cover if possible (e.g. sturdy barn/ shed or covered pen).
- In extreme circumstances, the best option may be to cut fences so that stock can escape danger (and be collected later).

RESPONSE PHASE

The response phase includes the mobilization of the necessary emergency services and first responders in the disaster area. This is likely to include a first wave of core emergency services, such as firefighters, police and ambulance crews. They may be supported by a number of secondary emergency services, such as specialist rescue teams. A well-rehearsed emergency plan developed as part of the preparedness phase enables efficient coordination of rescue.

Disaster site or evacuation area

- This is the site where a disaster or from where an evacuation has occurred.
- The priority focus of Animal Care Committee activities at the disaster site is to direct people with animals to an appropriate location away from the evacuation area.
- These owners should be advised to seek accommodation for themselves and their animals with friends or family or to seek temporary rental accommodation.
- If owners do not have these resources available to them they can be referred to the shelter facility.
- Stray animals are rescued from a flooded area after a hurricane be diseased, dispose of animal carcasses (diseased or non-diseased) and provide medical help for sick and injured animals.

Shelter facilities

- If animals are housed in the same building as people, the facility is called a "Public Shelter". A facility that houses animals only is an "Emergency Animal Housing Facility".
- Public shelters must meet public health regulations and shelter operator guidelines.
- The owner of a shelter should agree to admitting animals to the shelter before the facility is needed. These agreements should be made in writing and before a facility is needed to shelter people and house pets. Examples of suitable animal housing areas are within religious places, schools and garages.
- Animals that are not accompanied by their owners (stray animals) and the state animal husbandry department will determine how to deal with stray animals.
- A professional animal health care provider should supervise the housing and health of animals at shelter facilities.

Emergency Operations Center (EOC)

- An Animal Care Committee liaison should be assigned to the local EOC to ensure integration of activities. Staff should be assigned to the operating hours of the EOC.
- The Animal Care Committee liaison receives summary information from field disaster and evacuation sites and using these data can advise the EOC on community programs that have been established to provide care for animals. The principles of emergency management can be applied to three major disasters that threaten the livestock industry: food safety, contagious disease and waste handling

Common problem during disasters

- Because surroundings will have changed following a disaster, animals can be disoriented, frightened or aggressive. So take care when releasing them and do so in a confined area to avoid their escape. For missing animals check with pounds, shelters and animal control authorities.
- Large-scale outbreaks of diseases are the quintessential disasters. Epidemics result in mass mortality of animals, devastating economic impacts on industries and communities. The major infectious diseases during floods are clostridial infections (black leg, tetanus, and malignant edema), foot rot, anthrax, mastitis, leptospirosis, parasitic infestations etc.
- Spoilage of food and water supply
- Zoonoses
- Animal bites
- Impact on public mental health due to the emotional involvement of the owners with the animals
- Reduced dairy and livestock production, due to the scarcity of feed and water, high livestock mortality rates, etc.

SHORT DIETARY REQUIREMENTS FOR FARM ANIMALS DURING DISASTERS –
(FOR SPECIFIC AMOUNT AND TYPE OF FEEDS, CONSULT YOUR VETERINARIAN).

Animals		Amount of water per day (In summer months requirement will be higher)	Amount of feed per day
Dairy cows	In production	7-9 gal	20 lb hay
	Dry cows	7-9 gal	15 lb hay
	Heifers	3-6 gal	8-12 lb hay
	Cow with calf	8-9 gal	12-18 lb legume hay
	Calf (400 lb.)	4-6 gal	8-12 lb legume hay
Swine	Brood sow with litter	4 gal	8 lb grain
	Brood sow (pregnant)	3 gal	2 lb grain
	Gilt or boar	1 gal	3 lb grain
Sheep	Ewe with lamb	1 gal	5 lb hay
	Ewe (dry)	3 qt	3 lb hay
	Weanling lamb	2 qt	3 lb hay
Horses	All breeds	5-12 gal per 1000 lb	20 lb hay per 1000 lb

RECOVERY PHASE

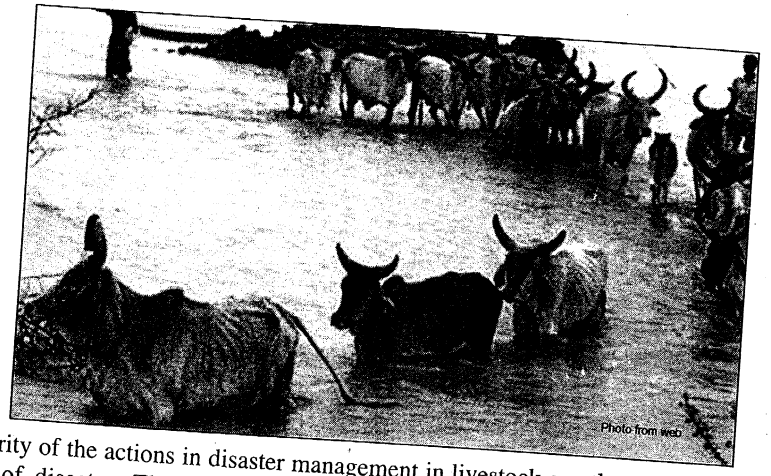
The aim of the recovery phase is to restore the affected area to its previous state. It differs from the response phase in its focus. Recovery efforts are primarily concerned with actions that involve rebuilding destroyed property, re-employment, and the repair of other essential infrastructure after immediate needs are addressed.

Just remember to-

List everything that must be done, and every person who must be contacted from the first individual to contact to the individual with a backhoe (if carcasses need to be buried).

- Use the animal emergency plan only as a guide. Be creative!
- Don't leave out details. When an actual disaster occurs it is too late to look for solutions.
- Hold regular exercises to be sure the plan will operate smoothly and is effective.
- Exercises should be held to practice implementing the disaster plan
- Communicate.
- Keep situation and activity reports of past scenarios. You never know when they might provide critical information.

CONCLUSIONS



Majority of the actions in disaster management in livestock greatly vary depending upon the type of disaster. Therefore, disaster-specific relief manuals/guidelines treating the livestock as living beings need to be developed. Though the relief manuals come very handy in providing immediate relief and rehabilitation in the eventuality of a disaster, these mankind-centric documents give considerably low importance for the livestock which remains the mainstay of livelihood and food security even in a devastated area. This low prioritization and poor preparedness coupled with non-availability of resources makes the situation pathetic in the event of a disaster. This is further compounded with the lack of adequate training of the personnel (Veterinarians and para-veterinarians) engaged in such activities. In the background of the fact that animal welfare is now a global concern, it is necessary that suitable steps are taken to consider livestock as living beings and attending to them from welfare angle instead of treating them as property.

There is a need to integrate the disaster management initiatives/plans with the existing International/National/State/District development plans on animal husbandry and veterinary services with a holistic approach with livestock welfare ingrained in such disaster management plans at all levels. The possible ways of such integration are inclusion of the components in the existing scheme like disaster mapping and disease forecasting, management of disaster caused by outbreak of animal diseases, strengthening and up gradation of the field Veterinary institutions including the diagnostic laboratories, need based research and development of livestock breeds suitable for disaster prone areas, mass vaccination, capacity building for handling livestock related disasters and evolving it as a component of 'all hazard' approach, mass campaign for community sensitization, scheme for development and storage of special feeds, fodder bricks, drinking water and medicines for use in different phases of disaster management cycle. Capacity building of the concerned officials may range from preliminary training in the form of continuing Veterinary education of short duration to development of a specialized cadre of experts with post graduate qualification in disaster management/handling. There should be long-term, inclusive and coherent institutional arrangements to address disaster issues with a long term vision.

ANIMAL WELFARE ORGANIZATIONS

AT NATIONAL LEVEL

ANIMAL WELFARE BOARD OF INDIA

To keep the law in force in India for the prevention of cruelty to animals and advice the Government on the amendments to be undertaken in any such law from time to time

WILDLIFE INSTITUTE OF INDIA (WII)

It is an institution under the Ministry of Environment and Forests, Government of India. WII carries out wildlife research in areas of study like Biodiversity, Endangered Species, Wildlife Policy, Wildlife Management, Wildlife Forensics and Climate Change.

PETA

Founded in 2000, PETA India operates through investigative and legislative work, public education, animal rescues, and outreach with youth to improve the quality of life for animals.

BLUE CROSS OF INDIA (BCI)

It is an animal welfare charity based in Chennai, and runs several animal welfare programs.

NATIONAL INSTITUTE OF ANIMAL WELFARE (NIAW)

It is a division of the Ministry of Environment and Forests, Government of India and has a broad mandate that covers the need to improve animal welfare through research, education and public outreach.

PEOPLE FOR ANIMALS (PFA)

PFA is animal welfare organization with a nationwide network of 26 hospitals, 165 units and work to rescue and rehabilitate sick and needy animals.

PET ANIMAL WELFARE SOCIETY (PAWS)

It is a non–government, registered animal welfare organization working for prevention of cruelty towards animals and a better environment for mankind.

BUDDHA SOCIETY FOR ANIMAL WELFARE (BSAW)

BSAW trust established to provide veterinary medical service for those animals who are less privileged than others deprived of minimum essential veterinary medical aid.

THE WILDLIFE RESCUE & REHABILITATION CENTRE (WRRC)

It is a registered public charitable Trust for the conservation and welfare of wildlife rescued from urban and rural areas around Bangalore, India.

(There are more than 3000 animal welfare organizations recognized by the animal welfare board of India. The detailed lists of these organizations can be checked on the site of animal welfare board of India)

GLOBAL



WORLD ORGANIZATION FOR ANIMAL HEALTH (OIE)

The OIE has been established "for the purpose of projects of international public utility relating to the control of animal diseases, including those affecting humans and the promotion of animal welfare and animal production food safety.

WORLD SOCIETY FOR THE PROTECTION OF ANIMALS (WSPA)

Tackles animal cruelty across the globe. WSPAs objectives include; helping people understand the critical importance of good animal welfare, encouraging nations to commit to animal-friendly practices and building the scientific case for the better treatment of animals.

COMPASSION IN WORLD FARMING

Compassion in World Farming is the leading non-governmental organization (NGO) working internationally to advance the welfare of farm animals and to achieve a vibrant rural economy based on humane and environmentally sustainable farming methods. Compassion also has offices and representatives in four continents, including in China.

INTERNATIONAL FUND FOR ANIMAL WELFARE (IFAW)

The International Fund for Animal Welfare (IFAW) works to improve the welfare of wild and domestic animals throughout the world by reducing commercial exploitation of animals, protecting wildlife habitats, and assisting animals in distress.

HUMANE SOCIETY INTERNATIONAL (HSI)

Humane Society International (HSI) is the international arm of The Humane Society of the United States (HSUS), a charitable nonprofit organization founded in 1954 with a constituency of more than ten million people, and incorporates both policy and on-the-ground programs in countries around the world. HSI oversees and coordinates the work of The HSUS around

ROYAL SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS (RSPCA)

Founded in 1824, it is the oldest animal charity in the world has programmes in more than 50 countries globally.

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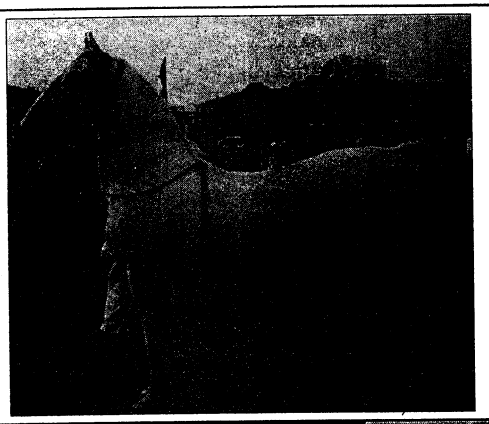
USEFUL WEB SITES

- American Red Cross Disaster Services http://www.redcross.org/disaster/safety/guide.html
- DEFRA – Animal Health and Welfare Strategy for Great Britain http://www.defra.gov.uk/animalh/ahws /
- Federal Emergency Management Agency (FEMA) Virtual Library and Electronic Reading Room http://www.fema.gov/library/
- Grandin T, Recommended Animal Handling Guidelines & Audit Guide, www.meatami.com; www.grandin.com
- Poultry Program Standardization Branch www.ams.usda.gov/poultry.
- Sheep Care Guide, 2002, 18 pp. :www.sheepusa.org
- The Prevention Of Cruelty To Animals Act, 1960.envfor.nic.in/legis/awbi/awbi01.pdf
- The welfare of animals during transport http://ec.europa.eu/food/fs/sc/scah/out71_en.pdf
- University of California. *Division of Agriculture and Natural Resources Guide to Disaster Preparedness Resources.* Available at http://www.vetmed.ucdavis.edu/vetext/INF-DI_DANRGuide.html
- University of Colorado Health Sciences Center Animal Care & Use Program http://www.uchsc.edu/animal/.
- University of Florida Emergencies http://www.health.ufl.edu/acs/emergency.htm.
- USDA Agricultural Marketing Service (livestock & meat marketing claims) :www.ams.usda.gov/lsg
- USDA Animal Welfare Information Center www.nal.usda.gov/awic/
- USDA Food Safety and Inspection Service (meat, poultry, & egg product labeling): www.fsis.usda.gov



9

Doping and Euthanasia of Animals



CHAPTER OUTLINE

- **Doping**
  - Commonly used substances to dope animals
  - Mode of administration of drugs
  - Clinical manifestations in doping
  - Procedure of taking sample
  - Analysis and detection for detection of doping
  - Exercise
- **Criteria and standards of euthanasia of animals**
  - Concerns and considerations for euthanising animals
  - Conditions requiring euthanasia of animals
  - Prohibited methods of inducing euthanasia
  - Essential principles of conducting euthanasia
  - Procedures of euthanasia
  - General considerations for choice of the euthanasia drug / procedures
  - Pre-euthanasia drugs – Tranquilizers / Sedatives / Immobilizers
  - General guidelines for euthanasia for different species of animals
  - Consent form for euthanasia

DOPING



Doping is the advertent or inadvertent use of substances of forbidden classes or of forbidden methods, which have been defined by the actual doping list. Normally doping is used in racehorses and greyhounds to affect their performance in a particular event. Generally the official list of banned substances is as follows:

- Substances acting on the nervous system
- Substances acting on the cardiovascular system
- Substances acting on the respiratory system
- Substances acting on the digestive system
- Substances acting on the urinary system
- Substances acting on the reproductive system
- Substances acting on the musculoskeletal system
- Substances acting on the blood system
- Substances acting on the immune system other than those in licensed vaccines
- Substances acting on the endocrine system; endocrine secretions and their synthetic counterparts.

For better understanding these include:

- Anti-pyretic, analgesics and anti-inflammatory substances
- Cytotoxic substances
- Antihistamines
- Diuretics
- Local anesthetics
- Muscle relaxants
- Respiratory stimulants
- Sex hormones, anabolic agents and corticosteroids

Commonly used substances to dope animals can be divided into two groups.

Stimulants

They have been used with the hope of improving training, endurance and performance of the race animals.

Depressants

They are used when there is desire to retard the animal's speed so that it does not win.

COMMONLY USED SUBSTANCES TO DOPE ANIMALS

Adrenaline	Barbiturates
Amphetamine	Chlorbutol
Caffeine and theobromine	Heroin
Methylprednisolone and other corticosteroids	Morphine
Cocaine	Flunixin
Leptazol	Phenylbutazone
Strychnine	Promazine
Picrotoxin	

Mode of administration of drugs

In most of the cases the drug is given by mouth most often mixed with normal foodstuffs within three hours of the race. Drugs can be injected parentally to the animals.

Clinical manifestations in doping

The doper does not always succeed in avoiding noticeable change in the behavior. After doping following clinical signs may be observed in animals:

Change in behavior

The animal may be violently excited or it may be virtually somnolent.

Gait

It may become inordinate.

Procedure of taking sample

- The horses /dogs which are tested are selected at the end of each race by the race stewards.
- They decide which animal to test based upon the animals' performance compared with its expected performance, its finishing position, the random testing procedure, or whether any prior indication was given to the stewards that a particular horse may be doped.
- Once an animal has been selected for testing, it is separated from the rest of the runners and taken to the testing unit where it is inspected by a veterinary technician or doping control officer.
- It is this person who is responsible for ensuring the safe collection of a sample, usually urine unless one cannot be given in which case a blood sample is taken.
- The competitor divides the urine sample into two portions, pour into two vials viz A and B and seal them,
- The sample is then transported to the accredited forensic laboratory of the country.

Analysis and detection for detection of doping

- Once the sample arrives, the second, or B, sample is put into deep freeze storage.
- Mass spectrometry, gas chromatography, high performance liquid chromatography and immunoassay are also presently employed as methods of analysis and detection of doping.
- If the test of the A sample is negative, the B sample is then immediately destroyed.
- However, if the test is positive the B sample is then sent to another laboratory abroad for a confirmatory test.
- Both tests need to come back positive for a animal to be deemed as having been doped.
- The reason the second samples is taken and sent abroad is so that independent verification can be obtained.
- If a animal is found positive on both tests an inquiry is then launched.

EXERCISE

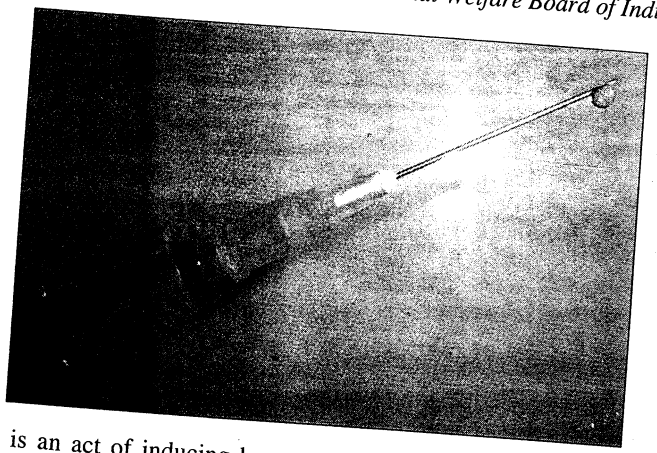


- At race course, below is a list of results of the various horses.
- From this list look at the positions the horses finished in and see if it matches their expected positions.
- It is not necessary that they should be in exact sequence but should be more or less.
- If an outside horse wins, it indicates a good chance of foul play.
- Similarly, if a favorite horse loses, this also indicates fowl play.
- There are five horses from the thirty-two below which need testing.
- As an example the first race shows the horses in approximately the correct order, except for the final horse who should of finished higher.
- Spot the other four.

RACE ONE			RACE TWO		
Position	Horse	Odds	Position	Horse	Odds
1st	Air Express	3-2	1st	Sandy	22-1
2nd	Apache	6-1	2nd	Mohan	5-4
3rd	Abaccus	4-1	3rd	Ranjit	5-2
4th	Tiger	8-1	4th	Apollo	8-1
5th	Old Nag	15-1	5th	Nawab	13-1
6th	Naughty boy	12-1	6th	Hero	12-1
7th	Rocket	45-1	7th	Saab	15-1
8th	Beauty's star	6-1	8th	Shotgun	100-1
RACE THREE			**RACE FOUR**		
Position	Horse	Odds	Position	Horse	Odds
1st	Red fire	3-1	1st	Blue moon	25-1
2nd	Racer	9-2	2nd	Bobby	66-1
3rd	Hunter	6-1	3rd	Red star	3-1
4th	Casper	7-1	4th	Rock star	5-1
5th	Cow boy	11-1	5th	Chocolate	7-1
6th	Czar	15-1	6th	Bullet	16-1
7th	Brave boy	33-1	7th	Desert storm	12-1
8th	Pride	33-1	8th	Bolt	2-1

CRITERIA AND STANDARDS OF EUTHANASIA OF ANIMALS

(As per the recommendations of the Animal Welfare Board of India)



Euthanasia is an act of inducing humane death in an animal with minimal pain and distress. The word Euthanasia comes from the Greek word "eu" meaning good and the word "thanotos" meaning death. Euthanasia is thus the process of inducing a "good death." Euthanasia is generally done in hopeless cases, to alleviate the pain and suffering of animals. It is the responsibility of the veterinarian administering euthanasia to ensure that the animal is dealt with highest degree of respect, with an emphasis on making the entire procedure as painless and distress free for the animal as possible. Euthanasia should result in rapid loss of consciousness followed by cardiac or respiratory arrest and the ultimate loss of brain function. It is important that the death of the animal is confirmed after euthanasia by examining the animal for cessation of vital parameters (heart beat/respiration).

CONCERNS AND CONSIDERATIONS FOR EUTHANISING ANIMALS

The following essential considerations must be kept in mind by the veterinarian while performing euthanasia: -

- Veterinarians have the primary obligation to relieve an animal's incurable suffering and pain by performing euthanasia
- A veterinarian must not cause any animal to suffer by failing to maintain adequate paw control and relief of suffering.

Decision making to perform euthanasia of an animal

The following points need consideration to perform euthanasia of an animal.

- History and seriousness of present illness and general health of the animal.
- Thorough physical examination for evidences of intractable or incurable condition / ailments

- Prognosis of the case based on the above observations.
- Future life of the animal if not euthanized especially in relation to the five freedoms mentioned in animal welfare.

The decision to perform euthanasia is ultimately vested with the veterinarian based on the above guidelines. Subsequent to the decision, the procedure to be adopted for administering euthanasia will be as per the guidelines / standards explained below.

GENERAL CONSIDERATIONS FOR CHOICE OF THE EUTHANASIA DRUG / PROCEDURES

- Ability to induce loss of consciousness and death without causing pain, distress, anxiety or apprehension
- Time required to induce loss of consciousness
- Reliability of the procedure
- Safety of personnel.
- Irreversibility of the procedure:
- Compatibility with requirement and purpose.
- Emotional effect on observers or operators.
- Compatibility with subsequent evaluation, examination or use of tissues
- Drug availability, cost and human abuse" potential.
- Compatibility with species, age and health status.
- Abillty to maintain equipment in proper working order.
- Safety for predators/scavengers should the carcass be consumed.

Human behavioral considerations for animal euthanasia

- Moral and ethical concerns with regard to grief at the loss of life.
- The Veterinarian certifying the need for euthanasia must give due consideration to moral and ethical concerns.
- When owners choose to witness the procedure they must be fully aware of the happening.
- Emotional uneasiness, discomfort or distress experienced by people to be minimized by utmost care and concern in handling of animal, choice of drug and procedure.
- Utmost care in planning use of animals in research especially if euthanasia is the ultimate method of disposal.
- Handling wildlife, relocation issues, need to euthanize, public, political administrative pressures.
- Mass euthanasia of poultry and livestock in the face of disease outbreaks, bio-terrorism and natural disasters.

Animal behavioral considerations

- Minimal animal distress in handling (reduce animal fear, anxiety, nervousness).
- Careful and effective sedation prior to euthanasia.
- Special attention to restraint in handling of wild and feral animals.

CONDITIONS REQUIRING EUTHANASIA OF ANIMALS

- Old age associated with debility, poor mobility and recoverability to normal health
- Incurable specific diseases (caused by bacteria, virus, endo-parasites, ecto-parasites, rickettsia, fungi etc.)
- Incurable systematic or non-specific diseases (cancer, tumors, pneumonia, nephritis, hepatitis, dermatitis etc.) which may cause severe pain, digestive disorders, poor mobility, lack of appetite and will not respond to treatment.
- Natural disasters - drowning, extensive fire burn wounds, cachexia due to starvation and inability to consume food
- Rail and road accident victims with multiple fractures, grievous injuries, extensive tear, laceration wounds that cannot be repaired, head injuries leading to severe shock, permanent disabilities affecting normal movement
- Serious conditions of shock, coma and unconsciousness that cannot be treated
- Animals suffering from zoonotic diseases
- Animals mutilated during research studies that cannot be restored to normalcy and will be in agony if permitted to survive
- Destruction of in contact / suspected animals in the event of outbreak of contagious / infectious diseases in animals or birds and more seriously considered if the disease can spread to human populations

PROHIBITED METHODS OF INDUCING EUTHANASIA

- Electrocution - Hanging
- Stunning
- Hypothermia
- Drowning
- Using household products and solvents for euthanasia
- Formalin injection
- Neuromuscular blocking agents injection (nicotine, magnesium sulphate, curariform agents)
- Burning
- Rapid freezing
- Chloroform
- Strychnine injection
- Exsanguination
- Decompression
- Air embolism
- Cyanide administration
- Chloral hydrate injection

ESSENTIAL PRINCIPLES OF CONDUCTING EUTHANASIA

- Euthanasia techniques should result in rapid loss of consciousness followed by cardiac or respiratory arrest and the ultimate loss of brain function.

- The technique chosen should minimize distress and anxiety experienced by the animal prior to loss of consciousness.
- The drugs chosen should be of proven quality cost effective and easily available.
- Veterinarian conducting euthanasia must be knowledgeable on the dose and route of administration of the drug.
- Veterinarian performing euthanasia must have appropriate training and experience in the techniques being used and humane restraint of the animal to be euthanized to ensure minimal pain and distress to the animal.
- Selection of the most appropriate method of euthanasia in any given situation depends on the species of animal involved, available means of animal restraint, professional skill of personnel and number of animals to be euthanized.

PROCEDURES OF EUTHANASIA

- The methods and drugs to euthanize animals is this document is with relevance to the availability of cost effective drugs in the field conditions in India. Availability of skilled and semi-skilled manpower, the standards has been drawn for euthanasia of animals of different species. In view of the poor infrastructure and non-availability of gaseous agents all over India in general, these agents have not been considered.

Pre-euthanasia drugs - Tranquilizers / Sedatives / Immobilizers

- Medication with these drugs is required to facilitate humane handling of animals prior to Euthanasia to reduce stress in handling of animals.

GENERAL GUIDELINES FOR EUTHANASIA FOR DIFFERENT SPECIES OF ANIMALS

Laboratory animals

- Sedate the animal with xylazine I/M followed by thiopentone sodium IV.
- Sedation of the animal with xylazine followed by physical method (cervical decapitation). This method can be adopted for smaller species and neonates.

Aviary and Poultry

- Sedation with ketamine I/M and followed by cervical dislocation.
- Sedation with ketamine I/M followed by thiopentone sodium I/V.

Dogs and cats

- Sedation with xylazine I/M followed by thiopentone sodium I/V.
- Sedation with acepromazine I/M followed by thiopentone sodium I/V.
- Sedation with Diazepam I/V followed by thiopentone sodium I/V.

Reptiles

- Sedation with xylazine and ketamine followed by thiopentone sodium

Elephants and camels

- Immobilization with xylazine and ketamine followed by potassium chloride 10% solution I/V.

Equines

- Sedation with acepromazine I/M / xylazine I/M followed by thiopentone sodium I/V or potassium chloride 10% solution I/V.

Livestock

- Sedation with xylazine I/M and ketamine I/V followed by10% potassium chloride/ Thiopentone sodium
- For swine restraining with gallamine I/M, followed by sedation with xylazine, followed by potassium chloride /thiopentone sodium I/V.

NOTE

- Potassium chloride10% solution must be given intravenously at a very fast pace after proper sedation of the animal.
- Barbiturates (thiopentone) at three times the anesthetic dose can be administered for euthanasia.
- Proper carcass disposal should be ensured after euthanasia as most of the drugs used for euthanasia will have residual effect / harmful to predators and scavengers.

SEDATION DOSAGE FOR SEDATION WITH XYLAZINE (MG/KG BODY WEIGHT)

Sr. No.	Species	Dose (mg/Kg)
1	Dogs and cats	0.5-1.0 mg IV, 1-2 mg IM/SC
2.	Cattle	0.05-0.15 mg IV, 0.10-0.33 mg IM
3.	Horses	1.1 mg IV, 2.2 mg IM
4.	Sheep and goat	0.05-0.10 mg IV , 0.10-0.22 mg IM
5.	Camels	0.5 mg IM
6.	Elephant	0.1 mg IM
7.	Deer species	3mg IM
8.	Bison/Yak	0.6-1 mg IM
9.	Bear/Lion/ Spotted Leopard	8-10 mg IM
10.	Wolf	7-8 mg IM
11.	Primates	2-5 mg IM
12.	Zebra	3-5 mg IM
13.	Rabbits	5 mg SQ/IM
14.	Mice/ rats	13mgIP
15.	Hamsters/ guinea pigs	8-10 mg IP

IV-Intravenous; IM- Intramuscular; SC- Subcutaneous; IP- Intraperitoneal

SEDATION USING KETAMINE HCI IN COMBINATION WITH XYLAZINE

Sr. No.	Species	Dose (mg/kg) route	Remarks
1.	Cattle	2.2 IV	
2	Sheep	22IV	
3	Goats	11IM	
4	Camels	1-2 IM	
5	Reptiles	10-20 IM	
6	Birds	0.1-0.2 IM	Birds <100 g
		0.05to 0.1 mg IM	Birds weighing 250-500 g
		0.02 to 0.1 mg IM	Birds weighing 500 g to 3 kg
		0.02 to 0.05 mg IM	Birds weighing > 3kg

EUTHANISING AGENTS WITH DOSAGES FOR DIFFERENT ANIMALS THIOPENTONE SODIUM I/V AND POTASSIUM CHLORIDE I/V

Sr. No.	Species	Thiopentone (mg/kg) / route	Remarks
1.	Dogs and cats	90 IV	Alternatively 10% potassium chloride can be used as euthanizing agent after xylazine sedation
2.	Cats	90 IV	—
3.	Horses and swine	35 IV	With preanesthetic tranquilization
4.	Swine	35IV	Swine weighing 5-50 kg
5.	Sheep	45 IV	
6.	Goats	70 IV	
7.	Cattle	120 1V	
8.	Mouse /Rabbits	150 IP	
9.	Hamster /Rats	120 IP	

ETORPHINE

Sr. No.	Species	Dose (mg/kg) route	Remarks
1.	Zebra	Total dose 1.5 mg	Drug is highly potent. Even 1.5 mg is fatal
2.	Chimpanzees	0.66-1.76 µg/kg IM	
3.	Small primates	0.44-1.3 µg/kg IM	
4.	Elephants	5-8 mg total dose IM	
5.	Camel	0.25-0.5 mg/45 kg IM	
GALLAMINE			
1	Swine	4 mg IM	

COMMENTS

Veterinarian performing euthanasia must confirm the death of the animal.

Confirmation of death is made from the following parameters:-

- No movement of the chest / No sign of respiration
- No heart beat when checked with the stethoscope
- No pulse on palpation.
- Colour of the mucous membranes turns blue from brightened in the animal mouth
- Loss of corneal reflex and glazing of the eyes.

CONSENT FORM FOR EUTHANASIA

Animal..... **Breed**..... **Sex**..... **Age** .....

Colour and identification marks.....

I, the undersigned, do hereby certify that I am the owner (duly authorized agent for the owner) of the animal described above.

I do hereby give the veterinarians/ representatives ..... (Name of the Veterinary Hospital) complete authority to destroy and dispose of the said animal in whatever manner the doctors or their representatives shall deem fit; and I do hereby forever release the said doctors or their representatives from any and all liability of so destroying the said animal. I do also certify that to the best of my knowledge the said animal has not bitten any person or animal during the last fifteen days, and has not been exposed to rabies.

Date & Place.....

(Signature of the owner or authorized agent)

Name..... Address.....

For office record

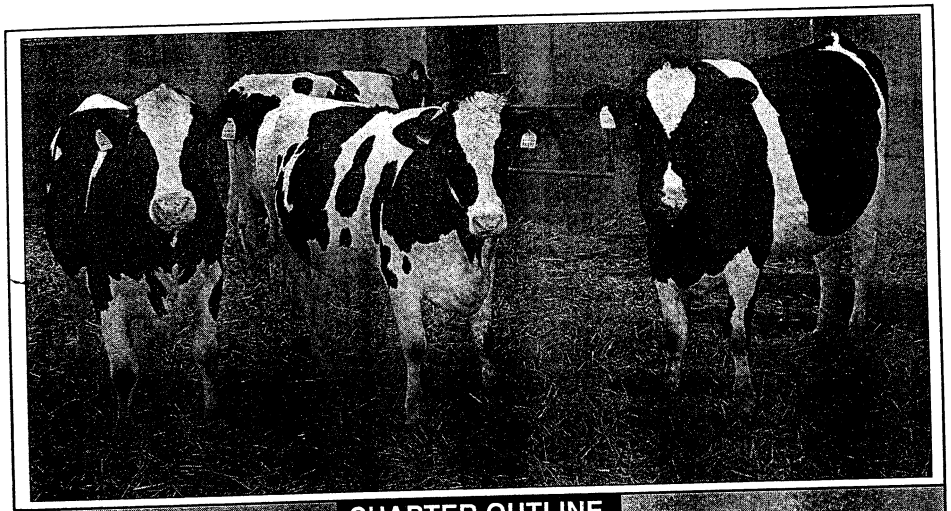
Mode of euthanasia ..... **Mode of disposal of carcass** .....

Date..... Signature of Doctor .....



10

Livestock Insurance



CHAPTER OUTLINE

- **Cattle and livestock insurance**
- **Poultry insurance**
- **Animal driven cart/ tonga insurance**

LIVESTOCK INSURANCE

In India approximately 100 million households are dependent upon livestock as either the primary or secondary source of income. Any disease accident or theft leads to a substantial loss to the household. Business risks in livestock rearing make it all the more important to regard insurance as an efficient measure to provide safety to low income households. Interest in developing animal industry insurance is increasing now days due to drastic animal environmental impact on low income households. The Government of India first launched livestock insurance in 1970 with the following objectives

- Providing protection mechanism to the farmers and cattle owners against any eventual loss of their animals due to death.
- To demonstrate the benefit of the insurance of livestock to the people and popularize it with the goal of attaining qualitative improvement in livestock and their products.

The following are the various insurance schemes along with the salient features under which various categories of the livestock are insured: The salient features of important insurance schemes are also given but conditions vary from time to time.

- Livestock insurance
- Sheep and goat insurance
- Horse/pony/mare/donkey/mule/yak insurance scheme
- Camel insurance scheme
- Pig insurance scheme
- Elephant insurance scheme
- Poultry ducks, quails insurance scheme
- Poultry insurance scheme (epidemics)
- Animal driven cart insurance

CONDITIONS FOR INSURANCE

- Every animal must be in sound health at the time of insurance.
- Animals should have a proper shelter and access to sufficient feed and water.
- Animals should be protected against bacterial and viral diseases like HS, FMD etc.
- Immediately inform the insurance company and/or the bank of any illness, accident, injury and death of the animal.

CATTLE AND LIVESTOCK INSURANCE

ANIMALS TO BE COVERED UNDER THE SCHEME AND BENEFICIARIES

- All indigenous/cross breed/exotic animals in the prescribed age groups duly fixing the value and certifying the health of the proposed animal by a qualified Veterinary Doctor.

- Under this scheme, animal owners / private dairies / cooperative dairies / NDDB owned dairies can be insured

SCOPE OF COVER

- Death due to accidents including fire, lightning, flood and cyclone or disease contracted or occurred during the currency of the policy period.
- Permanent Total Disability (PTD) due to total incapacity to conceive or yield milk by paying extra premium.

CHANGE OF OWNER DURING THE VALIDITY PERIOD OF INSURANCE

- In case of sale of the animal or otherwise transfer of animal from one owner to other, before expiry of the Insurance Policy, the authority of beneficiary for the remaining period of policy will have to be transferred to the new owner.
- The modalities for transfer of livestock policy and fees and sale deed etc required for transfer, should be decided while entering into contract with the insurance company.

SUM INSURED

- Normally it is 100% of the market value of an animal at the time of insurance, as recommended by a Veterinarian. In case of scheme animals-value is different.

PREMIUM RATE

- It generally varies from 4% -6% gross p.a. in different schemes.

IDENTIFICATION OF ANIMALS

- All insured animals are suitably identified by natural Identification marks and color.
- Ear tags made of suitable material are applied to the ear of the animals and the code number is entered into the Veterinary Health Certificate.
- Photographs of animals may be insisted in case of high value animal
- The cost of fixing the identification mark will be borne by the insurance companies and responsibility of its maintenance will lie on the concerned beneficiaries.

DOCUMENTS TO EFFECT INSURANCE COVERAGE

- Proposal Form
- Veterinary Health Certificate from a qualified Veterinarian giving the age, identification marks, health, and market value of the animal in the prescribed format.

INSURANCE CLAIM

- In the event of insurance claim, the following should be furnished:
- Completed claim form
- Ear tag where applicable
- Death certificate from a qualified veterinary surgeon
- Treatment chart
- Post mortem report
- Photograph of the dead animal

- Confirmation of the post mortem report jointly by any two of the following:
  - Village Sarpanch; or
  - Officer of any bank, other than a financing bank; or
  - Officer of a Co-operative Society; or
  - DRDA or an authorised nominee

COMMON MALPRACTICES IN THE INSURANCE CLAIM

- Claim for an uninsured animal
- Intentional killing of an insured animal
- Insurance of an ill or old animal
- Tampering with the ear tags
- Careful examination will reveal the tampering of the ear tags. In the recent punch for the application of tag:
- There will be some hair which otherwise will be absent in the old hole
- Histopathology of the old hole will show fibrous connective tissue
- The tag may look new and may not correspond with the time when the animal was insured
- Recent tag may show some new scratches

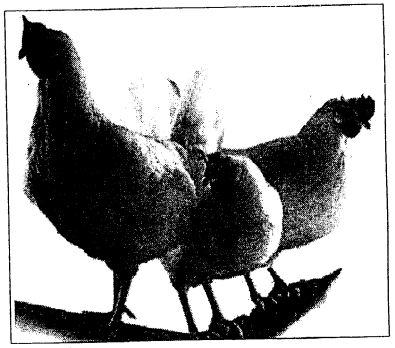
IMPORTANT EXCLUSIONS

- The policy does not cover the following:
- Malicious or wilful misconduct or neglect, over loading, unskilled treatment or use of the animal for the purpose other than stated in the policy without the consent of the company in writing.
- Accidents occurred or diseases contracted prior to commencement of risk.
- Intentional slaughter.
- Transport by air / sea and road beyond 80 kms.
- Theft / clandestine sale, missing of insured animal.
- Partial disablement of any type.
- War perils and nuclear perils
- Consequential loss
- Death of animals due to disease within 15 days from the inception of policy.

SPECIFIC EXCLUSIONS

- Pleuropneumonia in respect of Cattle in Lakhimpur and Sibasagar Districts and newly carved out districts out of these two districts of Assam.
- All the claims received without ear tag

POULTRY INSURANCE



BIRDS TO BE COVERED UNDER THE SCHEME AND BENEFICIARIES

- A layer birds and hatchery birds in a poultry farm in the age group of 1 day old to 72 weeks and broilers in the age group of 1 day to 8 weeks.
- Ducks and Quails are also insured under the policy.
- In this scheme, own poultry farmers / financing bank can insure the birds. All the birds in the farm should be insured without selection.

SCOPE OF COVER

Policy provides indemnity against death of birds due to accidents including fire, lightning, flood, cyclone, strike, riot, civil commotion, terrorism, earthquake and disease contracted or occurred during the policy period (a fewer specified diseases are however excluded and can be covered subject to vaccination.

POLICY PAYMENT

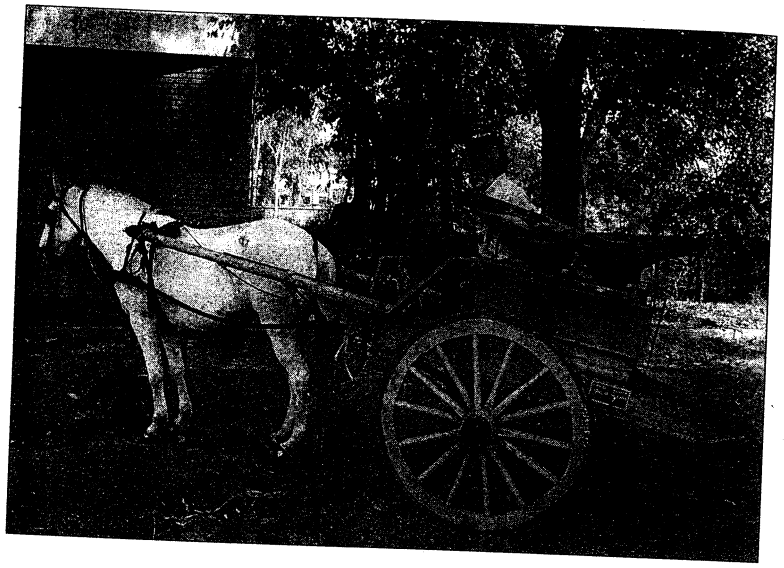
Generally 80% of the value of the bird at the time of loss as per stage wise valuation table attached to the policy subject to deduction of a specified policy excess.

IMPORTANT EXCLUSIONS

The policy will not pay for the losses caused by the following:

- Malicious / wilful misconduct / negligence.
- Transit by any mode of transfer.
- Improper management.
- Theft and clandestine sale of birds.
- Intentional slaughter of birds.
- Consequential loss
- War and nuclear perils.
- Mareks, Ranikhet, Fowl pox and Infectious bronchitis unless birds are successfully protected against them.
- Loss of production, malnutrition, under growth, cannibalism, loss due to huddling and piling of birds.

ANIMAL DRIVEN CART/TONGA INSURANCE



COVERAGE

- Cart / Tonga that is pulled by the animal.
- Animal used for pulling the said Cart / Tonga such as He-buffaloes, Bullocks, horse, Mule, Donkey and Camel as the case may be. The scope of coverage is as follows:

Section I

Death / PTD of animal and loss or damage to cart / tonga and its accessories by:

- Accidental external means
- Fire, explosion, lightning, flood, cyclones, earthquake, burglary, house breaking
- Riot, strike, Malicious act, terrorism
- While in transit by rail, road inland waterways

If the animal is to be covered against disease also, cover, exclusions and conditions will apply as per cattle policy. Cover can be extended for the cart against loss/damage by Theft risk.

Section-II

Third party liability arising out of accidents

- Personal injury (fatal and non-fatal)
- Property damage

Section- III

Personal accident cover to driver

POLICY PAYMENT

Section- I

Cart

- In case of damage, actual expenses of repair subject to deduction towards depreciation and under-insurance.
- Damage to hard or pneumatic rubber tyres payable up to 50% only when the same are damaged along with cart.
- In case of total loss 75 % of sum insured or market value whichever is less Item 1 & 2 subject to an excess of Rs. 100/- or Rs. 200/- per Cart/Tonga respectively.

Animal

1. Sum insured or market value whichever is less in case of death.
2. 75 % of Sum insured or market value whichever is less in case of PTD.

Section II

- Legal liability up to a limit of Rs. 10,000/- during any one year.
- Litigation expenses incurred with the consent of the insurer to contest any third party claim preferred.

Section- III

Personal accident to driver, Injury / death, directly caused by accident

- Death Rs. 6,000/-.
- Loss of sight of both eyes or loss of two limbs or one eye and one limb – Rs. 6,000/- .
- Loss of one eye or one limb Rs. 3,000/- .
- Permanent total disability Rs. 6,000/- .

IMPORTANT EXCLUSIONS

Policy does not cover liability in respect of death, disablement or injury or any loss or damage caused by:-

- War group of perils, nuclear perils.
- Intentional self injury, suicide, insanity, breach of law.
- Malicious or willful injury or neglect or overloading or strain, unskilled treatment.
- Theft of accessories unless the cart itself is stolen.
- Theft clandestine sale of the insured animal.

- Wear and tear, depreciation, consequential loss and dismantling of cart for the purpose of repairs.
- Any accident to the cart which is driven under the influence of drugs or drinks.
- Partial disability of any type whether permanent or temporary to animal.
- Compensation under more than one item of Section III of policy.
- In case of driver partial disability of any type other than the disability mentioned in Section III above.
- Any liability by virtue of an agreement.
- (The details furnished above do not constitute the entire terms, conditions and exceptions of the policy; for further details please contact our nearest office).

CHRONOLOGICAL EVENTS IN LIVESTOCK INSURANCE IN INDIA

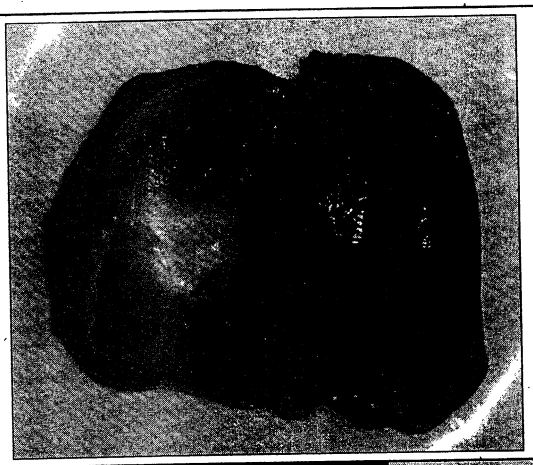
Year	Implementing Agency/program	Note
1971	"Cattle insurance scheme" by Small Farmer's development agency	Nationalized banks began to finance the purchase of cattle and agreed to collect premium from beneficiaries. Cover was for one year and premium was collected annually.
1983	"Cattle insurance policy" under Integrated Rural Development Program	Livestock and asset insurance was extended to the poor along with the IRDP subsidized loans (50% subsidy). Compulsory product. Devised by General Insurance Company (GIC) and implemented through its four subsidiary agencies of GIC 1983 onwards. Premium 2.25% (death) + 0.85% for PTD, no age limit.
1983	Market agreement	No subsidy and voluntary product. For non-scheme animals. Premium- 2.85-4%. Age specified: milch cow- 2-8 years, buffalo- 3-12 yrs,
1999	IRDA	Inception of IRDA, liberalization of Indian insurance industry
2001 onwards	Private players registered	ICICI Lombard, IFFCO-TOKYO, HDFC ERGO, Royal Sundaram
2005	Micro-insurance regulation, 2005	Micro-Finance Institutions (MFIs), Non-Government Organizations (NGOs) and Self-Help Groups (SHGs) can act as an agent for insurance companies to increase the penetration of insurance in the rural markets.
2005-06	"Livestock insurance scheme" implemented by State Livestock Development Boards (SLDB and State Animal Husbandry Departments	Premium of the insurance is subsidized to the tune of 50%; Competition increased between public and private players- premium not to exceed 4.5% for annual policies and 12% for three year policies. Scheme is extended in 11th Five Year Plan (2007-2012) to cover entire country.

Note : *Particulars of cover, liability and exclusion given above are not complete or exhaustive. Please contact the nearest branch office for complete details.*



11

Common Frauds in the Sale of Livestock Products



CHAPTER OUTLINE

- **Ante- mortem and post mortem examination of meat**
- **Frauds in the sale of meat**
- **Techniques to determine the species of origin of meat**
  - Physical techniques
  - Chemical techniques
  - Immunological techniques
  - Electrophoretic techniques
  - DNA assay techniques
- **Tests for meat quality control**
- **Determination of the freshness of milk**
  - Common testing of milk
- **Frauds in the sale of milk**
  - Adulteration
  - Tests to detect adulteration in milk
- **Frauds in sale of ghee**
- **Tests to detect adulteration in ghee**

ANTEMORTEM AND POST MORTEUM EXAMINATION OF MEAT

To avoid sale of meat unfit for human consumption, there should be proper ante mortem and post mortem inspection of meat and meat animals and is done with the following objectives.

- To ensure that only apparently healthy, physiologically normal animals are slaughtered for human consumption and that abnormal animals are separated and dealt with accordingly.
- To ensure that meat from animals is free from disease, wholesome and of no risk to human health.

ANTEMORTEM EXAMINATION

- During ante-mortem inspection of meat animals, look for the evidence of communicable diseases. Also it should be checked that the animal has undergone a pre-slaughter rest of 24 hours and fasting of 12 hours. During fasting sufficient clean water should be supplied. During inspection record following details
- Species .....sex .... colour ..... age .....
- Body temperature
- General condition, especially emaciation
- Evidence of cruelty to animals
- Manner of standing and walking
- Hide, skin and hair
- Digestive system (lips, mouth, anus, rumination, quality of feces and appetite)
- Vulva, vagina and mammary glands
- Respiratory system (nasal openings and respiration)
- Pregnant" animals should be rejected and removed from slaughtering
- Animals with young at foot should not be slaughtered
- Presence of scheduled diseases or symptoms
- If any animal on ante-mortem inspection is suspected of being affected with any disease or condition that would cause condemnation of only part of the carcass then on postmortem examination should be marked "suspect". Suspected" animals should be slaughtered separately. The following categories of animals should be marked suspect:
  - Any animal seriously crippled
  - Animals, which have reacted to tuberculin, test
  - Any animal, on ante-mortem inspection, showing a disease or condition that would necessitate condemnation of the carcass on post-mortem inspection, should be tagged as 'condemned'.

The following categories of animals should be condemned

- Any animal suffering from high temp (>106°F)
- All animals showing symptoms of rabies, scrapie, tetanus or anthrax
- All animals showing symptoms of some disease condition that would cause condemnation of carcass on post-mortem inspection.
- Any animal found to be dead or in dying condition.
- Any animal used for research investigations.
- Any animal vaccinated against anthrax in last 6 weeks.
- Hogs showing symptoms of hog cholera or swine erysipelas.
- Animals treated with some medicines whose residues are expected.
- "Condemned" animals shall be slaughtered in emergency slaughter hall only

POSTMORTEM EXAMINATION OF MEAT

A careful post mortem inspection of the carcass and the parts thereof should be made at the time of slaughter. As far as possible, the post-mortem inspection shall be conducted under condition simulating natural light.

VISCERA

Ensure the viscera belong to the particular animal - every organ and the associated lymph modes shall be examined.

CARCASS

- Evidence of bruising, hemorrhage, discolouration, local or generalized edema, deformities of bones and joints.
- The serous membranes (pleura and peritoneum) shall be inspected in every case.
- After the carcass is split, the sternum, ribs, vertebrae and spinal cord shall be examined.
- Incision shall be made on each quarter in the musculature for detection of cysts (*Cysticercus cellulosae*).

INSPECTION OF SWINE, SHEEP AND GOAT CARCASSES

Head

Muscles from tongue and cheek shall be examined microscopically for trichinellosis.

Abdominal cavity

- Stomach, intestine and spleen
- Liver and kidneys
- Uterus and ovaries
- Urinary bladder

Thoracic cavity

- Lungs
- Heart and pericardium
- Udder
- Testicles and penis
- Serous membranes (pleura and peritoneum)

Evidence of tuberculosis

All the lymph nodes should be examined and carcasses should be condemned, if:

- Animal was suffering from fever before slaughter
- Tuberculosis associated with cachexia
- When lesions are generalized
- Lesions on the muscles, bones or joints
- When lesions are extensive in one or both body cavities
- Where lesions are multiples, acute and actively progressive

Partial condemnation is done in following conditions

- Lesion is localized
- Contaminated with tuberculosis materials
- An organ shall be condemned when the corresponding lymph node is tuberculous.
  - Whole carcass and its parts found to be healthy, wholesome and fit for human consumption should be marked "inspected and passed".
  - Each carcass or parts, which is found to be unhealthy and unfit for human food should be marked "inspected and condemned".
  - Carcasses of animals in a well-nourished condition showing uncomplicated localized lesions of actinomycosis or actinobacillosis may be passed after the infected organ or parts have been removed and condemned.
  - As per the detailed list of the conditions on the basis of which the carcass is completely condemned (e.g. anthrax and generalized TB).

Action to be taken in evidence of other diseases

The entire carcass and all the parts and organs and also the blood, thereof shall be condemned, if evidence of any of the following conditions is found.

- Actinomycosis and Actinobacillosis (generalized)
- Anemia - with emaciation
- Anthrax
- Black leg

- Bruising - general, extensive and severe
- *Cysticercus cellulosae* (measly pork)
- Dropsy (general)
- Emaciation - general, pathological
- Erysipelas, acute, swine
- Fever (acute)
- Foot-and-mouth disease (acute)
- Goat pox
- Hemorrhagic septicemia
- Immaturity, still born or unborn carcass
- Jaundice (pronounced)- icterus or jaundice
- Johne's disease - accompanied by emaciation or anemia
- Lymphadenitis, caseous
- Malignant neoplasms
- Mammilitis - acute and septic
- Melanosis - generalized
- Metritis - acute and septic
- Peritonitis - acute, diffuse, septic
- Pericarditis - septic
- Pneumonia - gangrenous
- Pyaemia - including joint ill or umbilical pyemia
- Rabies
- Rickets and malnutrition
- Rinderpest
- Sarcocysts - if generalized in the musculature and visible to the naked eye
- Septicemia or septic intoxication
- Sheep pox
- Swine fever
- Surra
- Tetanus
- Trichinosis - inspect the principal locations of trichinae in the musculature, namely (*a*) coastal muscles, (*b*) pillars of diaphragm (c) tongue, masticatory and neck (laryngeal muscles and muscles of the shoulders, loins, abdomen and groins)
- Tumors - multiple in musculature

Carcasses in following conditions should also be condemned

- Carcasses showing generalized pigmentary deposits.
- Carcasses of animals affected with mange, or scab in advanced stages.
- Carcasses showing any degree of icterus.
- All carcasses of animals so affected that consumption of the products thereof may give rise to food poisoning e.g. generalized inflammatory, abscess, septicemia or gangrenous condition.
- Carcasses which give off pronounced odour of urine or of any medicinal or chemical substance.
- Carcasses of all unborn and still born animals.
- Carcasses of those animals, the meat of which give appearance of water soaked, flabby and tears easily.
- Carcasses infested with parasites transmissible to man.
- Carcasses of the animals affected with or showing lesions of any of the following diseases should be condemned, except when recovery has occurred to the extent that only localized lesions persist.

– Anaplasmosis	Babesiosis	– Blue tongue	– Bacillary Haemoglobinuria
– HS	IBR	– Leptospirosis	– Malignant Catarrh

FRAUDS IN THE SALE OF MEAT

Adulteration of meat involves substitution of costly or superior quality meat with cheaper and inferior quality meat. The substitutions of meat generally practiced are beef for buffalo meat, mutton for goat meat, rabbit meat for chicken etc. Since meat adulteration is a fraudulent practice, which is objectionable on the grounds of health, religion and economics, so identification of meat is very important. Qualitative species determination can be based anatomical difference, chemical analysis, protein or DNA analysis. Physical and chemical assays are time consuming, exhaustive and are not reliable.

TECHNIQUES TO DETERMINE THE SPECIES OF ORIGIN OF MEAT

- Physical techniques
- Chemical techniques.
- Immunological techniques
- Electrophoretic techniques
- DNA assay techniques

PHYSICAL TECHNIQUES

The muscles, fat, and bones of different animals have different characteristics. Hence a thorough knowledge of the physical character of different types of meats is essential for the detection of fraud:

PHYSICAL CHARACTERISTICS OF MEAT OF VARIOUS SPECIES

Meat	Colour	Consistency (*Odour*)	Fat
Sheep meat	Dark red	Firm and dense (*Ammonical*)	White fat deposition in between groups of muscles
Buffalo meat	Dark red	Firm	Pale white
Horse flesh	Dark red	Soft	Golden to dark yellow
Dog meat	Dark red		White fat is slightly intermixed with muscles
Beef	Red	Fairly firm	Yellowish white fat is intermixed with muscles
Camel meat	Red	Fairly firm	Pale yellow
Goat meat	Light red	Very firm (similar to that of buck)	Pure white; muscles contain very little fat
Pork	Light red	Very soft (*Urine like*)	White and granulated fat is intermixed with muscles
Poultry	White	Firm	Fat intermixed with muscles
Fish meat	White	The entire muscular mass of each side comprises a single muscle plate	Fat is finely distributed in the muscles

Rigor mortis

The onset time of rigor mortis varies in different species. So by looking at the rigor mortis we can identify the type of the meat.

Meat of dead animals

Animals which have died of natural causes show fullness of blood vessels and their meat is dark red due to lack of proper bleeding. Such carcasses undergo decomposition very quickly. So such meat should not be allowed for human consumption.

CHEMICAL TECHNIQUES

The following tests are used in determining the different types of meats-

Glycogen test

The horseflesh contain maximum glycogen i.e. 2.28% whereas in normal mammalian muscles it varies from 0.5 to 1%. The liver of pig also contains a high percentage of glycogen.

Tests based on fat of the animals

Sometimes the fat of horse is mixed with the fat of cattle and sheep. The fat of horse is identified by the presence of 1 to 2 per cent linolenic acid. In the fat of other animals, the percentage of this acid is not more than 0.1 per cent.

Estimation of refractive index

The fat of different animals has different refractive indices. For this purpose the fat of the animal is converted into liquid by heat and refractive index is estimated.

Determination of iodine value

Iodine value is the amount of iodine absorbed by unsaturated fatty acids present in the fat. The iodine values of fats of some animals are given below in the table. Some other chemical tests based on the myoglobin content, muscle enzymes, moisture protein, fat, vitamin and mineral contents of the meat can be undertaken.

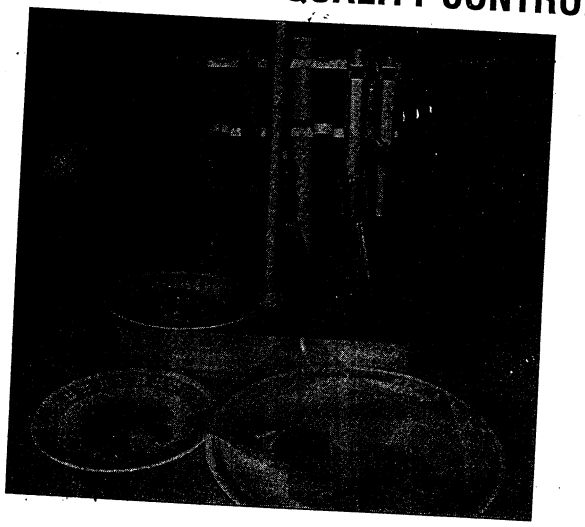
RIGOR MORTIS TIME, REFRACTIVE INDEX AND IODINE VALUE IN VARIOUS SPECIES

Species	Rigor Mortis time (min)	Refractive index	Iodine value
Sheep	80	—	35-46
Lamb	60	—	—
Ox	163	40	38-46
Pig	50	51.9	50-70
Horse	238	53.5	71-86

IMMUNOLOGICAL, ELECTROPHORETIC AND DNA ASSAY TECHNIQUES

For meat species identification, immunological and electrophoretic methods (*Immuno-precipitation test, Electrophoretic methods, Isoelectric focusing etc*) give best results in raw and mildly cooked meat. For heat treated meat products, DNA based assays that includes traditional and real time PCR can be used.

TESTS FOR MEAT QUALITY CONTROL



The quality of the meat can be tested with the following tests.

1. Extract Release Volume (ERV)
2. Methylene Blue Reduction Test (MBRT)
3. Malachite green test
4. Boiling test
5. pH value

Extract Release Volume (ERV)

It refers to the volume of aqueous extract released by meat homogenate when it is allowed to pass through whatman filter paper no. 1, for a given period of time. As meat homogenate undergoes microbial spoilage, there is complete hydrolysis of protein, which significantly decreases ERV. Good meat quality has higher ERV and vice- versa.

Procedure

- Take 25 gm of meat sample and mince it in pestle and mortar and add 100 ml of distilled water and make homogenate
- Filter the homogenate through filter paper (Whatman No. 1) and measure the volume in a measuring cylinder
- If 25-40 ml is collected in 15 minutes, meat is of good quality
- If less than 25 ml, meat is of poor quality

Methylene Blue Reduction Test (MBRT)

Methylene blue is a dye blue in colour and can be utilized for determining the bacteriological quality of meat. Bacteria present in meat utilize the oxygen and release hydrogen which reduces and decolourizes methylene blue.

Procedure

Take 10gm of meat sample and triturate with 50 ml distilled water in pestle and mortar (make homogenate) Now run two test tubes I- Test and II- Control.

Methylene blue dye

Take 5 ml of ethanol in a test tube and add methylene dye till it become saturate. Now take 2.5 ml of it and add in 200 ml of distilled water.

I-Test

Take 10 ml of homogenate and add 1 ml of methylene blue dye and cover the test-tube with aluminium foil.

II-Test

Take 10 ml of homogenate and add 1 ml of distilled water and cover it with aluminium foil.

Then maintain at 37.C for 30 minutes in water bath and note the change in colour.

- If colour changes in 30 minutes =Very poor
- 30 minutes – 1hour = Poor
- 1-2 hour = Fair
- 2-3 hour = Good

Malachite green test

This test is done to know the efficacy of bleeding. It is based on on the principle that oxidized haemoglobin on addition of acidic solution of malachite green produces a green coloured complex.

Procedure

- Take 6gm of meat sample and triturate in pestle mortar.
- Add 14 ml of distilled water and keep it for 15 minutes at room temperature.
- Shake well the flask and pour the mixture into a test tube.
- Allow to sediment the meat and obtain a clear supernatant fluid.

Malachite green solution

- Take 10 gm of malachite green dye and add 25 ml of 30% glacial acetic acid.
- Dissolve the dye by heating the mixture in water bath at 60.C for 10 minutes.
- Add 100 ml of distilled water and store in coloured bottles with stopper.

3% Hydrogen peroxide solution

- Add 3 ml of H_2O_2 in 100 ml of distilled water.
- Take 0.7 ml clear meat extract in an agglutination tube.
- Mix one drop of acid malachite green solution.
- Add one drop of hydrogen peroxide.
- Shake well till foam develops.
- Allow the test tube to stand for 20 minutes for colour development.
- Clear blue colour indicates = Normal bleeding
- Cloudy and green colour indicate = Imperfect bleeding
- Cloudy fluid of olive green colour shows = very unsatisfactory bleeding as in case of emergency slaughter.

Boiling test

Take 5-10 gm. of meat sample and keep in microwave oven for 1-2 minutes and note the change in smell/ odour. If there is offensive smell, it suggests that meat is of bad quality.

pH of meat

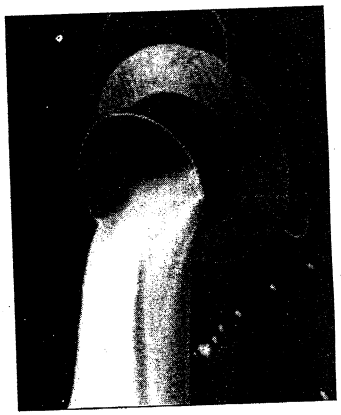
With digital pH meter- pH value in the meat and meat products can be measured by digital pH meter. For this blend 15 gm of meat sample with 30 ml of distilled water. And note the pH with digital meter.

With pH paper -Take a piece of pH paper and rub against the meat piece or dip in meat solution and note the change in colour.

pH values

- Beef 5.5 to 6.0
- Pork 5.5 to 6.2
- Muscle tissue immediately after slaughter 7.0 to 7.2
- Raw fermented sausage 4.8 to 6.0
- Blood 7.3 to 7.6

DETERMINATION OF THE FRESHNESS OF MILK



Good quality milk should have a pleasantly sweet and clean flavor with no distinct aftertaste. Bacterial and other microbial (i.e., yeast or molds) off-flavors result from the growth of microorganisms that are present in milk due to poor sanitation and/or milk handling practices.

COMMON TESTING OF MILK

Organoleptic tests

This test permits segregation of poor quality milk at the milk receiving platform. In it milk grader must have good sense of sight, smell and taste.

Open a can of milk, smell the milk and observe the appearance of the milk. If need be, milk can be tasted (avoid swallowing of milk). The abnormal smell and taste may be caused by taints due to atmosphere (e.g. barn/ cow's odour), altered physiology (hormonal imbalance, cows in late lactation- spontaneous rancidity), bacteria, chemicals or acidification (pH < 6.4). The cleanliness can be assessed by looking at the lid. Milk which cannot be adequately judged organoleptically must be subjected to other more sensitive and objective tests.

Acidity test

Bacteria that normally develop in raw milk produce more or less of lactic acid by its action on the milk sugar. The natural acidity of milk is 0.16 - 0.18%. Higher values signifie indicate acidity which can be detected by adding 1 ml of Phenolphthalein to 9 ml of the mil in a conical flask, and then slowly from the burette, 0.1 N Sodium hydroxide unde

continuous mixing, until a faint pink colour appears. The number of ml of Sodium hydroxide solution divided by 10 expresses the percentage of lactic acid.

Alcohol test

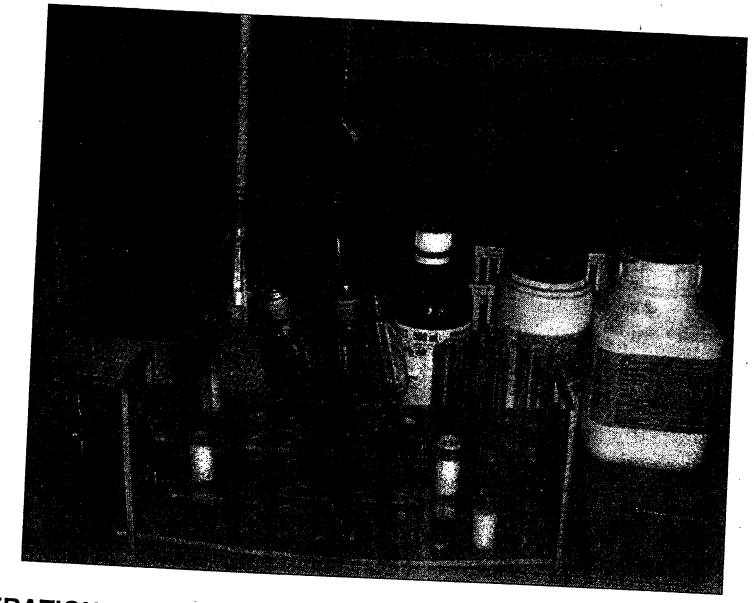
The test is based on instability of the proteins when the levels of acid and/or rennet are increased and acted upon by the alcohol. Also increased levels of albumen (colostrum milk) and salt concentrates (mastitis) results in a positive test.

In this test mixing equal amounts of milk and 68% of ethanol solution (68 ml 96%; absolute; alcohol and 28 ml distilled water) in a test tube. If the tested milk is of good quality, there will be no coagulation, clotting or precipitation, but it is necessary to look for small lumps. The first clotting due to acid development can first be seen at 0.21-0.23% lactic acid.

Clot on boiling (C.O.B) test

This tests is for too acid milk (pH<5.8) or abnormal milk (e.g. colostrum or mastitis milk). If a milk sample fails in the test, the milk must contain many acid or rennet producing microorganisms.

FRAUDS IN THE SALE OF MILK



ADULTERATION

It is the addition or deletion of any chemical to enhance quality and to conceal fraudulent practices. Adulteration includes both aspects of dilution of quality attributes as well as masking of inferior quality of the products.

Various adulterants are used in milk to enhance quality, shelf life and conceal the fraudulent practices by milk vendors with respect to its consistency, viscosity and solids content.

ROUTINE METHODS IN THE ADULTERATION OF MILK

Adulteration	Method
Reduction of fat	• By adding water. • By skimming of milk. • By skimming and watering.
Addtion of thickening agents	• This is done to increase the specific gravity and consistency of the milk. • It is done by adding starch, gelatin and cane sugar.
Addtion of colouring agent	• Sometimes colours are added to make milk more attractive. • The colours generally used are annatto and coal tar dyes.
Addition of preservatives	• Preservaties like formalin, boric acid, hydrogen peroxide sodium bicarbonate, sodium carbonate are added to retard the decomposition with an objective to : • Delay the curdling of milk. • Destroy the pathogenic bacteria.
Accidental adulteration	Some adulterants are mixed accidentally in the milk e.g urine of animal, dung, vegetable cells, dirty water. These agents give a foul smell.

TESTS TO DETECT ADULTERATION IN MILK

Detection of added water in milk

Adulteration with water results in

- Decrease in fat percentage.
- Lower specific gravity (density) of milk at 27°C.
- Lower percentage of SNF.
- Depression of freezing point

Per cent adulteration of water in milk on the basis of fat

$$= \frac{\text{Standard fat content of milk- Observed fat content in sample}}{\text{Standard fat content of milk}} \times 100$$

Per cent adulteration of water in milk on the basis of SNF

$$\frac{\text{Standard SNF content of milk – Observed SNF content in sample}}{\text{Standard SNF content of SNF}} \times 100$$

- The specific gravity of milk can be determined by lactometer.
- Normal milk does not contain nitrates but ordinary water does. The presence of nitrates in the milk is a sure test of adulteration of milk with water.

Detection of skimming

Skimming is detected by -

- Low fat percentage
- Higher specific gravity (density) reading at 27°C
- High SNF and fat ratio

Detection of milk adulterated with skimmed/ separated milk

- Low fat percentage
- Higher density of adulterated milk at 27°C
- High SNF percentage
- High SNF and fat ratio

Detection of starch in milk

Addition of starch also increases the SNF content of milk. Apart from the starch, wheat flour, arrowroot, rice flour is also added.

Take 3 ml milk in a test tube and boil it thoroughly. Then milk is cooled to room temperature and added with 2 to 3 drops of 1% iodine solution. Change of colour to blue indicates that the milk is adulterated with starch.

Test for detection of sugar in milk

Generally sugar is mixed in the milk to increase the solids not fat content of milk i.e. to increase the lactometer reading of milk, which was already diluted with water.

Take 10 ml of milk in a test tube and add 5 ml of hydrochloric acid along with 0.1 g of resorcinol. Then shake the test tube well and place the test tube in a boiling water bath for 5 min. Appearance of red colour indicates the presence of added sugar in milk.

Detection of gelatin

Gelatin is detected by adding equal volume of mercuric nitrate, milk sample and double the volume of distilled water. After mixing and filtration, saturated picric acid solution is added to the filtrate. Development of yellow colour indicates the presence of gelatin.

Detection of vegetable oil

Vegetable oil in milk is detected by Baudain Test. Pour 5 ml of sample (if fat only then melt it) in a test tube. Add 5 ml of HCl and 2 drops of furfural reagent. Cork and shake vigorously for a minute and allow it to stand for few minutes. Two layers will separate. Reddish colour in the lower acid layer indicates the presence of vegetable oil (sesame oil). Add 5 ml of water; shake and again allow the layers to separate. If reddish colour disappears test is not confirm, if the colour persists, test is positive.

Detection of preservatives

There are number of chemical substances used by some unscrupulous dairymen to prolong the shelf life of milk. The practice of adding preservatives is highly objectionable and illegal and should be checked completely. The preservatives used may in itself be poisonous

or interfere with the normal digestion process. It also tends to promote carelessness and uncleanliness amongst the producers. Specific qualitative tests have been developed to detect the presence of various preservatives, as mentioned below:

Detection of boric acid/borax

Boric acid is detected by adding few drops of phenolphthalein indicator and 10 ml N/10 NaOH to 10 ml of milk. Development of pink colour occurs which disappears after addition of 5 ml 50%glycerine solution.

Detection of formaldehyde/formalin

Formalin (40%) is poisonous though it can preserve milk for a long time. Its detection can be done by Hehner sulphuric acid test. For this add one or two drops of ferric chloride solution into 10 ml of milk. After mixing 5 ml of conc. sulphuric acid carefully added down the sides of tube so that it forms a layer at the bottom without mixing with the milk. If a violet or blue ring appears at the intersection of the two layers, then it shows the presence of formalin

Detection of hydrogen peroxide

Take 5 ml milk in a test tube and then add 5 drops of paraphenylenediamine and shake it well. Change of the colour of milk to blue confirms that the milk is added with hydrogen peroxide.

Detection of neutralizers in milk

In milk neutralizers like hydrated lime, sodium hydroxide, sodium carbonate or sodium bicarbonate are added which are generally prohibited.

Detection of carbonates/bicarbonates

It can be done by using Rosalic acid test (Soda Test). In it equal volume of ethyl alcohol and milk sample are mixed and add 4-5 drops of 1% Rosalic acid solution. Appearance of rose red colour after proper mixing confirms the presence of carbonates/bicarbonates in milk whereas pure milk shows only brownish discoloration.

This test will be effective only if the neutralizers are present in milk. If the added neutralizers are nullified by the developed acidity, then this test will be negative. In that case the alkaline condition of the milk for the presence of soda ash has to be estimated.

Take 20 ml of milk in a silica crucible and then the water is evaporated and the contents are burnt in a muffle furnace. The ash is dispersed in 10 ml distilled water and it is titrated against decinormal (N/10) hydrochloric acid using phenolphthalein as an indicator. If the titre value exceeds 1.2 ml, then it is construed that the milk is adulterated with neutralizers.

Detection of synthetic milk

Synthetic milk is the mixture of balanced amounts of vegetable oil, urea, detergent powder, caustic soda, powdered sugar or salt, starch and pastel colour, skim milk powder in water. These components are thoroughly mixed in a blender. The fluid liquid thus formed is an emulsion and has the physical appearance similar to thick creamy white milk in colour

density and texture. The synthetic milk does not have any nutritive value found in natural milk. Moreover, it is highly injurious to health. The major harmful effects includes impairment of eye sight leading to blindness, chronic cardiopathy, neurological disorders, nephrologic and hepatic ailments, swelling of hand and feet and may lead to development of cancer.

DIFFERENCES IN SYNTHETIC AND NATURAL MILK

Characteristics	Synthetic Milk	Natural Milk
Colour	Creamy white	Creamy white
Taste	Non-palatable, bitter	Palatable
Odour	Soapy odour becomes distinct on boiling	Characteristic milky odour
Texture	Soapy feeling when rubbed between fingers	No soapy feeling
Specific gravity	1.025-1.035	1.025-1.035
pH	Alkaline pH, 9.0-10.5	Acidic, pH 6.5-6.8
Urea test	Highly positive	Weak positive
Sugar test	Positive	Negative
Vegetable fat test	Positive	Negative
Neutralizer test	Positive	Negative

Detection of urea in milk

Urea is a natural component of milk that comes through fodder, forage, etc. Normal milk has urea concentration in the range of 20-70 mg/ 100 ml of milk. Synthetic milk has urea concentration of 500-1000 mg/ 100 ml of milk and used for adulteration of milk. Therefore, the quantitative detection of urea in milk becomes essential. Two methods are commonly employed to detect urea in milk.

(*i*) To detect urea, 0.2 ml of urease (20 mg/ml) is added into 5 ml of milk to which 0.1 ml of bromothymol blue solution is added. Shake well and keep at room temperature. Appearance of dark blue colour after 10-15 minutes indicates the presence of urea. Normal milk gives faint blue colour as it has 0.02% urea in it.

(*ii*) Equal volumes of milk and p-DMAB are mixed. Development of distinct yellow colour after few minutes indicates the presence of added urea. A parallel sample of fresh milk sample must be run as control to compare the colour.

The basic strategies to control the social menace of milk adulteration includes regular detection of the adulterants in the market milk and sensitization of the consumers, trainings for the dairy personnel's, farmers, consumers, scientists and technologists involved directly or indirectly to the dairy industry.

Procedures for using the kit

Urea

- Take 2 ml milk, add 2 ml urea reagent and mix well. Distinct yellow colour indicates that urea has been added to milk.

Starch and cereal flour

- Boil 5 ml of milk, cool, add few drops of starch reagent. Appearance of blue colour + for starch.

Sugar/Sucrose

- Take 1 ml milk add 1ml sugar reagent, boil for 3-5 min. Appearance of red color

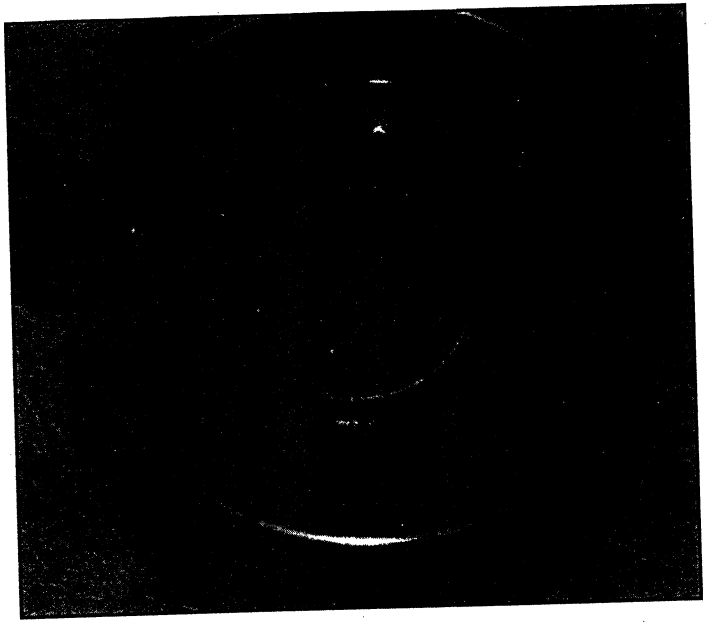
Salt

- Take 5 ml of salt reagent I, add few drops of salt reagent II, add 1ml of milk and mix well. Yellow color for positive.

Neutralisers

- Take 2 ml milk, add 2 ml neutraliser reagent and mix well. rose red or pink color positive.

FRAUDS IN SALE OF GHEE



Ghee is characterized by a pleasant, nutty flavour and a creamy white to light yellow colour. It should be free from foreign colouring matter, sediment and should have a granular texture. It should be free from any objectionable odours. Some of the methods of adulteration of ghee are by adding vegetable oils, hydorgenated oils (seasome oil) or animal fat (mutton or

beef fat). There are various chemical tests to detect the adultration of ghee with the above mentioned oils and fats.

TESTS TO DETECT ADULTERATION IN GHEE

Butyrorefractometer reading (BR value)

Properly filtered ghee whose temperature is around 40°C is taken; 2-3 drops of it is poured in to the butyro-refractometer by the side of the glass rod. Now the reading is noted by the scale placed above the meter. Care has to be exercised to maintain the temperature of water that is flowing over the thermometer to be at 40°C. If the temperature deviates, then the results obtained may not be accurate. The normal BR value of ghee ranges between 40 and 43.

Baudoin test (Detection of adulteration of ghee with vanaspathi or hydrogenated vegetable oil)

As per the prevention of food adulteration act, it has been made mandatory to add 5% sesame oil to vanaspathi in order to detect the presence of vanaspathi in ghee through Baudoin test. The principle behind the test is development of permanent crimson red colour with furfural in the presence of concentrated hydrochloric acid in ghee adulterated with vanaspathi.

Procedure

Take 5 g of molten filtered ghee in a test tube and add 5 ml of concentrated hydrochloric acid and 0.1 ml furfural solution in alcohol (2%) and mix the contents thoroughly and it is allowed to remain undisturbed for 10 min. Development of crimson red colour shows that the ghee is adulterated with vanaspathi.

Detection of mineral oil in ghee

About 2 g of ghee is saponified with 25 ml of 50% alcoholic potassium hydroxide for one hour. Then the saponified content is transferred to a beaker containing 100 ml of water. Development of turbidity indicates the adulteration of mineral oil in ghee.

Detection of animal fat in ghee

Sometimes adulteration of ghee is done with mutton or beef fat which can be detected by the following test. Take 1 ml of filtered melted ghee in a long test tube, add 15 ml mixture of acetate and alcohol (650 ml pure dry acetone made up to a liter with absolute alcohol) and keep it in a water bath at 30 C for 3 hrs. The slightest deposit of crystals in the test tube is a definite indication of the presence of mutton or beef fat.

Adulteration of food or drink is punishable under section 272 IPC
Selling of unfit food or drink is punishable under Section 273 IPC

Inputs made by Dr M K Chatli, Head, LPT Department, GADVASU for preparation of this chapter is acknowledged



12

Acts/Rules Related to Animal Welfare



CHAPTER OUTLINE

- **The Prevention of Cruelty to Animals Act, 1960**
  - Breeding of and Experiments on Animals (Control and Supervision) Rules, 1998
  - Performing Animals (Registration) Rules, 2000
  - The Prevention of Cruelty to Animals (Licensing of Farriers) Rules, 1965
  - The Prevention of Cruelty to Draught and Pack Animals (1965)
  - Transport of Animal Rules, 1978
  - Prevention of Cruelty to Animals (Transport of Animals on Foot) Rules, 2001
  - The Prevention of Cruelty to Animals (Registration of Cattle Premises) Rules, 1978
  - The Prevention of Cruelty to Animals (Applications of the Fines) Rules, 1978
  - The Prevention of Cruelty to Animals (Capture of Animals) Rules, 1979
  - The Prevention of Cruelty to Animals (Slaughter House) Rules, 2000
  - Animal Birth Control (Dogs) Rules, 2001
  - Prevention of Cruelty to Animals (Establishment and Regulation of Societies for Prevention of Cruelty to Animals) Rules, 2001
- **Prohibition of Cow Slaughter Act, 1955**
- **The Cattle Trespass Act, 1871**
- **The Wild Life (Protection) Act, 1972**
  - Recognition of Zoo Rules, 1992
- **Forthcoming Acts/Rules pertaining to Animal Welfare in India**

THE PREVENTION OF CRUELTY TO ANIMALS ACT, 1960

59 of 1960 [26th December, 1960]
(As amended up to 30th July, 1982)

An Act to prevent the infliction of unnecessary pain or suffering on animals and for that purpose to amend the law relating to the prevention of cruelty to animals.

CHAPTER I
PRELIMINARY

1. Short title, extent and commencement

(1) This Act may be called the Prevention of Cruelty to Animals Act, 1960.

(2) It extends to the whole of India except the State of Jammu and Kashmir. ,

2. Definitions

In this Act, unless the context otherwise requires,

(*a*) "animal" means any living creature other than a human being;

(*b*) "Board" means the Board established under Section 4 and as reconstituted from time to time under Section 5A];

(*c*) "captive animal" means any animal (not being a domestic animal) which is in capacity or confinement, whether permanent or temporary, or which is subjected to any appliance of contrivance for the purpose of hindering or preventing its escape from captivity or confinement or which is pinioned or which is or appears to be maimed;

(*d*) "domestic animal" means any animal which is tamed or which has been or is being sufficiently tamed to serve some purpose for the use of man or which, although it neither has been nor is intended to be so tamed, is or has become in fact wholly or partly tamed-,

(*e*) "local authority" means a municipal committee, district board or other authority for the time being invested by law with the control and administration of any matters within a specified local area;

(*f*) "owner", used with reference to an animal, includes not only the owner but also any other person for the time being in possession or custody of the animal, whether with or without the consent of the owner.

(*g*) "phooka" or "doom dev" includes any process of introducing air or any substance into the female organ of a milch animal with the object of drawing off from the animal any secretion of milk;

(*h*) "prescribed" means prescribed by Rules made under this Act;

(*i*) "street" includes any way, road, lane, square, court, alley, passage or open space, whether a thoroughfare or not to which the public have access.

3. Duties of persons having charge of animals

It shall be the duty of every person having the care or charge of any animal to take all reasonable measures to ensure the well-being of such animal and to prevent the infliction upon such animal of unnecessary pain or suffering.

CHAPTER II
ANIMAL WELFARE BOARD OF INDIA

4. Establishment of Animal Welfare Board of India



(1) For the promotion of animal welfare generally and for the purpose of protecting animals from being subjected to unnecessary pain or suffering, in particular, there shall be established by the Central Government, as soon as may be after the commencement of this Act, a Board to be called the [3](Animal Board of India.)

(2) The Board, shall be a body corporate having perpetual succession and a common seal with power, subject to the provisions of this Act, to acquire, hold and dispose of property and may by its name sue and be sued.

5. Constitution of the Board

(1) The Board shall consist of the following persons, namely:

(*a*) the Inspector General of Forests, Government of India, ex-officio,

(*b*) the Animal Husbandry Commissioner to the Government of India, ex-officio;

(ba) two persons to represent respectively the Ministries of the Central Government dealing with Home Affairs and Education, to be appointed by the Central Government;

(bb) one person to represent the Indian Board for Wild Life, to be appointed by the Central Government;

(bc) three persons who, in the opinion of the Central Government, are or have been actively engaged in animal welfare work and are well-known humanitarians, to be nominated by the Central Government;)

(*c*) one person to represent such association of veterinary practitioners as in the opinion of the Central Government ought to be represented on the Board, to be elected by that association in the prescribed manner;

(*d*) two persons to represent practitioners of modern and indigenous systems of medicine, to be nominated by the Central Government;

(*e*) one person to represent each of such two municipal corporations as in the opinion of the Central Government ought to be represented on the Board, to be elected by each of the said corporations in the prescribed manner

(*f*) one person to represent each of such three organizations actively interested in animal welfare as in the opinion of the Central Government ought to be represented on the Board, to be chosen by each of the said organizations in the prescribed manner;

(*g*) one person to represent each of such three societies dealing with prevention of cruelty to animal as in the opinion of the Central Government ought to be represented on the Board, to be chosen, in the prescribed manner;

(*h*) three persons to be nominated by the Central Government,

(*i*) six Members of Parliament, four to be elected by the House of the People (Lok Sabha) and two by the Council of States (Rajya Sabha).

(2) Any of the persons referred to in clause 9a) or [6][clause (*b*) or clause (ba) or clause (bb) of sub-section (1) may depute any other person to attend any of the meetings of the Board.

(3) The Central Government shall nominate one of the members of the Board to be its Chairman and another member of the Board to be its Vice-Chairman.)

5A. Reconstitution of the Board

5.A (1) In order that the Chairman and other members of the Board hold office till the same date and that their terms of office come to an end on the same date, the Central Government may, by notification in the Official Gazette, reconstitute, as soon as may be after the Prevention of Cruelty to Animals (Amendment) Act, 1982 comes into force, the Board.

(2) The Board as reconstituted under sub-section (1) shall be reconstituted from time to time on the expiration of every third year, from the date of its reconstitution under sub-section (1).

(3) There shall be included amongst the members of the Board reconstituted under sub-section (1), all persons who immediately before the date on which such reconstitution is to take effect, are Members of the Board but such persons shall hold office only for the unexpired portion of the term for which they would have held office if such reconstitution had not been made and the vacancies arising as a result of their ceasing to be Members of the Board shall be filled up as casual vacancies for the remaining period of the term of the Board as so reconstituted:

Provided that nothing in this sub-section shall apply in relation to any person who ceases to be member of the Board by virtue of the amendment made in sub-section (1) of section 5 by sub-clause (*ii*) of clause (*a*) of section 5 of the Prevention of Cruelty to Animals (Amendment) Act, 1982).

6. Term of office and conditions of service of members of the Board

(1) The term for which the Board may be reconstituted under section 5A shall be three years from the date of the reconstitution and the Chairman and other Members of the Board as so reconstituted shall hold office till the expiry of the term for which the Board has been so reconstituted.

(2) Notwithstanding anything contained in sub-section (1):

(*a*) the term of office of an ex-officio Member shall continue so long as he holds the office by virtue of which he is such a Member;

(*b*) the term of office of a Member elected or chosen under clause (*c*), clause (*e*), clause (*g*), clause (*h*) or clause (*i*) of section 5 to represent anybody of persons shall come to an end as soon as he ceases to be a Member of the body which elected him or in respect of which he was chosen;

(*c*) the term of office of a Member appointed, nominated, elected or chosen to fill a casual vacancy shall continue for the remainder of the term of office of the Member in whose place he is appointed, nominated, elected or chosen;

(*d*) the Central Government may, at any time, remove for reasons to be recorded in writing a member from office after giving him a reasonable opportunity of showing cause against the proposed removal and any vacancy caused by such removal shall be treated as casual vacancy for the purpose of clause (*c*).

(3) 'The members of the Board shall receive such allowance, if any, as the Board may, subject to the previous approval of the Central Government, provided by regulations made in this behalf,

(4) No act done or proceeding taken by the Board shall be questioned on the ground merely of the existence of any vacancy in, or defect in the constitution of the Board and in particular, and without prejudice to the generality of the foregoing, during the period intervening between the expiry of the term for which the Board has been reconstituted under section 5A and its further reconstitution under that section, the ex-officio members of the Board shall discharge all the powers and function of the Board).

7. Secretary and other employees of the Board

(1) The Central Government shall appoint [10]xxxxx the Secretary of the Board.

(2) Subject to such rules as may be made by the Central Government in this behalf, the Board may appoint such number of other officers and employees as may be necessary for the exercise of its powers and the discharge of its functions and may determine the terms and conditions of service of such officers and other employees by regulations made by it with the previous approval of the Central Government.

8. Funds of the Board

The funds of the Board shall consist of grants made to it from time to Board time by the Government and of contributions, subscriptions, bequests, gifts and the like made to it by any local authority or by any other person.

9. Functions of the Board

The functions of the Board shall be Board

(*a*) to keep the law in force in, India for the prevention of cruelty to animals under constant study and advise the Government on the amendments to be undertaken in any such law from time to time;

(*b*) to advise the Central Government on the making of rules under this Act with a view to preventing unnecessary pain or suffering to animals generally, and more particularly when they are being transported from one place to another or when they are used as performing animals or when they are kept in captivity or confinement;

(*c*) to advise the Government or any local authority or other person on improvements in the design of vehicles so as to lessen the burden on draught animals;

(*d*) to take all such steps as the Board may think fit for [11](amelioration of animals) by encouraging or providing for, the construction of sheds, water-troughs and the like and by providing for veterinary assistance to animals:

(*e*) to advise the Government or any local authority or other person in the design of slaughter-houses or the maintenance of slaughter houses or in connection with slaughter of animals so that unnecessary pain or suffering, whether physical or mental, is eliminated in the pre-slaughter stages as far as possible, and animals are killed; wherever necessary, in as humane a manner as possible;

(*f*) to take all such steps as the Board may think fit to ensure that unwanted animals are destroyed by local authorities, whenever it is necessary to do so, either instantaneously or after being rendered insensible to pain or suffering;

(*g*) to encourage by the grant of financial assistance or otherwise, [12](the formation or establishment of pinjrapoles, rescue homes, animal shelters, sanctuaries and the like) where animals and birds may find a shelter when they have become old and useless or when they need protection;

(*h*) to co-operate with, and co-ordinate the work of, associations or bodies established for the purpose of preventing unnecessary pain or suffering to animals or for the protection of animals and birds;

(*i*) to give financial and other assistance to animal welfare organizations functioning in any local area or to encourage the formation of animal welfare organizations in any local area which shall work under the general supervision and guidance of the Board;

(*j*) to advise the Government on matters relating to the medical care and attention which may be provided in animal hospital, and to give financial and other assistance to animal hospitals whenever the Board thinks it necessary to do so;

(*k*) to impart education in relation to the humane treatment of animals and to encourage the formation of public opinion against the infliction of unnecessary pain or suffering to animals and for the promotion of animal welfare by means of lectures, books, posters, cinematographic exhibitions and the like;

(*l*) to advise the Government on any matter connected with animal welfare or the prevention of infliction of unnecessary pain or suffering on animals.

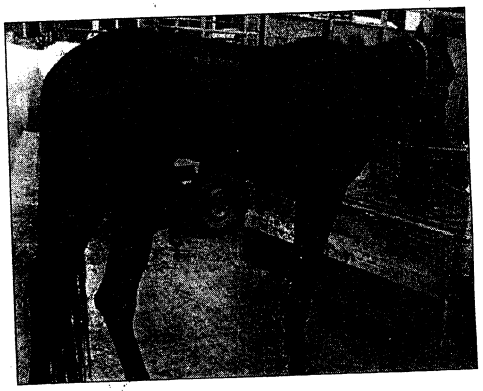
10. Power of Board to make regulations

The Board may, subject to the previous approval of the Central Government, make such regulations as it may think fit for the administration of its affairs and for carrying out its functions.

CHAPTER III
CRUELTY TO ANIMALS GENERALLY

11. Treating animals cruelly

(1) If any person



(*a*) beats, kicks, over-rides, over-drives, over-loads, tortures or otherwise treats any animal so as to subject it to unnecessary pain or suffering or causes, or being the owner permits, any animal to be so treated; or

(*b*) (employs in any work or labour or for any purpose any animal which, by reason of its age or any disease) infirmity; wound, sore or other cause, is unfit to be so employed or, being the owner, permits any such unfit animal to be employed; or

(*c*) wilfully and unreasonably administers any injurious drug or injurious substance to (any animal) or wilfully and unreasonably causes or attempts to cause any such drug or substance to be taken by [15](any animal;) or

(*d*) conveys or carries, whether in or upon any vehicle or not, any animal in such a manner or position as to subject it to unnecessary pain or suffering; or

(*e*) keeps or confines any animal in any -cage or other receptacle which does not measure sufficiently in height, length and breadth to permit the animal a reasonable opportunity for movement; or

(*f*) keeps for an unreasonable time any animal chained or tethered upon an unreasonably short or unreasonably heavy chain or cord; or

(*g*) being the owner, neglects to exercise or cause to be exercised reasonably any dog habitually chained up or kept in close confinement; or

(*h*) being the owner of (any animal) fails to provide such animal with sufficient food, drink or shelter; or

(*i*) without reasonable cause, abandons any animal in circumstances which tender it likely that it will suffer pain by reason of starvation thirst; or

(*j*) wilfully permits any animal, of which he is the owner, to go at large in any street, while the animal is affected with contagious or infectious disease or, without reasonable excuse permits any diseased or disabled animal, of which he is the owner, to die in any street; or

(*k*) offers for sale or without reasonable cause, has in his possession any animal which is

suffering pain by reason of mutilation, starvation, thirst, overcrowding or other illtreatment; or

(*l*) mutilates any animal or kills any animal (including stray dogs) by using the method of strychnine injections, in the heart or in any other unnecessarily cruel manner or;)

(*m*) solely with a view to providing entertainment

(*i*) confines or causes to be confined any animal (including tying of an animal as a bait in a tiger or other sanctuary) so as to make it an object or prey for any other animal; or

(*n*) organizes, keeps uses or acts in the management or, any place for animal fighting or for the purpose of baiting any animal or permits or offers any place to be so used or receives money for the admission of any other person to any place kept or used for any such purposes; or

(*o*) promotes or takes part in any shooting match or competition wherein animals are released from captivity for the purpose of such shooting:

he shall be punishable (in the case of a first offence, with fine which shall not be less than ten rupees but which may extend to fifty rupees and in the case of a second or subsequent offence committed within three years of the previous offence, with fine which shall not be less than twenty-five rupees but which may extend, to one hundred rupees or with imprisonment for a term which may extend, to three months, or with both.

(2) For the purposes of section (1) an owner shall be deemed to have committed an offence if he has failed to exercise reasonable care and supervision with a view to the prevention of such offence;

Provided that where an owner is convicted permitting cruelty by reason only of having failed to exercise such care and supervision, he shall not be liable to imprisonment without the option of a fine.

(3) Nothing in this section shall apply to -

(*a*) the dehorning of cattle, or the castration or branding or noseroping of any animal in the prescribed manner, or

(*b*) the destruction of stray dogs in lethal chambers by such other methods as may be prescribed or

(*c*) the extermination or destruction of any animal under the authority of any law for the time being in force; or

(*d*) any matter dealt with in Chapter IV; or

(*e*) the commission or omission of any act in the course of the destruction or the preparation for destruction of any animal as food for mankind unless such destruction or preparation was accompanied by the infliction of unnecessary pain or suffering.

12. Penalty for practicing phooka or doom dev

If any persons upon any cow or other milch animal the operation called practicing phooka or [doom dev or any other operation (including injection of any or doom dev. substance) to

improve lactation which is injurious to the health of the animal] or permits such operation being performed upon any such animal in his possession or under his control, he shall be punishable with fine which may extend to one thousand rupees, or with imprisonment for a term which may extend to two years, or with both, and the animal on which the operation was performed shall be forfeited to the Government.

13. Destruction of suffering animals

(1) Where the owner of an animal is convicted of an offence under section 11, it shall be lawful for the court, if the court is satisfied that it would be cruel to keep the animal alive, to direct that the animal be destroyed and to assign the animals to any suitable person for that purpose, and the person to whom such animal is so assigned shall as soon as possible, destroy such animal or cause such animal to be destroyed in his presence without unnecessary suffering: and any reasonable expense incurred in destroying the animal may be ordered by the court, if the court is satisfied that it would be cruel to keep the animal alive, to direct that the animal be destroyed and to assign the animal to any reasonable expense incurred in destroying the animal mal be ordered by the court to be recovered from the owner as if it were a fine:

Provided that unless the owner assents thereto, no order shall be made under this section except upon the evidence of a veterinary officer in charge of the area.

(2) When any magistrate, commissioner of police or district superintendent of police has reason to believe that an offence under section 11 has been committed in respect of any animal, he may direct the immediate destruction of the animal, if in his opinion, it would be cruel to keep the animal alive.

(3) Any police officer above the rank of a constable or any person authorized by the State Government in this behalf who finds any animal so diseased or so severely injured or in such a physical condition that in his opinion it cannot be removed without cruelty, may, if the owner is absent or refuses his consent to the destruction of the animal, forth with summon the veterinary officer in charge of the area in which the animal is found, and if the veterinary officer certifies that the animal is mortally injured or so severely injured or in such a physical condition that it would be cruel to keep it alive, the police officer or the person authorized, as the case may be, may, after obtaining orders from a magistrate, destroy the animal injured or cause it to be destroyed; [22](in such manner as may be prescribed)

(4) No appeal shall lie from any order of a magistrate for the destruction of an animal.

CHAPTER IV
EXPERIMENTATION OF ANIMALS

14. Experiments on animals

Nothing contained in this Act shall render unlawful the performance of experiments (including) experiments involving operations) on animals for the purpose of advancement by new discovery of physiological knowledge or of knowledge which will be useful for saving

or for prolonging life or alleviating suffering or for combating any disease, whether of human beings, animals or plants.

15. Committee for control and supervision of experiments on animals

(1) If at any time, on the advice of the Board, the Central Government is of opinion that it is necessary so to do for the purpose of controlling "and supervising experiments on animals it may be notification in the Official Gazette

Constitute a Committee consisting of such number of officials and non-officials, as it may think fit to appoint thereto.

(2) The Central Government shall nominate one of the Members of the Committee to be its Chairman.

(3) The Committee shall have power to regulate its own Procedure in relation to the performance of its duties.

(4) The funds of the Committee shall consist of grants made to it from time to time by the Government and of contributions, donations, subscriptions, bequests, gifts and the like made to it by any person.

15A. Sub-Committee

(1) The Committee may constitute as many sub-committees as it thinks fit for exercising any power or discharging any duty of the Committee or for inquiring into or reporting and advising on any matter which the Committee may refer.

(2) A sub-committee shall consist exclusively of the Members of the Committee.)

16. Staff of the Committee

Subject to the control of the Central Government, the Committee may committee appoint such number of officers and other employees as may be necessary to enable it to exercise ills powers and perform its duties and may determine the remuneration and other terms and conditions of service of such officers and other employees.

17. Duties of the Committee and power of the Committee to make rules relating to experiments on animals

(1) It shall be the duty of the Committee to take all such measures as may be necessary to ensure that animals are not subjected to unnecessary pain or suffering before, during or after the performance of experiments on them, and for the purpose it may, by notification in the Gazette of India and subject to the condition of previous publication, make such rules as it may think fit in animals relation to the conduct of such experiments.

(lA)In particular, and without prejudice to the generality to the foregoing power, such rules may provide for the following matters namely:

(*a*) the registration of persons or institutions carrying on experiments on animals;

(*b*) the reports and other information which shall be forwarded to the Committee by persons and institutions carrying on experiments or, animals.]

(2) In particular, and without prejudice to the generality of the foregoing power, rules made by the Committee shall be designed to secure the following objects, namely:

(*a*) that in cases where experiments are performed in any institution, the responsibility therefore is placed on the person in charge of the institution and that, in cases where experiments are performed outside an institution by individuals, the individuals, are performed outside an institution by individuals, the individuals, are qualified in that behalf and the experiments are performed on their full responsibility;

(*b*) that experiments are performed with due care and humanity and that as far as possible experiments involving operations are performed under the influence of some anesthetic of sufficient power to prevent the animals feeling pain;

(*c*) that animals which, in the course of experiments under the influence of anesthetics, are so injured that their recovery would involve serious suffering, are ordinarily destroyed while still insensible;

(*d*) that experiments on animals are avoided wherever it is possible to do so; as for example; in medical schools, hospitals, colleges and the like, if other teaching devices such as books, models, films and the. like, may equally suffice;

(*e*) that experiments on larger animals are avoided when it is possible to achieve the same results by experiments upon small laboratory animals like guinea-'pigs, rabbits, frogs and rats;

(*f*) that, as far as possible, experiments are not performed merely for the purpose of acquiring manual skill;

(*g*) that animals intended for the performance of experiments are properly looked after both before and after experiments;

(*h*) that suitable records are maintained with respect to experiments performed on animals

(3) In making any rules under this section, the Committee shall be guided by such directions as the Central Government (consistently with the objects for which the Committee is set up) may give to it, and the Central Government is hereby authorized to give such direction.

(4) All rules made by the Committee shall be binding on all individuals performing experiments outside institutions and on persons incharge of institutions in which experiments are performed.

18. Power of entry and inspection

For the purpose of ensuring that the rules made by it are being complied and with the Committee may authorize any of its officers or any other person in writing to inspect any institution or place where experiments are being carried on and report to it as a result of such inspection, and any officer or person so authorized may-

(*a*) enter at any time considered reasonable by him and inspect any institution or place in which experiments on animals are being carried on; and

(*b*) require any person to produce any record kept by him with respect to experiments on animals.

19. Power to prohibit experiments on animals

If the Committee is satisfied, on the report of any officer or other person made to it as a result of any inspection under section 18 or otherwise that the rules made by it under section 17 are not being animals the Committee may, after giving an opportunity to the person or institution carrying on experiments on animals; the Committee may, after giving an opportunity to the person or institution of being heard in the matter, by order, prohibit the person or institution from carrying on any such experiments either for a specified period or indefinitely, or may allow the person or institution to carry on such experiments subject to such special conditions as the Committee may think fit to impose.

20. Penalties

If any person-

(*a*) contravenes any order made by the Committee under section 19; or

(*b*) commits a breach of any condition imposed by the Committee under that section:

he shall be punishable with fine which may extend to two hundred rupees, and, when the contravention or breach of condition has taken place in any institution the person incharge of the institution shall be deemed to be guilty of the offence and shall be punishable accordingly.

CHAPTER V
PERFORMING ANIMALS

21. "Exhibit" and "train" defined

In this Chapter, "exhibit" means exhibit or any entertainment to which the public are admitted through sale of tickets, and "train" means train for the purpose of any such exhibition, and the expressions "exhibitor" and "trainer" have respectively the corresponding meanings.

22. Restriction on exhibition and training of performing animals

No person shall exhibit or train

(*i*) any performing animal unless he is registered in accordance with the provisions of this Chapter;

(*ii*) as a performing animal, any animal which the Central Government may, by notification in the official gazette, specify as an animal which shall not be exhibited or trained as a performing animal.

23. Procedure for registration

(1) Every person desirous of exhibiting or training any performing animal shall, on making an application in the prescribed form to the prescribed authority and on payment of the prescribed fee, be registered under this Act unless he is a person who, by reason of an order made by the court under this Chapter, is not entitled to be so registered.

(2) An application for registration under this Chapter shall contain such particulars as to the animals and as to the general nature of the performances in which the animals are to be exhibited or for which they are to be trained as may be prescribed, and the particulars so given shall be entered in the register maintained by the prescribed authority.

(3) The prescribed authority shall give to every person whose name appears on the register kept by them, a certificate of registration in the prescribed form containing the particulars entered in the register.

(4) Every register kept under this Chapter shall at all reasonable times be open for inspection on payment of the prescribed fee, and any person shall, on payment of the prescribed fee, be entitled to obtain copies thereof or make extracts therefrom.

(5) Any person whose name is entered in the register shall, subject to the provisions of any order made under this Act by any court, be entitled, on making an application for the purpose, to have the particulars entered in the register with respect to him varied, and where any such particulars are so varied, the existing certificate shall be cancelled and a new certificate issued.

24. Power of court to prohibit or restrict exhibition and training of performing animals

(1) Where it is proved to the satisfaction of any magistrate on a complaint made by a police officer or an officer authorized in writing by the prescribed authority referred to in section 23, that the training or exhibition of any performing animals has been accompanied by unnecessary pain or suffering and should be prohibited or allowed only subject to conditions, the court may make an order against the person in respect of whom the complaint is made, prohibiting the training or exhibition or imposing such conditions in relation thereto as may be specified by the order.

(2) Any court by which an order is made under this section, shall cause a copy of the order to be sent, as soon as may be after the order is made, to the prescribed authority by which the person against whom the order is made is registered, and shall cause the particulars of the order to be endorsed upon the certificate field by the person, and that person shall produce his certificate on being so required by the court for the purposes of endorsement, and the prescribed authority to which a copy of an order is sent under "his section shall enter the particulars of the order in that register;

25. Power to enter premises

(1) Any person authorized in writing by the prescribed authority referred to in section 23 and any police officer not below the rank of a sub-inspector may

(*a*) enter at all reasonable times and inspect any premises in which any performing animals are being trained or exhibited or kept for training or exhibition, and any such animals found therein; and

(*b*) require any person who, he has reason to believe is a trainer or exhibitor of performing animals to produce his certificate of registration,

(2) No person or police officer referred to in sub section (1) shall be entitled under this section to go on or behind the stage during a public performance of performing animals.

26. Offences

If any person -

(*a*) not being registered under this chapter, exhibits or trains any performing animal; or

(*b*) being registered under the Act, exhibits or trains any performing animal with respect to which or in a manner with respect to which, he is not registered; or

(*c*) exhibits or trains as a performing animal, any animal which is not to be used for the purpose by reason of a notification issued under clause (*ii*) of section 22; or

(*d*) obstructs or wilfully delays any person or police officer referred to in section 25 in the exercise of powers under this Act as to entry and inspection; or

(*e*) conceals any animal with a view to avoiding such inspection: or

(*f*) being a person registered under 'the Act, on being duly required in pursuance of this Act to produce his certificate under this Act, fails without reasonable excuse so to do; or

(*g*) applies to be registered under this Act when not entitled to be so registered,

He shall be punishable on conviction with fine which may extend to five hundred rupees or with imprisonment which may extend to three months, or with both.

27. Exemptions

Nothing contained in this Chapter shall apply to -

(*a*) the training of animals for bonafide military or police purpose or the exhibition of any animals so trained; or

(*b*) any animals kept in any zoological garden or by any society or association which has for its principal object the exhibition of animals for educational or scientific purposes.

CHAPTER VI
MISCELLANEOUS

28. Saving as respects manner of killing prescribed by religion

Nothing contained in this Act shall render it an offence to kill any animal in a manner required by the religion of any community.

29. Power of court to deprive person convicted of ownership of animal

(1) If the owner of any animal is found guilty of any offence under this Act. the court upon his conviction thereof, may, if it thinks fit, in addition to any other punishment make an order that the animal with respect to which the offence was committed shall be forfeited to Government and may, further, make such order as to the disposal of the animal as it thinks fit under the circumstances.

(2) No order under sub section (1) shall be made unless it is shown by evidence as to a -previous conviction under this Act or as to the character of the owner or otherwise as to the treatment of the animal that the animal if left with the owner, is likely to be exposed to further cruelty.

(3) without prejudice to the provision contained in sub-section (1), the court may also order that a person convicted of an offence under this Act shall, either permanently or during such period as is fixed by the order, be prohibited from having the custody of any animal of any kind whatsoever, or as the court thinks fit of any animal of any kind or species specified in the order.

(4) No order under sub-section (3) shall be made unless

(*a*) it is shown by evidence as to a previous conviction or as to the character of the said person or otherwise as to the treatment of the animal in relation to which he has been convicted that an animal in the custody of the said person is likely to be exposed to cruelty;

(*b*) it is stated in the complaint upon which the conviction was made that it is the intention of the complaint upon the conviction of the accused to request that an order be made as aforesaid and

(*c*) the offence for which the conviction was made was committed in an area in which under the law for the time being in force a licence is necessary for the keeping of any such animal as that in respect of which the conviction was made.

(5) Notwithstanding anything to the contrary contained in any law for the time being in force, any person in respect of whom an order is made under sub-section (3) shall have no right to the custody of any animal contrary to the provisions of the order, and if he contravenes the provisions oil any order, he shall be punishable with fine which may extend to one hundred rupees, or. with imprisonment for a term which may extend to three months, or with both.

(6) Any court which has made an order under sub-section (3) may at any time, either on its own motion or on application made to it in this behalf, rescind or modify such order.

30. Presumptions as to guilt in certain cases

If any person is charged with the offences of killing a goat, cow or its to guilt in progeny contrary to the provisions of clause (1) of sub section (1) or section 11, and it is proved that such person had in his possession, at the time the offence is alleged to have been committed, the skin of any such animal as is referred to in this section with any the skin of any such animal as is referred to in this section with any part of the skin of the head attached thereto, it shall be presumed until the contrary is proved that such animal was killed in a cruel manner.

31. Cognizability of offences

Notwithstanding anything contained in the Code or Criminal procedure, 1898, (5 of

1898) an offence punishable under clause (1) or clause (*n*) or clause, (*o*) of sub-section (1) of section 11 or under section 12 shall be a cognizable offence within the meaning of that code.

32. Powers of search and seizure

(1) If a police officer not below the rank of sub inspector, or any person authorized by the State Government in this behalf has reason to believe that an offence under clause (1) of sub-section (1) of section 11 in respect of any such animal as is referred to in section 30 is being, or that any person has in his possession the skin of any such animal with any part of the skin of the head attached thereto, he, may enter and search such place or any place in which he has reason to believe any such skin to be, and may seize such skin or any article or thing used or intended to be used in the commission of such offence.

(2) If a police officer not below the rank of sub-inspector, or any person authorized by the State Government in this behalf, has reason to believe that phooka or (doom dev or any other operation of the nature referred to in section 12) has just been or is being, performed on any animal within the limits of his jurisdiction, he may enter any place in which he has reason to believe such animal to be, and may seize the animal and produce it for examination by the veterinary officer incharge of the area in which the animal is seized.

33. Search warrants

(1) If a magistrate of the first or second class or a presidency magistrate or a commissioner of police or district superintendent of police, upon information in writing; and after such inquiry as he thinks necessary, has reason to believe that an offence under this Act is being, or is about to be, or has been committed in any place, he may either himself enter and search or by his warrant authorize any police officer not below the rank of sub-inspector to enter and search the place.

(2) The provisions of the Code of Criminal Procedure, 1898, relating to searches shall so far as those provision can be made applicable, apply to searches under this Act.

34. General power of seizure for examination

Any police officer above the rank of a constable or any person authorized seizure for by the State Government in this behalf, who has reason to believe that examination an offence against this Act has been or is being, committed in respect of any animal, may, if in his opinion the circumstances so require, seize the animal and produce the same for examination by the nearest magistrate or by such veterinary officer as may be prescribed; and such police officer or authorized person may, when seizing the animal, require the person in charge thereof to accompany it to the place of examination.

35. Treatment and care of animals

(1) The State Government, may by general or special order appoint infirmaries for the treatment and care of animals in respect of which offences against this Act have been committed, and may authorize the detention therein of any animal pending its production before a magistrate.

(2) The magistrate before whom a prosecution for an offence against this Act has been instituted may direct that the animals concerned shall be treated and cared for in an infirmary, until it is fit to perform its usual work or is otherwise fit for discharge, or that it shall be sent to a pinjrapole, or if the veterinary officer in charge of the area in which the animal is found or such a veterinary officer as may be authorized in this behalf by rules made under this Act certifies that it is incurable or cannot be removed without cruelty, that it shall be destroyed.

(3) An animal sent for care and treatment to an infirmary shall not, unless the magistrate directs that it shall be sent to a pinjrapole or that it shall be destroyed, be released from such place except upon a certificate of its fitness for discharge issued by the veterinary officer in charge of the area in which the infirmary is situated or such other veterinary officer as may be authorized in this behalf by rules made under this Act.

(4) The cost of transporting the animal to an infirmary or pinjrapole and of its maintenance and treatment in an infirmary, shall be payable by the district magistrate, or, in presidency-towns, by the commissioner of police;

Provided that when the magistrate so orders on account of the poverty of the owner of the animal, no charge shall be payable for the treatment of the animal.

(5) Any amount payable by an owner of an animal under sub-section (4) may be recovered in the same manner as an arrear of land revenue,

(6) If the owner refuses or neglects to remove the animal within such time as a magistrate may specify, the magistrate may direct that the animal be sold and that the proceeds of the same be applied to the payment of such cost.

(7) The surplus, if any, of the proceeds of such sale shall, on application made by the owner within two months from the date of the sale be paid to him.

36. Limitation of prosecutions

A prosecution for an offence against this Act shall not be instituted after prosecutions the expiration of three months from the date of the commission of the offence.

37. Delegation of powers

The Central Government may, by notification in the official Gazette, direct that all or any of the powers exercisable by it under this Act, may, subject to such conditions as it may think fit to impose, be also exercisable by any State Government.

38. Power to make rules

(1) The Central Government may, by notification in the Official Gazette and subject to the condition of previous publication, make rules to carry out the purposes of this Act.

38A. Rules and regulations to be laid before Parliament

Every rule made by the Central Government or by the Committee constituted under section 15 and every regulation made. by the Board shall be laid, as soon as may be after it is made, before each House of Parliament for approval.

39. Persons authorized under section 34 to be public servants

Every person authorized by the State Government under section 34 shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal code.

40. Indemnity

No suit, prosecution or other legal proceeding shall lie against any person who is, or who is deemed to be a public servant within the meaning of section 21 of the Indian Penal Code in respect of anything in good faith done or intended to be done under this Act.

41. Repeal of Act 11 of 1890

Where in pursuance of a notification under subsection (3) of section 1 of 1890 any provision of this Act comes into force in any State, any provision of the Prevention of Cruelty to Animals Act, 1890, which corresponds to the provision so coming into force, shall thereupon stand repealed.

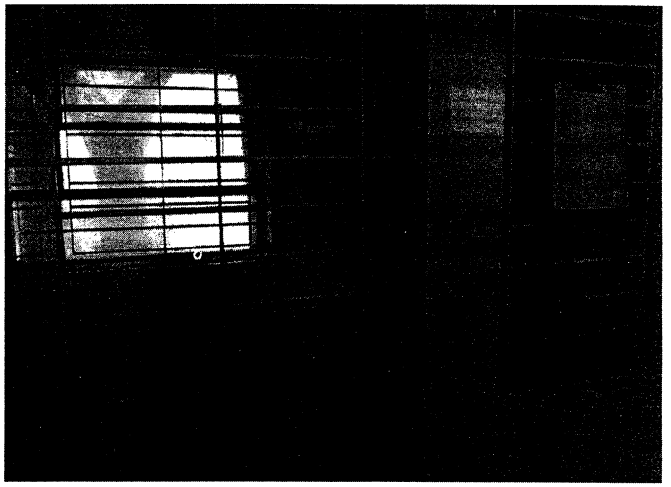
SUMMARY

The Prevention of Cruelty to Animals Act, 1960 of India (except Jammu and Kashmir) imposes a duty on every person having the care of any animal to take all reasonable measures to ensure its well-being and to prevent the infliction of unnecessary pain or suffering. The Act prohibits any person from inflicting, causing, or if it is the owner, permitting, unnecessary pain or suffering to be inflicted on any animal. The term, "animal," means any living creature other than a human being. The Act makes it a crime to beat, kick, torture, mutilate, administer an injurious substance, or cruelly kill an animal. It is also illegal to over-ride, over-drive, over-load, or work an unfit animal. It is an offense to cruelly transport, confine, chain or tether an animal. It is a violation to engage in animal fighting or shooting competitions in which animals are released from captivity to be shot. An owner commits an offense if he or she fails to provide sufficient food, drink or shelter, unreasonably abandons any animal, or permits any diseased or disabled animal to roam or die in any street. Exemptions include the dehorning of cattle, castration, branding, and noseroping of animals in the prescribed manner. Also exempted is the destruction of stray dogs in lethal chambers, the humane slaughter of animals for food or according to religious sacrifice, and the destruction of suffering animals. Experimentation on animals is also exempted, provided that operations are performed using an anesthetic that prevents the animal from feeling pain. Violations are punishable with a fine and/or imprisonment (up to 3 months). The court may also confiscate any animal from a person convicted under the Act. The statute of limitations is three months for prosecution.

BREEDING OF AND EXPERIMENTS ON ANIMALS (CONTROL AND SUPERVISION) RULES, 1998

S.0.1074 [15 Dec, 1998]
(As amended upto Feb, 2001)

Following amendment in 2006, these rules may be called the Breeding of and Experiments on Animals (Control and Supervision) Amendment Rules, 2006.



In exercise of the powers conferred by sub-section (1) (1A) and (2) of section 17 of the Prevention of Cruelty of Animals Act, 1960, the committee for the control and supervision of the experiments on animals hereby makes the following rules, namely:

1. Short title and commencement

Breeding of and Experiments on Animals (Control and supervision) Rules, 1998.

2. Definitions

(*a*) "Act" means the Prevention of Cruelty to Animals Act, 1960;

(*b*) "breeder" means person including an institution, which breeds animals for the purpose of transfer to other authorized institution for performing experiments;

(*c*) "Committee" means the committee considered under section 15 of the Act for the control of supervision of experiments;

(*d*) "Establishment" means any individual, company firm, corporation, institution other than schools up to higher secondary level, which performs experiments on animals;

(*e*) "Experiment" means any programme or project involving use of animal(s) for the acquisition of knowledge of a biological, physiological, ethological, physical or

chemical nature; and includes the use of animal(s) in the production of reagents and products such as antigens and antibodies, routine diagnostics, testing activity and establishment of transgenic stocks, for the purpose of saving or prolonging life or alleviating suffering or significant gains in wellbeing for people of the country or for combating any disease whether of human beings or animals;'

(*f*) "Institutional Animal Ethics Committee" means a body comprising of a group of persons recognized and registered by the Committee for the purpose of control and supervision of experiments on animals performed in an establishment which is constituted and operated in accordance with the procedures specified for the purpose by the Committee;

(*g*) "Contract research" means any research undertaken by individual, company, firm, corporation or institution on behalf of a foreign individual company, firm, corporation or institution for any consideration;

(*h*) "Collaborative research" means any research undertaken between two or more research institutions on an equal footing which does not involve any financial or monetary consideration and is undertaken solely for the purpose of advancement of scientific research and human welfare;

(*i*) "Specified format" means the form specified for the purpose by the Committee from time to time.

3. Breeding of animals

(*a*) No establishment shall carry on the business of breeding of animals or trade of animals for the purpose of experiments unless it is registered.

(*b*) Every breeder/ establishment carrying on the business of breeding animals or the trade of animals for the purpose of experiments, shall, apply for the registration within sixty days from the date of commencement of these rules and stop breeding of animals if registration is subsequently refused to it by the Committee.

4. Registration of establishments

(*a*) No establishment shall carry on the business of breeding of animals or trade of animals for the purpose of experiments unless it is registered.

(*b*) Every establishment performing experiments on animals, shall apply for registration shall, apply for the registration within sixty days from the date of commencement of these rules and stop performing experiments on animals if registration is subsequently refused to it by the Committee.

5. Application for registration

(*a*) The application for registration by a breeder under sub-rule (*b*) of rule 3 and an establishment under sub-rule (*b*) of rule 4 shall be made in a specified format to the member-secretary or any other officer authorized in this regard by the Committee.

(*b*) The member-secretary or the authorized officer of the Committee may for deciding the issue of registration, ask for information relating to premises where the experiments are to be conducted, animal housing facilities, details of breeding of animals and its trade, the other infrastructure including availability of the manpower trained in handling animals and for verification of facts, mentioned in the application for the registration, and if satisfied, shall register such establishment or the breeder.

(*c*) A breeder or the establishment on registration for the purpose of performing experiments on animals shall comply with the conditions as may be specified at the time of registration by the Committee.

(*d*) The Committee or any other-officer authorized in this regard by the Committee shall take decision on the registration within three months of making the application.

(*e*) If any modification of facilities are required before registration, the details needed shall be communicated by the Committee."

6. Details of experiments conducted

(*a*) Every registered establishment shall maintain a register as per the specified format and keep a complete particulars about the kind of animals to be used for conducting any experiments, the health of the animal, the nature of the experiment to be performed and the reasons necessitating the performance of such an experiment on particular species.

[1](*b*) The Committee or any other officer authorized by the Committee may examine the register so maintained and if the Committee is not satisfied even after opportunities given for improvement, It may take such action as may be appropriate under these rules.

7. Stocking of animals

The animals shall be stocked by the breeder and the establishments in the following manner;

(*a*) Animal houses shall be located in a quiet atmosphere and the premises kept tidy, hygienic and the animals protected from drought and extremes of weather;

(*b*) animal cages for small animals and stables for large animals shall be such that animals can live in comfort and overcrowding is avoided;

(*c*) where the standards have been laid down by the Indian Standards Institution, the cages, the stable, as the case may be shall confirm to those standards;

(*d*) animal attendants should be suitably trained and experienced in the duties allotted to them;

(*e*) a trained and experienced attendant should look after animals before and after the experiments;

(*f*) there shall be satisfactory arrangement for looking after the animals during off-hours and on holidays;

(*g*) detailed specifications for housing, feeding and maintenance of various species to be used In animal experimentation as notified by the Committee, shall be adhered to by the registered establishment;

(*h*) in the interim period fill such detailed specifications are notified, the breeders and establishments shall comply with the Indian National Science Academy Guidelines.

8. Permission of the committee required for conducting experiments

Every registered establishment before acquiring animals or conducting any experiment on an animal/animals shall apply for permission of the Committee along with the details contained in the specified format to the member Secretary of the Committee or the Institutional Ethics Committee, as the case may be.

9. Performance of experiments

While performing the experiments the following points should be kept in mind;

[1](*a*) experiments shall be performed in every case by or under the supervision of a person duly qualified in that behalf, that is, degree holders in medicine or veterinary science, post graduate and above in life sciences/pharmaceutical sciences or any other natural sciences, degree or diploma holders in pharmacy, diploma or certificate in laboratory animal techniques sciences from a recognized institution as identified by Committee for the purpose of control and supervision of experiments on animals for the purpose and under the responsibility of the person performing the experiment;

(*b*) experiments should be performed with due care and humanity;

(*bb*) animals lowest on the phylogenetic scale which may give scientifically valid results should be first considered for any experimental procedure and the experiment should be designed using minimum number of animals to give statistically valid results at 95% degree of confidence:

Provided that replacement alternatives not involving experiments on animals should be given due and full consideration and sound justification must be provided in case alternatives, though available, are not used;"

(*c*) animals should be properly looked after before and after the experiment;

(*cc*) (*i*) personnel using experimental animal(s) shall be responsible for the welfare of animal(s) during their use in experiments;

(*ii*) Investigators shall be responsible for the aftercare and rehabilitation of animal(s) after experimentation, and shall not euthanise animal(s) except in situations as defined in clause (ff);

(*iii*) costs of aftercare and rehabilitation of animal(s) after experimentation shall be made part of research costs and shall be scaled in positive correlation with the level of costs involved in such aftercare and rehabilitation of the animal(s);

(*iv*) rehabilitation treatment of an animal after experimentation shall extend till the point the animal is able to resume a normal existence by providing a lump-sum amount as costs for rehabilitation and care of such animal to cover its entire statistical expected life span; and

(*v*) the establishment undertaking experiments or duly licensed and authorized animal welfare organization under the control of the Committee may, on payment of lump-sum amount, undertake rehabilitation of animals;";

(*d*) Experiments involving operative procedures more severe than simple inoculation shall be performed under the influence of anesthetic to prevent the animal feeling pain. Anesthesia shall be administered by a veterinary surgeon or scientist/technician trained in methods of anesthesia;

(*e*) those injured animals whose recovery would involve pain or suffering shall be destroyed humanely while still under the influence of anesthesia;

(*f*) when animal is suffering severe pain at any stage of a continuing experiment, it shall be painlessly destroyed at that stage without proceeding with the experiment;

(*ff*) the following parameters shall be adopted for application of euthanasia, namely:-

(*i*) when the animal is paralyzed and is not able to perform its natural functions or it becomes incapable of independent locomotion or it can no longer perceive the environment in an intelligible manner; or

(*ii*) if during the course of experimental procedure the animal has been left with a recurring pain wherein the animal exhibits obvious signs of pain and suffering; or

(*iii*) where the non-termination of the life of the experimental animal will be life threatening to human beings or other animals;".

(*g*) the experiments shall not be performed for the sole purpose of attaining or retaining manual skill except In schools, colleges and programmes duly scrutinized and permitted in registered establishments by the Committee;

(*h*) experiments shall not be performed by way of an illustration;

(*i*) experiments shall not be performed as a public demonstration;

(*j*) no paralyzing agent, including but not limited to curare, shall be used for the purpose of any experiment except in conjunction with anesthetic;

(*k*) no experiment the result of which is already conclusively known, shall be repeated without previous justification;

(*l*) there shall not be applied to the eye of an animal by way of experiment any chemical substance for the purpose of absorption through the conjunctival membrane or through the cornea calculated only to give pain;

(*m*) dogs held for experimental purposes shall not be debarked;

(*n*) where experiments are performed in any institution, the responsibility therefore is placed on the person in charge of the institution and in cases where an individual performs experiments outside an institution qualified in that behalf, the experiments are performed on his responsibility.

10. Transfer and acquisition of animals for experiment

(*a*) A breeder shall not trasfer any animal to an unregistered establishment.

(*b*) (*i*) an establishment shall acquire animal(s) for experiments from registered breeders only;

(*ii*) in case of non-availability of animal(s) from registered breeders, the animal(s) may be procured from alternate legal sources;

(*iii*) in case the animal is procured from the alternate legal sources, the same shall be procured after taking written permission from the authority competent under the law for the time being in force, to give such permission; and

(*iv*) the establishment procuring such animal shall maintain a record in this regard and shall produce the same before the Committee, whenever required;" ;

[1](*bb*) For the acquisition of laboratory bred experimental rats and mice species of genetically defined strains not available within the country, the registered breeders or establishments shall apply for permission to the Institutional Animal Ethics Committee recognized by the Committee for the Purpose of Control and Supervision of Experiments on Animals.

(*c*) Every establishment after acquisition of an animal shall not transfer to any unregistered establishment or breeder.

(*d*) Animals used for production/breed improvement may be given out by the breeder instituion for domestic use.

(*e*) In case an animal is not available from a registered breeder or from alternate legal sources within the country, genetically defined animals may be imported with permission of Directorate General of Foreign Trade:

Provided that the condition of non-availability within the country shall not apply for laboratory bred rats and mice of genetically defined strains;".

(*a*) The breeder and the instituitions will comply by all the directions of the Committee.

11. Records

(*a*) Every establishment/Institutional Animals Ethics Committee shall maintain a record of the animals under its control and custody in the specified format.

(*b*) Every establishment/Institutional Animals Ethics Committee shall furnish such information, as the Committee may, from time require in the specified format.

(*c*) All laboratories shall inform the exact number/ species of animals to the Member Secretary or any officer authorized in this regard by the Committee as per the specified format.

12. Contract animal experiments

Registered establishments may undertake contract research on behalf of any other agency in accordance with the Prevention of Cruelty to Animals Act, 1960 (59 of 1960) and the rules made thereunder."

13. Composition of Institutional Animals Ethics Committee

Every Institutional Animal Ethics Committee shall include: A biological scientist, two scientists from different biological disciplines, a veterinarian involved in the care of the animals, the scientist in charge of the animal facility of the establishment concerned, a scientist from outside the institute, a socially aware non-scientist, member and a representative or nominee of the committee. A specialist may be co-opted while reviewing special projects using hazardous agents such as radioactive substances and deadly micro-organisms.

14. Power to suspend or revoke registration

(*a*) The Committee, if it is satisfied with the report of the Member-Secretary or the authorized officer of the Committee (made to it as a result of any inspection or information received or otherwise) that -

(*i*) the rules made by it are not being complied with by an establishment or breeder; or

(*ii*) a violation of the directions of the Committee has been committed by any establishment or breeder and the Committee's directions to rectify such violation have not been complied within the period so specified,

The Committee may, by order in writing, suspend or revoke the registration of the establishment or breeder and/or direct closure of the animal house facility for such a period as may be specified in the order:

Provided that no order under this clause shall be made without giving the establishment or breeder any opportunity of being heard in the matter:

Provided further that no order for suspension or revocation of registration, or closure of animal house facility shall be issued in a case of minor violation.

Explanation:- for the purposes of this clause, "minor violation" means an act of commission or omission which does not have direct bearing on the health of an animal which may not lead to adverse health effect or pain or suffering or death of an animal.".

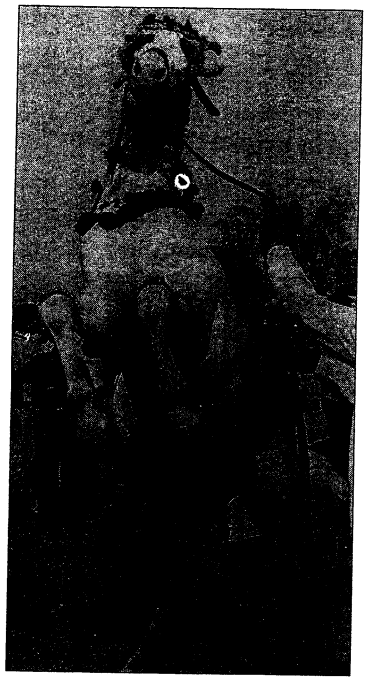
(*b*) The committee if it is of the opinion that an establishment or breeder has failed to comply with the provisions of these rules may suspend the registration of such establishments.

(*c*) The committee may in the event of revocation or suspension of registration of an establishment or breeder issue such directions for the care and protection of animals which are in their custody.

(*d*) Such establishment or breeder will cease to perform any experiment on any animal or acquire or transfer any animal.

PERFORMING ANIMALS (REGISTRATION) RULES, 2000

S.O. 267 (E) [26th March, 2001]
(As amended upto 2002)



In exercise of the powers conferred by sub-sections (1) and (2) of section 38 of the Prevention of Cruelty to Animals Act, 1960, the Central Government hereby makes the following rules, namely;

1. Short title and commencement

These rules may be called the Performing Animals (Registration) Rules, 2001.

2. Definitions

In these rules unless the context otherwise requires;

(*a*) "Act" means the Prevention of Cruelty to Animals Act, 1960;

(*b*) "Board" means the Animal Welfare Board of India;

(*c*) "film" means a cinematograph film as defined in the Cinematograph Act of 1952;

(*d*) "fitness certificate" means a certificate granted by a veterinary doctor to be nominated by the prescribed authority certifying the health and fitness of the animal;

(*e*) "owner" means the owner of an animal and includes any other person in possession or custody of such animal whether with or without the consent of the owner;

(*f*) "ownership certificate" means a certificate granted under section 42 of the Wildlife (Protection) Act 1972;

(*g*) "prescribed authority" means the Central Government, or such other authority including the Board or the State Government, as may be authorized by the Central Government;

(*h*) "performing animal" means an animal which is used at or for the purpose of any entertainment including a film or an equine event to which the public are admitted;

(*i*) schedule" means a Schedule appended to these rules;

(*j*) "veterinary doctor' means a person registered with the Veterinary Council of India established under the Indian Veterinary Council Act, 1984 (52 of 1984).

3. Application of registration

Any person desirous of training or exhibiting a performing animal shall, apply for registration (First Schedule) to the prescribed authority. The race horses which have been registered by the owners with the Turf Authorities shall not, require registration under this rule.

4. Fee and registration

Every application for registration shall be accompanied by a fee of Rupees five hundred.

5. Power to call for additional information

(1) The prescribed authority may call for such additional records and information as it may deem fit from the applicant in respect of the particulars furnished by it.

(2) If the prescribed authority is satisfied about the proposed performance and the method to be adopted for the training of such animals by the applicant it may grant registration.

6. Form of certificate of registration

The certificate of registration shall be issued by the prescribed authority in the form set out in the Second Schedule.

7. Prior information for use of performing animals in films

(1) Every owner desirous of hiring out or lending a performing animal in the making of a film shall give prior information in the format as specified by the prescribed authority for this purpose to specifying the kind of animal, age of animal, physical health of the animal, the nature of performance to be done by the animal, the duration for which the animal shall be used for such performance, the duration and method of training of the animal for such performance and justification for the use of such animals in the film and such other information as may be required by that authority.

(2) Every such application shall be accompanied by a fitness certificate issued by a veterinary doctor.

8. General conditions for registration

(1) The prescribed authority while granting registration may impose such terms and conditions as it deems appropriate and may impose the following conditions in granting registration, namely:

(*i*) every owner who has ten or more such performing animals shall have a veterinarian as a regular employee for their care treatment and transport;

(*ii*) the owner shall not transport such animals by road continuously for more than 8 hours and except in cages admeasuring as specified in the Fifth Schedule;

(*iii*) the owner shall ensure proper watering and feeding halts during such transportation;

(*iv*) the owner after transportation shall provide feeding and retiring enclosures in respect of the animal specified in the Sixth Schedule;

(*v*) the owner shall ensure that any animal is not inflicted unnecessary pain or suffering before or during or after its training or exhibition;

(*vi*) the owner shall not deprive the animal of feed and water in order to compel the said animal to train or perform any trick;

(*vii*) the owner shall train an animal as a performing animal to perform an act in accordance with its basic natural instinct;

(*viii*) the owner shall not make a performing animal perform if it is sick or injured or pregnant;

((*ix*) the owner shall ensure that no sudden loud noise is deliberately created within the vicinity of any performing animal or bring an animal close to fire which may frighten the animal;

(*x*) the owner shall ensure that in case the performing animal is to be exhibited under artificial light, the overall intensity of such light shall not be more than 500 LUX;

(*xi*) the owner shall not subject the animals to a action which may either kill or injure or use the animal in scenes which may cause injury to the animals;

(*xii*) the owner shall not use any tripping device wires or pitfalls for such animals;

(*xiii*) the owner shall not expose any animal to either burning fire or to fire accidents;

(*xiv*) the owner shall not keep any animal including horses in close proximity while shooting scenes involving explosives or other loud noises;

(*xv*) the owner shall ensure that props such as spears nails splinters, barbed wires and other such props shall not cause injury to the animals during performance;

(xvi) the owner shall ensure that the equines are made to walk on hard surfaces without being shoed and shall further ensure that the animals are used in downhill slides or road slide stops with proper skid and hock boots;

(*xvii*) the owner of any equine shall not use any whip that cause weal, bruising or other damage to the horse and subject to the conditions that:

(*a*) the whip shall not have raised binding, stitching seam or flap;

(*b*) the whip shall be used by licensed jockeys only;

(*c*) the owner shall also ensure the whip is used only at the specified area;

(*d*) the whip shall not be used more than [1]8 times in a race;

(*e*) each horse immediately after the race and again after a period of six hours but within eight hours of the race shall be subject to the veterinary inspection, to check for injuries;

(*f*) the horses shall be housed in stables admeasuring 12ft X 12ft with adequate facility for the horses to see each other with adequate provision for proper ventilation and protection against heat and an friendly environment atmosphere as far as possible;

[1]Provided that if the whip is used more than eight times in race, the prescribed authority in consultation with the Turf Authorities shall decide, if the use of such whip in excess of the number specified, was for any reason to save the horse or the jockey from any accident, for the purpose of initiating any action under the Act;

(*xviii*) the owner shall ensure that the animal is not used on floors that are very smooth without the use of non-skidding mats;

(*xix*) the owner shall ensure that large gathering of animals is not allowed in such a way which may cause or result in stampede to the animals;

(*xx*) the owner shall ensure that the animal is not made or incited to fight against other animals and shall further ensure that sedatives or tranquillizers or steroids or any other artificial enhancers are not administered to or inserted in any animal except the anesthesia by a veterinary doctor for the purpose of treatment of an injured or sick animal;

The use of steroids shall be avoided as far as possible provided the steroids may be used if no other option is available to be supported by a veterinary prescription and the 'purchase of such steroids shall be from a duly authorized source;

(*xxi*) the owner shall ensure that the animal shall not be transported or be kept or confined in cages and receptacles which do not measure in height, length or breadth as specified under the Transport of Animal Rules, 1978, the Recognition of Zoo Rules, 1992 or under any other Act, rule or order for this purpose;

(*xxii*) the owner shall ensure that the animal is not continuously used for excessive number of takes in shooting a film without providing adequate rest to the animal. In the event of a snake being used it shall not be made to ingest any substances or made to crawl across tarred or any other heatened surface and shall not be contorted to wrestle;

(*xxiii*) the owner shall ensure that while using an animal in shooting a film, the figh

sequence shall not be shot in any livestock holding area including poultry area and shall further ensure that no birds are shown in cages;

(*xxiv*) the owner shall inform the prescribed authority at least four weeks in advance informing the place, date and time of the actual making of the film wherein the animal is to be used;

(*xxv*) 'persons desirous of transporting horses from one place to another shall adhere to the following norms:

(*a*) no horse shall be tied up in such a way that his head and neck movements are unnaturally restricted while travelling;

(*b*) all horses must be watered at least every four hours and provided adequate ration of hay during the journey lasting more than eight hours;

(*c*) adequate ventilation and free flow of fresh air in the vehicle shall be ensured during transport;

(*d*) rubber mats shall preferably be used for flooring instead of straw bedding;

(*e*) horses shall not be transported within twenty four hours of having raced;

(*f*) no horse shall be raced, where the period of journey exceeds, six hours, unless twenty four hours have elapsed since completion of the travel.

(2) The prescribed authority may also impose such other conditions for the grant of registration as may be deemed appropriate to it for the welfare of animals.

9. Register

Every person to whom a certificate of registration is issued under these rules shall have his name entered in a register which shall be kept in the form set out in the Third Schedule.

10. Inspection of register

The register kept for the purpose of these rules shall be open to inspection during office hours on any working day on payment of a fee of twenty rupees and any person may take extract there from or may require the prescribed authority to issue to him a certified copy of any entry made therein on payment of a fee of fifty rupees.

11. Application for variation of entries in register

Every application for the variation of any particular entered in the register maintained for the purpose of these rules shall be in the form set out in the Fourth Schedule and when any particular is varied the existing certificate of registration shall be cancelled and a new certificate be issued.

12. Submission of report by veterinary doctor

Every person who has been granted registration under these rules shall ensure that a monthly report of all the performing animals in the form to be specified by the prescribed authority in respect of their health, deaths and births duly certified by a veterinary doctor is submitted to the prescribed authority on or before the 7th of every succeeding month.

13. Prohibition on exhibition and training of specified performing animals

Performing animals whose performance has been prohibited under sub section (2) of section 22 of the Act shall not be trained or exhibited as a performing animal.

14. Power to inspect

(1) The prescribed authority may depute an officer or authorize any other person, to inspect the mode of transport, care and upkeep of the animals, or to be present at the time of training or exhibition of the performing animals or during making of a film to ensure that the conditions of registration are being complied with.

(2) The owner shall not obstruct the entry of such officer or authorized person and extend all possible assistance to enable him to discharge his duty.

15. Report of inspection

The officer deputed shall after inspection submit a report to the prescribed authority about the compliance of the rules.

16. Cancellation of registration in respect of which registration has been granted:

(1 & 2) Every animal in respect of which registration has been granted under rule 5 shall be exhibited (or for film) and trained subject to the conditions of registration and these rules.

(3) The prescribed authority in the event of breach of any of the conditions of registration under rule 5 or may suspend the registration pending enquiry and after granting an opportunity of hearing revoke the registration.

17. Issue of duplicate copies of certificate

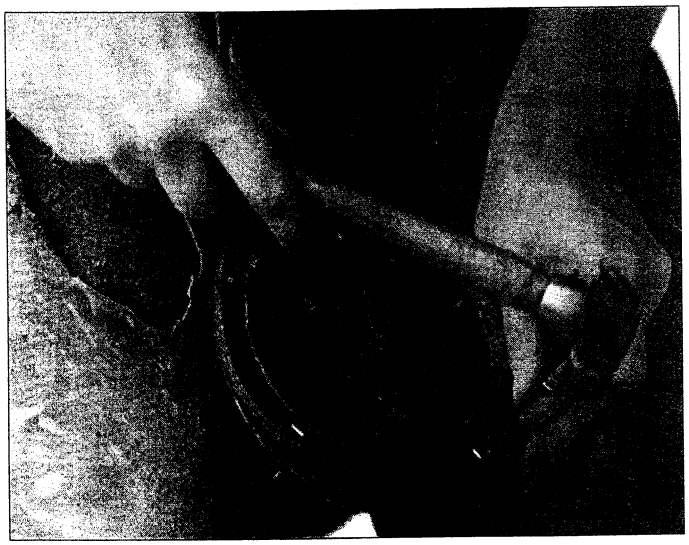
Any person who has lost the original registration certificate will be issued a duplicate copy of registration on payment of a fee of one hundred rupees.

SCHEDULES UNDER PERFORMING ANIMALS (REGISTRATION) RULES, 2000

Schedule No.	Rule	Purpose
First	See rule 3 (2)	Form of application
Second		Certificate of Registration
Third	See rule 9	Form of Register
Fourth		Form of Application for Variation Particulars entered In Register
Fifth	See rule 8 (*ii*)	Suggestive Size of Cages for Transportation
Sixth	See rule 8 (*iv*)	Minimum prescribed size for feeding/retiring cubicle/enclosures for important mammalian species of captive animals

THE PREVENTION OF CRUELTY TO ANIMALS (LICENSING OF FARRIERS) RULES, 1965

[23 March, 1965]



In exercise of the powers conferred by clause (*f*) of sub-section (2) of section 38 of the Prevention of Cruelty to Animals Act, 1960 (59 of 1960), the Central Government hereby makes the following rules

1. Short title and commencement

(1)These rules may be called the Prevention of Cruelty to Animals (Licensing of Farriers) Rules, 1965.

2. Definitions

In these rules, unless the context otherwise requires-

(*a*) "cattle" means buffaloes, bullocks, horses, mules, or donkeys and includes other animals used for draught, pack or carriage purpose, which require shoeing;

(*b*) "farrier" means a person who carries on the business of shoeing cattle;

(*c*) "license" means a license granted under these rules;

(*d*) "licensing authority" means such officer of the veterinary department of the State or a local authority or any organization for the welfare of animals as the State Government may, by general or special order, specify in this behalf.

3. Farriers to be licensed

No person shall, after the commencement of these rules, begin to carry on the business of a farrier, and no person carrying on the business of a farrier at the commencement of these rules, shall, after the expiration of three months from such commencement, continue to carry on such business, except under a license.

4. Persons entitled to apply for license

Every person who-

(*i*) has completed the age of eighteen years , and

(*ii*) has undergone any such training in the business of shoeing cattle as may be approved by the licensing authority; or

(*iii*) has been carrying on the business of a farrier for not less than two years before the commencement of these rules shall be entitled to a license.

5. Application for license

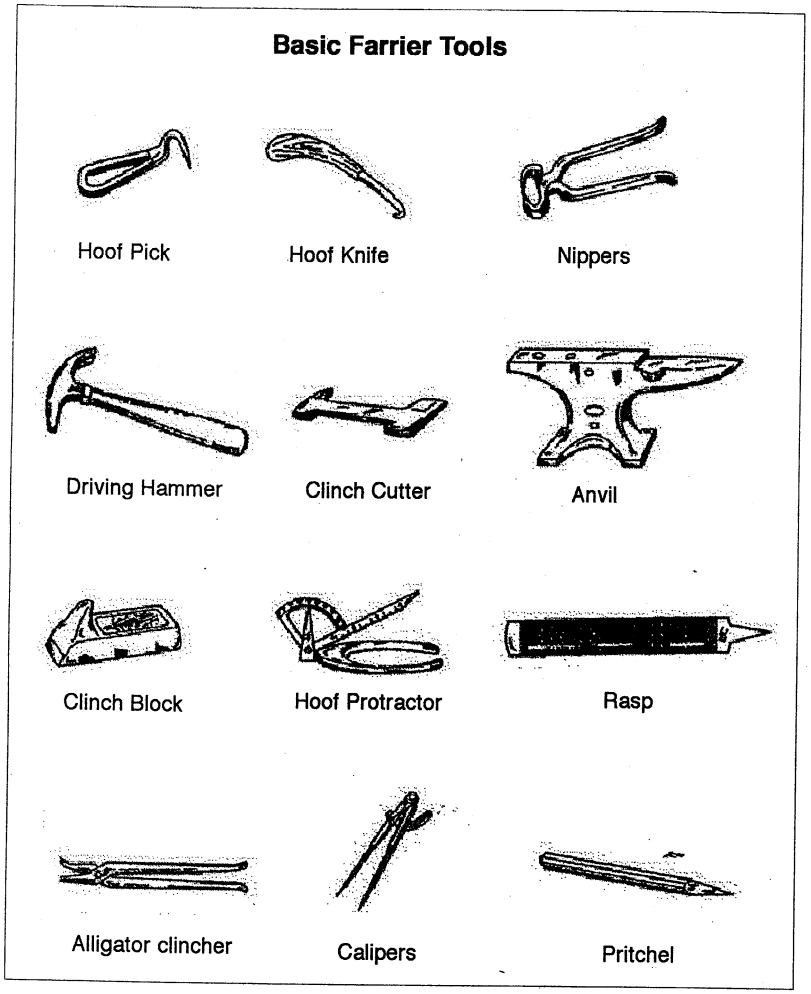
Every person who at the commencement of these rules is carrying on the business of a farrier and who intends to carry on such business after such commencement and every person who intends to begin such business after such commencement shall apply inwriting to the licensing authority for a license giving his name, place of residence, place of business, his qualifications for the license and such other particulars as the licensing authority may require.

6. Grant of license

The licensing authority shall after satisfying himself as to whether the applicant is a fit and proper person to be granted a license and whether he has equipped himself or has made arrangements for equipping himself with proper tools and other implements for the purpose of his business, grant to, every applicant who is duly qualified in this behalf a license in the form prescribed in the Annexure to these rules.

Explanation: The tools and other implements which a person carrying on or intending to carry on the business of a farrier shall ordinarily have in his possession are the following, namely –

1. Driving hammer with claws	2. Hand hammer
3. Drawing knife	4. Scorcher knife
5. Pincers	6. Buffer
7. Rasp	8. Chisel for cutting bar iron
9. Punch for making nail holes	10. Nails for shoeing
11. Twitch	12. Wooden plank for finishing work
13. Iron anvil	14. Good quality wrought iron for shoes



7. Term of license and renewal thereof

(1) A license shall be valid for a period of two years from the years from the date of its grant, but it may be renewed from time to time on application made by the license stating the period from which the license is to be renewed:

Provided that no license shall be renewed for a period exceeding two years at a time.

(2) The renewal of a license shall be made by inscribing, in the columns provided for the purpose in the license, the date of renewal, the date of expiry of the renewed licence and the signature of the licensing authority.

8. Issue of duplicate license

If a license is defaced, lost or destroyed the licensing authority may after making such inquiry into the matter as he thinks fit, issue a duplicate.

9. Farrier to exercise reasonable care and skill

Every license under these rules shall exercise a reasonable degree of care and skill in the shoeing of cattle.

10. Cancellation of license

(1)It shall be lawful for the licensing authority to enter the place of business of any license during normal working hours for the purpose of inspection; and if, in the opinion of the licensing authority the license is unable to exercise a reasonable degree of care and skill in the shoeing of cattle or is not properly equipped for the purposes of his business, he may, after giving the license a reasonable opportunity of being heard, cancel the license.

(2)A license may also be cancelled if the licensing authority is satisfied, after giving the license a reasonable opportunity of being heard, that there has been a breach of any.of the conditions of the license.

10A. An appeal shall lie from any order refusing or canceling a license under these rules to such authority as the State Government may, by notification in the official Gazette, specify for the purpose.

11. Issue of fresh license after cancellation

A person whose license has been cancelled under rule 10 may be granted a fresh license on application made in this behalf if the licensing authority is satisfied that having regard to the circumstances obtaining at the time of such application, there is no reason why the applicant should not be granted a fresh license.

12. Fees

(1) The fees payable on every application for a license shall be one rupee and that on every application for renewal of the license or for a duplicate thereof shall be fifty paise.

(2) Such fees may be paid either in cash or by affixing non-judicial stamps of equivalent value to the application.

13. Maintenance of register

The licensing authority shall maintain a register containing full particulars relating to every license.

FARRIER'S LICENCE

License No. .....

1. Name of License .....
2. Place of residence and full postal address .....
3. Place of business .....
4. Duration of License .....

From ..... To .....

Conditions of License

(1 This license is valid for two years only from the date of its grant, unless renewed, on application made under rule 7 of the Prevention of Cruelty to Animals (Licensing of Farriers) Rules, 1965, within one month before the date of expiry of the original or earlier license.

(2 During the continuance of the license, the license shall be bound to produce for inspection during normal workings hours and at his place of business all the tools and other implements in his possession and kept for the purpose of his business if a demand for the production of the same is made by the licensing authority.

(3 The license shall afford all reasonable facilities for the purpose of enabling the licensing authority to inspect the place of business of the license and the manner in which he is carrying on the business.

Renewal Endorsement

1. Date of Renewal .....
2. Date of Expiry .....
3. Signature of licensing authority .....
4. Remarks of authority .....

[1] *Substituted by the Licensing of Farriers (Amendment) Rule, 1966*

THE PREVENTION OF CRUELTY TO DRAUGHT AND PACK ANIMALS (RULES, 1965)

[23 March, 1965]
(As amended upto 9th December, 1968)



In exercise of the powers conferred by sub section (2) of the section 38 of The Prevention of Cruelty to Animals Act, 1960 the Central Government makes the following rules:

1. Short title and commencement

This rule may be called The Prevention of Cruelty to Draught and Pack Animals Rules 1965.

2. Definitions

(1) In these rules, unless the context otherwise requires-

(*a*) "large bullock" or "large buffalo" respectively means a bullock or buffalo, the weight of which exceeds 350 kilograms;

(*b*) "medium bullock" or "medium buffalo" respectively means a bullock or buffalo, the weight of which exceeds 250 kilograms, but does not exceed 350 kilograms;

(*c*) "small bullock" or "small buffalo" respectively means a bullock or buffalo, the weight of which does not exceed 250 kilograms;

(*d*) "street" includes any way, road, lane, square, alley or passage, whether a thoroughfare or not over which the public have a right of way;

(*e*) "vehicle" means a wheeled conveyance of any description which is capable of being used as such on any street.

(2) For the purposes of clauses (*a*), (*b*) and (*c*) of sub-rule (1), the weight of an animal shall be determined by applying any of the following formulae, namely:

$$\frac{\text{length} \times \text{Girth}^2 \text{ in cm}}{10838} = \text{Weight of animal in kg}$$

or

$$\frac{9 \text{ (length in cm} \times \text{Girth in cms}^2)}{1{,}00{,}000}$$

3. Maximum loads for draught animals

(1) No person shall cause any animal specified in column 1 of the table below to draw a vehicle of the kind described in the corresponding entry in column 2 thereof if it carries a load in excess of the weight specified in the corresponding entry in column 3 thereof.



1	2	3
1. Small bullock or Small buffalo	Two-wheeled vehicle-	
	(a) if fitted with ball-bearing	1000 kg
	(b) if fitted with pneumatic tyres	750 kg
	(c) if not fitted with pneumatic tyres	500 kg
2. Medium bullock or Medium buffalo	Two-wheeled vehicle-	
	(a) if fitted with ball-bearing	1400 kg
	(b) if fitted with pneumatic tyres	1050 kg
	(c) if not fitted with pneumatic tyres	900 kg
3. Large bullock or Large buffalo	Two-wheeled vehicle-	
	(a) if fitted with ball-bearing	1800 kg
	(b) if fitted with pneumatic tyres	1350 kg
	(c) if not fitted with pneumatic tyres	900 kg
4. Horse or Mule	Two- wheeled vehicle-	
	(a) if fitted with pneumatic tyres	750 kg
	(b) if not fitted with pneumatic tyres	500 kg
5. Pony	Two –Wheeled vehicle-	
	(a) if fitted with pneumatic tyres	600 kg
	(b) if not fitted with pneumatic tyres	400 kg
6. Camel	Two-Wheeled Vehicle	1000 kg

(2) Where the vehicle to be drawn is a four-wheeled vehicle, weight specified in column3 of the said table shall, in each case, be read as being one and a quarter times and, if the four-wheeled vehicle is one fitted with pneumatic tyres, as being one and a halftimes, as much as the weight so specified.

(3) Where the vehicle, whether two-wheeled or four-wheeled is to be drawn by two animals of either species referred to in each of the entries in column 1 of the said table, the weight specified in the corresponding entry in column 3 thereof shall be read as being twice, and, if the vehicle is one fitted with pneumatic tyres, as being two and a half times as much as the weight so specified.

(4) Where the route by which a vehicle is to be drawn involves an ascent for not less than one kilometer and the gradient is more than three meters in a distance of thirty meters, the weight specified in column 3 of the said table shall, in each case, be read as being one-half of what is so specified.

Explanation 1: The weights specified in this rule shall be inclusive or the weight of the vehicle.

Explanation 2: In calculating any weight for the purpose of this rule, fractions shall be disregarded.

4. Maximum load for certain pack animals

No person shall cause any animal specified in column 1 of the table below to carry any load in excess of the weight specified in the corresponding entry in column 2 thereof.

1	2
1 Small bullock or buffalo	100 kilograms
2. Medium bullock or buffalo	150 kilograms
3. Large bullock or buffalo	175 kilograms
4. Pony	70 kilograms
5. Mule	200 kilograms
6. Donkey	50 kilograms
7. Camel	250 kilograms

5. Maximum number of passengers for animals drawn vehicle

Maximum number of passengers for animal's drawn vehicles is four excluding the driver and the children below 6 years of age.

6. General conditions for use of draught and pack animals

The draught animals should not work more than five hr continuously and total nine hrs in a day. In the hot summer months when the temp exceeds 37^0 C, they should not be put to use between 12 noon to 3 pm.

7. Animals to be disengaged after work

No person shall continue to keep in harness any animal used for the purpose of drawing vehicles after it is no longer needed for such purpose.

8. Use of spiked bits prohibited

Use of spiked bits for driving or riding is prohibited.

9. Saddling of horses

No person shall cause a horse to be saddled in such a way that the harness rests directly on the animal's withers without being sufficient clearance between the arch of the saddle and the withers.

10. Certificates regarding unladen weight of vehicles etc.

(1) For the purpose of these rules, the Board may authorize any organization established for the purpose of preventing cruelty to animals or for promoting their welfare to issue to the owner of any vehicle which may be brought before it for examination, a certificate as toits unladen weight, and any certificate so issued may be accepted as evidence of the weight of such vehicle.

(2) Nothing contained in this rule shall be construed as being in derogation of any rightconferred by any law for the time being in force authorizing any local authority todetermine the unladen weight of any vehicle and to grant the necessary certificate-or stamp the vehicle in this behalf.

11. Powers of the police officers and other authorized persons

If a police officer or any authorized person has a reason to believe that offence against rule 3 or 4 is being committed, he may ask the owner of the animal to take the animal and vehicle to the nearest weigh bridge for determining the load on the animal.

If the owner refuses to comply with, then it shall be lawful for the police officer or concerned person to take the animal or the vehicle or both to the weighbridge for determination of the weight and give the owner a written statement about the weight so determined.

As soon as any weight is determined under this rule, the owner or other person in charge of the said animal shall be given a statement in writing signed by the police officer or the person authorized as aforesaid, as the case may be, as to the weight so determined and any other information relevant for the purpose.

12. Applications of rules where local bylawsetc. exist

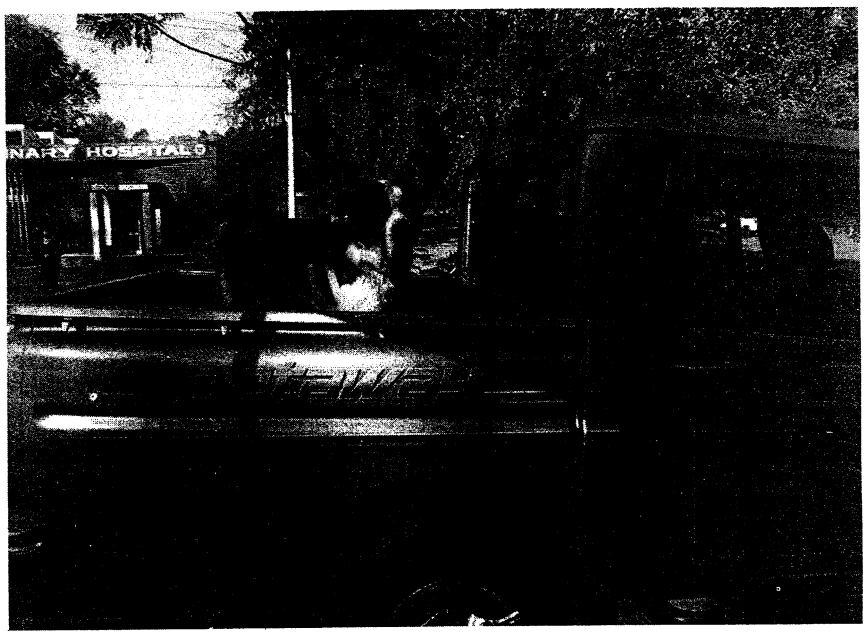
If there is in force in any area to which these rules extend, any rule, regulation or bye-law made under any law for the time being in force by any local authority in respect of any of the matters for which provision is made in these rules, such rule, regulation or bye-law shall, to the extent to which

(*a*) It contains provisions less irksome to the animal than those contained in these rules, prevail,

(*b*) It contains provisions more irksome to the animal than those contained in these rules, be of no effect.

TRANSPORT OF ANIMALS, RULES, 1978

(23 March, 1978)
(As amended upto March, 2001)



In exercise of the powers conferred by clause (*h*) of sub-section (2) of Section 38 of the Prevention of Cruelty to Animals Act, 1960 (59 of 1960); the Central Government hereby makes the following rules, the same having been previously published as required by the said Section, namely: Transport of Animals Rules, 1978.

CHAPTER I

1. Short Title

These rules may be called the Transport of Animals, Rules, 1978.

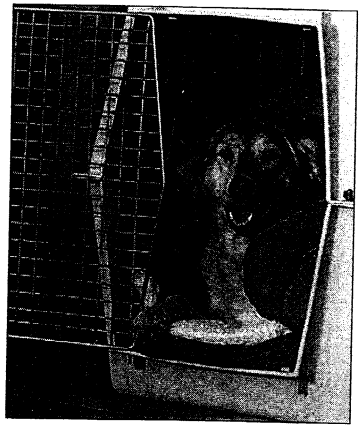
2. Definitions

In these rules, unless the context otherwise requires-

(*a*) "qualified veterinary surgeon" means one who holds a diploma or a degree of a recognized veterinary college;

(*b*) "Schedule" means a schedule appended to these rules.

CHAPTER II
TRANSPORT OF DOGS AND CATS



3. Rules 4 to 14 shall apply to the transport of dogs and cats of all breeds whether by rail, road, inland, waterway, sea or air.

4. (*a*) A valid health certificate by a qualified veterinary surgeon to the effect that the dogs and cats are in a fit condition to travel by a rail, road, inland waterway, sea or air and are not showing any sign of infectious or contagious disease including rabies, shall accompany each consignment and the certificate shall be in the form specified in Schedule - A.

(*b*) In the absence of such a certificate, the carrier shall refuse to accept the consignment for transport.

5. No dog or cat in an advanced stage of pregnancy shall be transported.

6. (*a*) Dogs or cats to be transported in the same container shall be of the same species and breed.

(*b*) Unweaned puppies of kittens shall not be transported with adult dogs or cats other than their dams.

(*c*) No female dog or cat in season (estrus) shall be transported with any male.

7. (*a*) Any dog or cat reported to be vicious or exhibiting a vicious disposition shall be transported individually in a cage, muzzled and labelled to give warning to the handlers.

(*b*) In extreme cases, the dogs and cats shall be administered with sedative drugs by a qualified veterinary surgeon.

8. (1) When dogs or cats are to be transported for long distances:

(*a*) they shall be fed and given water at least two hours prior to their transport and shall not be packed for transport if they are hungry or thirsty;

(*b*) they should be exercised as late as possible before dispatch;

(*c*) they shall be given adequate water for drinking every four hours in summer or every six hours during winter;

(*d*) they shall be fed once in twelve hours in the case of adult dogs or cats and they shall be fed once in four hours in the case of puppies and kittens in accordance with the instructions of the consignors if any;

(*e*) adequate arrangements shall be made for their care and management during the journey.

(2) When the dogs or cats are to be transported by rail involving a journey of more than, six hours, an attendant shall accompany the dogs or cats to supply them with food and water on the way and the attendant shall have access to the dogs or cats for this purpose at all stations and no dog or cat shall be exposed to the direct blast of air during such journey.

9. Where dogs or cats are to be transported for short distance by road in a public vehicle, the following precautions are to be taken namely:

(*a*) they shall be put in a cage and the cage containing the dogs or cats shall not be put on the roof of the vehicle but shall be put inside the vehicle preferably near the end of the vehicle;

(*b*) the vehicle transporting the dogs or cats shall as far as possible maintain constant speed, avoiding sudden stops and reducing effects of shocks and jolts to the minimum;

(*c*) at least one attendant shall be present at all times during transit who shall ensure that proper transit conditions are observed and shall also replenish food and water whenever necessary;

10. Where dogs or cats are to be transported by air

(*a*) the cages shall be properly cleaned and disinfected before the dogs or cats are put in the cages;

(*b*) sufficient paddy straw or saw dust or paper cuttings shall be provided for cats in the cages as resting material;

(*c*) for international transport, the dogs or cats shall be kept in pressurized compartment with regulated temperature.

11. The size and type of crates for transport of dogs and cats shall confirm as clearly as may be to the size and type specified in Schedule - B and Schedule - C respectively.

12. All containers of dogs or cats shall be clearly labelled showing the names address and telephone number (if any) of the consignor.

13. The consignee shall be informed about the train or transport arrival or flight number and its time of arrival in advance.

14. Consignment of dogs or cats to be transported by rail or road shall be booked by the next passenger or main train or bus and should not be detained after accepting the consignment for booking.

CHAPTER III
TRANSPORT OF MONKEYS

15. Rules 16 to 23 shall apply to the transport of all types of monkeys from the trapping area to the nearest rail-head.

16. (*a*) A valid health certificate by a qualified veterinary surgeon to the effect that the monkeys are in a fit condition to travel from the trapping area to the nearest unit-head

and are not showing any sign of infections or contagious disease shall accompany each consignment.

(*b*) In the absence of such a certificate, the carrier shall refuse to accept the consignment for transport.

(*c*) The certificate shall be in a form specified in Schedule - D.

17. (1) Monkeys from one trapping area shall not be allowed to mix with monkeys from any other trapping area for preventing the dangers of cross - infection.

(2) The time in transit from trapping area to the nearest rail-head shall be as short as possible and factors causing stress to monkeys shall be reduced to the minimum.

(3) If the travel time is longer than six hours provision shall be made to feed and to give -water to the monkeys en route.

(4) During transit, precautions shall be taken to protect the monkeys from extreme weather conditions and monkeys that die en route shall be removed at the earliest available opportunity.

18. Monkeys that are not completely weaned, that is, under 1.8 kilogram in weight, shall not be transported except when specifically permitted by the Central Government.

19. (*a*) Pregnant and nursing monkeys shall not be transported except when specifically permitted by the Central Government.

(*b*) Pregnant and nursing monkeys as well as monkeys weighing more than 5 kilograms- shall be transported in compartmented cages.

20. All monkeys in the same cage shall be of the same species and of approximately the same weight and size.

21. Monkeys captured within their natural habitat shall be placed in new, sterilized or thoroughly cleaned cages and subsequent transfer, if any, shall also be new, disinfected or thoroughly cleaned cages.

22. Monkeys shall be transported from trapping area to the nearest rail-head by the fastest means of transport available and the monkeys shall not be left unattended at any time during the journey.

23. (1) (*a*) Monkeys shall be transported in suitable wooden or bamboo cages, so constructed as not to allow the escape of the monkeys but permit sufficient passage of air ventilation.

(*b*) No nails, metallic projections or sharp edges shall be exposed on the exterior or in the interior of the cages.

(*c*) Each cage shall be equipped with appropriate water and feed receptacles which are leak proof and capable of being cleaned and refilled during transit.

(2) The floor of the cages shall be made of bamboo reapers and the space between each reaper shall range between 20 mm and 30 mm.

(3) To facilitate carriage of these cages, provision may be made for rope loops at the four top ends.

(4) The weight of any one loaded cage shall not exceed 45 kilograms.

(5) The following two sizes of cages shall be used.

(*a*) 910 × 760 | 510 mm - to contain not more than twelve monkeys, weighing between 1.8 and 3.00 kilograms each or ten monkeys weighing between 3.1 and 5.0 kilograms, each.

(*b*) 710 × 710 × 510 mm - to contain not more than ten monkeys weighing between 1.8 and 3.00 kilograms each or eight monkeys weighing between 3.1 and 5.00 kilograms each.

Provided that wooden cages as specified in Schedule - F to these rules may also be used for carrying monkeys from the trapping area to the nearest rail-head.

(6) The construction details of two types of cages shall be given in Schedule - E.

24. Rules 25 to 32 shall apply to transport of monkeys from a rail - head to another railhead or from a rail-head to nearest airport.

25. (*a*) Loading and unloading shall be carried out quickly and efficiently.

(*b*) Cages shall be stored in such a manner that ventilation is adequate and the monkeys are not exposed to drought and direct heat or cold.

(*c*) Monkeys found dead shall be removed as quickly as possible for suitable disposal.

26. The transport cages shall be in accordance with specifications given in rule 28.

27. (1) Due provision shall be made by the sender for a sufficient supply of food and water for the journey.

(2) In case the journey is over six hours an attendant shall accompany the monkeys to supply them food, water, and such other things, on route and he shall have access to the monkeys for feeding, giving water and attention at all stations en route.

(3) The food and water containers shall be checked at least every six hours and refilled, if necessary.

(4) Monkeys shall not be disturbed during the night hours.

28. Not more than one cage shall be placed over the other and gunny packing shall be placed between two cages, when one is placed over the other.

29. Monkeys shall be brought to the airport sufficiently early.

30. Monkeys shall be provided with food and water immediately before loading on the aircraft.

31. (*a*) The cages shall be clearly labelled showing the name, address and telephone number (if any) of the consignor and the consignee in bold red letters.

(*b*) The consignee shall be informed about the train in which the consignment of monkeys is being sent and its, arrival time in advance.

(*c*) The consignment of monkeys to be transported shall be booked by the next passenger or main train and should not be detained after the consignment is accepted for booking.

32. (*a*) A valid health certificate by a qualified Veterinary Surgeon to the effect that the monkeys are in a fit condition to travel from the nearest rail-head to another railhead or from a rail-head to the nearest airport and are not showing any signs of infectious or contagious disease shall accompany each consignment.

(*b*) In the absence of such a certificate, the carrier shall refuse to accept the consignment for transport.

(*c*) The certificate shall be in a form specified in Schedule - D.

33. Rules 34 to 45 shall apply in relation to the transport of monkeys by air.

34. The time in transit shall be as short as possible and factors causing stress to monkeys shall be reduced to the minimum.

35. Monkeys that are not completely weaned, that is, under 1.8 kilograms in weight, shall not be transported except when specifically permitted by the Central Government.

36. Pregnant and nursing monkeys shall not be transported except when specifically permitted by the Central Government. Pregnant and nursing monkeys and monkeys weighing over 5 kilograms shall be transported in specially designed individual cages.

37. All monkeys in the some cage shall be of the same species and of approximately the same weight and size.

38. (1) In view of the dangers of infection, only monkeys of the same species shall be transported in the same cabin or compartment of the aircraft.

(2) Apparently sick or disabled monkeys exhibiting external injuries or infested with parasites shall not be transported.

(3) Transport of other species of animals, birds, fish food stuff or poisonous materials, such as pesticides and insecticides, in the same cabin or compartment shall not be permitted.

39. (1) At no time during transit shall the monkeys be left unattended when carried in a freighter aircraft.

(2) At least one attendant shall be present at all times when the aircraft is on the ground.

40. (1) Monkeys shall be transported in suitable wooden cages, so constructed as not to allow the escape of the monkeys and shall allow sufficient passage of air for ventilation; no nails, metallic projections or sharp edges shall be exposed in the interior or on the exterior of such cages. Each cage shall be equipped with water and food receptacles which shall be leak - proof and be capable of being cleaned and refilled during transit. A suitable absorbent material such as saw dust should be kept in the dropping trays.

(2) The weight of any one loaded cage shall not exceed 45 kilograms in any case.

(3) The following two sizes of cages shall be used:

(*a*) 460 × 460 × 460 mm - to contain not more than ten monkeys weighing from 1.8 to 3.0 kilograms each or four monkeys weighing from 3.1 to 5.0 kilograms each; and

(*b*) 760 × 530 × 460 mm - to contain not more than ten monkeys weighing from 1.8 to 3.0 kilograms each or eight monkeys weighing from 3.1 to 5.0 kilograms each.

(4) The construction details of the two types of cages shall be as given in Schedule - F.

(5) The construction details of the two types of cages used for the transport of pregnant and nursing monkeys shall be as given in Schedule - G.

41. (*a*) The cages shall be clearly labelled showing the name, address and telephones number (if any) of the consignor and the consignee in bold red letters.

(*b*) The consignee shall be informed in advance about the flight number of the freighter aircraft in which the consignment of monkeys is being sent and its arrival time.

(*c*) The consignment of monkeys to be transported shall be booked by the next flight of the freighter aircraft and should not be detained after the consignment is accepted for booking.

42. (1) A valid health certificate by a qualified veterinary surgeon to the effect that the monkeys are fit to travel by air and are not showing any signs of infectious or contagious disease shall accompany each consignment of monkeys.

(2) In the absence of such a certificate, the carrier shall refuse to accept the consignment for shipment.

(3) The form of certificate under sub-rule (1) be as given in Schedule - D.

43. (1) The air shall be changed not less than twelve times per hour and droughts shall be avoided and there shall be no dead pockets of air.

(2) Except when the monkeys are being fed and given water; they shall travel in semi darkness to make them quieter and less inclined to fight and thus give them better opportunities of resting.

44. The food and water containers shall be checked at every stop and refilled; if necessary, and a sufficient stock of food shall be available on the aircraft and at likely stopping places.

Note : About 85 grams of food per monkey is required daily. Suitable foods are dry cereal grains or gram. It is recommended that whole gram made into biscuits or wheat meal bread should be fed. A minimum of 140 ml. of water shall be allowed for each monkey per day.

45. An empty cage of the usual dimensions with its sides covered except 50mm at the top to allow for ventilation shall be provided in the freighter aircraft for housing the monkeys, which fall sick or are injured during the journey.

CHAPTER IV
TRANSPORT OF CATTLE

46. Rules 47 to 56 shall apply to the transport by rail of cows, bulls, bullocks, buffaloes, yaks and calves. (herein after in these rules referred to as cattle).

47. (*a*) A valid certificate by a qualified veterinary surgeon to the effect that the cattle are in a fit condition to travel by rail or road and are not suffering from any infectious or contagious or parasitic diseases and that they have been vaccinated against rinderpest and any other infectious or contagious or parasitic diseases, shall accompany each consignment.

(*b*) In the absence of such a certificate, the carrier shall refuse to accept the consignment for transport.

(*c*) The certificate shall be in the form specified in Schedule - E.

48. Veterinary first-aid equipment shall accompany all batches of cattle.

49. (*a*) Each consignment shall bear a label showing in bold red letters the name, address and telephone number (if any) of the consignor and consignee, the number and types of cattle being transported and quantity of rations and food provided.

(*b*) The consignee shall be informed about the train or vehicle in ' which the consignment of cattle is being sent and its arrival time in advance.

(*c*) The consignment of cattle shall be booked by the next train or vehicle and shall not be detained after the consignment is accepted for booking.

50. The average space provided per cattle in Railway wagon or vehicle shall not be less than two square metres.

51. (*a*) Suitable rope and platforms should be used for loading cattle from vehicles.

(*b*) In case of railway wagon the dropped door of the wagon may be used as a ramp when loading or unloading is done to the platform.

52. Cattle shall be loaded after they are properly fed and given water.

53. Cattle in advanced stage of pregnancy shall not be mixed with young cattle in order to avoid stampede during transportation.

54. (1) Watering arrangements on route shall be made and sufficient quantities of water shall be carried for emergency.

(2) Sufficient feed and fodder with adequate reserve shall be carried to last during the journey.

(3) Adequate ventilation shall be ensured.

55. When cattle is to be transported by rail:

(*a*) an ordinary goods wagon shall carry not more than ten adult cattle or fifteen calves on broad gauge, not more than six adult cattle or ten calves on metre gauge, or not more than four adult cattle or six calves on narrow gauge;

(*b*) every wagon carrying cattle shall have at least one attendant;

(*c*) cattle shall be loaded parallel to the rails, facing each other;

(*d*) rations for padding, such as straw, shall be placed on the floor to avoid injury if a cattle lies down and this shall not be less than 6 cms thick;

(*e*) rations for the journey shall be carried in the middle of the wagon.;

(*f*) to provide adequate ventilation, upper door of one side of the wagon shall be kept open properly fixed and the upper door of the wagon shall have wire gauge closely welded mesh arrangements to prevent burning cinders from the engines entering the wagon and leading to fire outbreak;

(*g*) cattle wagons should be attached in the middle of the train;

(*h*) cooking shall not be allowed in the wagons nor hurricane lamps without chimneys;

(*i*) two breast bars shall be provided on each side of the wagon, one at height of 60 to 80 cm and the other at 100 to 110 cm;

(*j*) cattle-in-milk shall be milked at least twice a day and the calves shall be given sufficient quantity of milk to drink;

(*k*) as far as possible, cattle may be moved during the nights only;

(*l*) During day-time, if possible, they should be unloaded, fed, given water and rested and if in milk, milking shall be carried out.

56. When cattle are to be transported by goods vehicle the following precautions are to be taken namely:

(*a*) specially fitted goods vehicles with a special type of tail board and padding around the sides should be used;

(*b*) ordinary goods vehicles shall be provided with anti-slipping material, such as coir matting or wooden board on the floor and the superstructure, if low, should be raised;

(*c*) no goods vehicle shall carry more than six cattle;

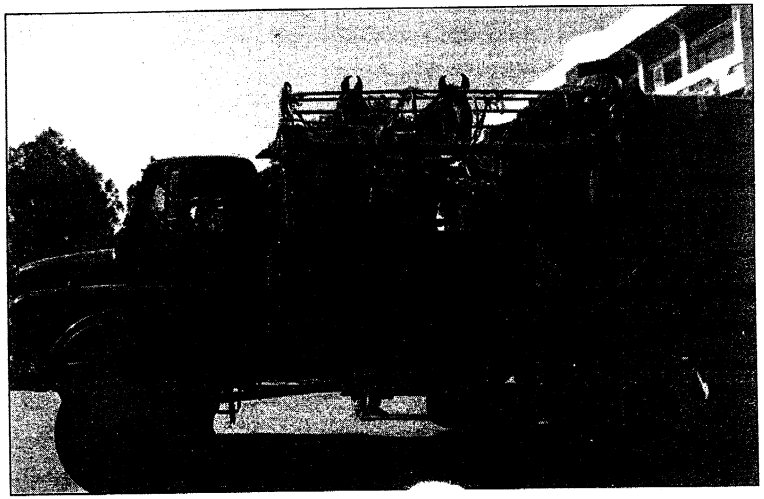
(*d*) each goods vehicle shall be provided with one attendant;

(*e*) while transporting, the cattle, the goods vehicle shall not be loaded with any other merchandise; and

(*f*) to prevent cattle being frightened or injured, they should preferably, face the engine.

CHAPTER V

TRANSPORT OF EQUINES



57. Rules 57 to 63 shall apply to the transport by rail, road or sea or horses, mules and donkeys (hereinafter-in these rules referred to as 'equines')

58. (*a*) A valid certificate by a qualified veterinary surgeon to the effect that the equines are in a fit condition to travel by rail; road or sea and are not suffering from any infectious or contagious disease or diseases shall accompany each consignment.

(*b*) In the absence of such a certificate, the carrier shall refuse to accept the consignment for transport.

(*c*) The certificates shall be in a form specified in Schedule - 1.

59. (*a*) Each consignment shall bear a label showing in bold red letters the name address and telephone number (if any) of the consignor and consignee the number and type of equines being transported and quantity of rations and food provided.

(*b*) The consignee shall be informed in advance about the train or vehicle or ship in which the consignment of equines is being sent and its arrival time.

(*c*) The consignment of equines shall be booked by the next train or vehicle or ship and shall be accepted for booking.

60. (*a*) Pregnant and young equines shall not be mixed with other animals.

(*b*) Different species of equines shall be kept separately.

(*c*) Equines shall be loaded after being fed and given water adequately, watering arrangements shall be made en route and sufficient food carried to last during the journey.

(*d*) Veterinary first-aid equipment shall accompany all batches of equines.

(*e*) Adequate ventilation shall be ensured.

(*f*) Suitable ramps and platforms, improvised where not available, shall be used for loading and unloading equines.

61. For the transport of equines by rail, the following precautions shall be taken

(*a*) Equines shall be transported by passenger or mixed trains only;

(*b*) Ordinary goods wagon when used for transportation shall carry not more than eight to ten horses or ten mules or ten donkeys on broad gauge and not more than six horses or eight donkeys on meter-gauge

(*c*) in extreme hot, water shall be sprinkled over the wagons containing equines by the railway authorities to bring down temperature. Ice slabs in specially made containers may be placed inside the wagon, if recommended by a qualified veterinary surgeon;

(*d*) every wagon shall have two attendants if the equines are more than two in number;

(*e*) equines shall be loaded parallel to the rails, facing each other;

(*f*) material for padding, such as paddy, straw, shall be placed on the floor to avoid injury if an animal lies down and this shall not be less than 6 cm thick;

(*g*) to provide adequate ventilation, upper door of the side of the wagon shall be kept open and properly fixed and the upper door of the wagon shall have wire gauge closely welded mesh arrangements to prevent burning cinders from the engines entering the wagon and leading to fire break out;

(*h*) two breast bars shall be provided on each side of the wagon, one at a height of 50 to 80 cm and the other at 110 cm.

62. For the transport of equines by goods-vehicles, the following precautions shall be taken, namely:

(*a*) Specially fitted vehicles with a special type of tailboard and padding around the sides shall be used;

(*b*) ordinary goods vehicles shall be provided with anti-slipping material on the floor and the super structure, if low, should be raised;

(*c*) bamboo poles of at least 8 cm diameter between each animal and two stout batons at the back shall be provided to prevent the animal from falling;

(*d*) to prevent horses from being frightened or injured their heads should face left away from the passing traffic;

(*e*) each vehicle shall not carry more than four to six equines;

(*f*) each vehicle shall be provided with one attendant;

(*g*) these vehicles shall be driven at a speed not more than 35 kilometers per hour;

63. For the transport of equines by sea the following precautions shall be taken, namely:

(*a*) horses may normally be accommodated in single stalls and mules in pens, each pen holding four to five mules;

(*b*) ample ventilation shall be ensured by keeping portholes and providing permanent air trunks or electric blowers on all decks, and exhaust fans shall be installed to blow out foul air;

(*c*) all standings shall be athwart the ship with heads facing inwards;

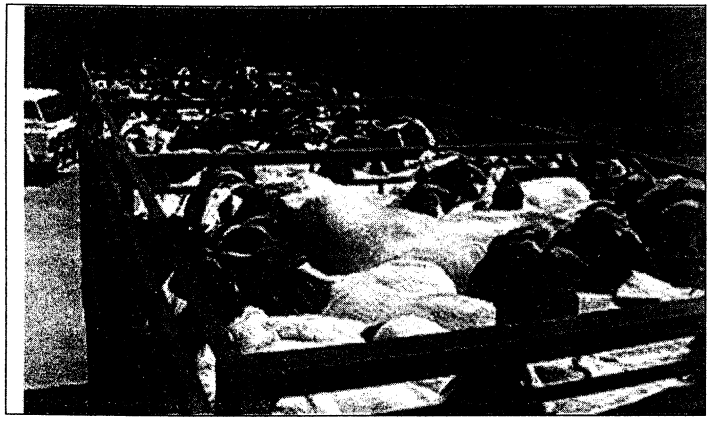
(*d*) to avoid distress specially during hot weather, the ship may go underway immediately after embarking and disembarking shall be done as early as possible after anchoring;

(*e*) colts and fillies shall be kept on the exposed decks;

(*f*) a pharmacy and spare stalls for five per cent of equines shall be available;

(*g*) passage between two rows of pens shall not be less than 1.5 meters.

CHAPTER VI
TRANSPORT OF SHEEP AND GOATS



64. Rules 65 to 75 shall apply to the transport of sheep and goats by rail or road involving journeys of more than six hours.

65. (*a*) A valid health certificate by a qualified veterinary surgeon to the effect that the sheep and goats are in a fit condition to travel by rail or road and are not suffering from infectious or contagious or parasitic disease shall accompany each consignment.

(*b*) In the absence of such a certificate, the carrier shall refuse to accept the consignment for transport.

(*c*) The certificate shall be in a form specified in Schedule - J

66. (*a*) Each consignment shall bear a label showing in bold red letters the name, address and telephone number (if any) of the consignor and consignee the number and type of sheep or goats being transported and quantity of rations and food provided.

(*b*) The consignee shall be informed in advance about the train or vehicle in which the consignment of sheep or goats are being sent and its arrival time.

(*c*) The consignment of sheep or goats shall be booked by the next train or vehicle and shall not be detained after the consignment is accepted for booking.

67. (*a*) First-aid equipment shall accompany the sheep or goats in transit.

(*b*) Suitable romps shall be provided for loading and unloading the sheep or goats.

(*c*) In the case of a railway wagon, when the loading or unloading is done on the plot form the dropped door of the wagon shall be used as a ramp.

68. Sheep and goats shall be transported separately; but if the lots are small special partition shall be provided to separate them.

69. Rams and male young stock shall not be mixed with female stock in the same compartment.

70. Sufficient food and fodder shall be carried to last during the journey and watering facility shall be provided at regular intervals.

71. Material for padding, such as straw, shall be placed on the floor to avoid injury if an animal lies down, and this shall be not less than 5 cm. thick

72. The animals shall not be fettered unless there is a risk of their jumping out and their legs shall not be tied down.

73. The space required for a goat shall be the same as that for a woolled sheep and the approximate space required for a sheep in a goods vehicle or a railway wagon shall be as under:

APPROXIMATE WEIGHT OF ANIMAL IN KILOGRAM

	Space required in square meters	
Woolled	Shorn	
Not more than 20	0.18	3.16
More than20 but not more than 25	0.20	0.18
More than25 but not more than 30	0.23	0.22
More than 30	0.23	0.26

74. (*a*) No railway wagon shall accommodate more than the following number of the sheep or goats

Broad gauge		Meter gauge		Narrow gauge
1	2	3	4	5
Area of wagon less than 21.1 square meter.	Area of wagon less than 21.11 square meter and above.	Area of wagon less than 12.5square meter.	Area of wagon less than 12.5 square meter and above.	
70	100	50	60	25

(*b*) Adequate ventilation shall be provided in every wagon. Upper door of one side of wagon shall be kept open and properly fixed and the upper door of the wagon shall have wire gauge closely welded mesh arrangements to prevent burning cinders from the engines entering the wagon and leading to fire breakout.

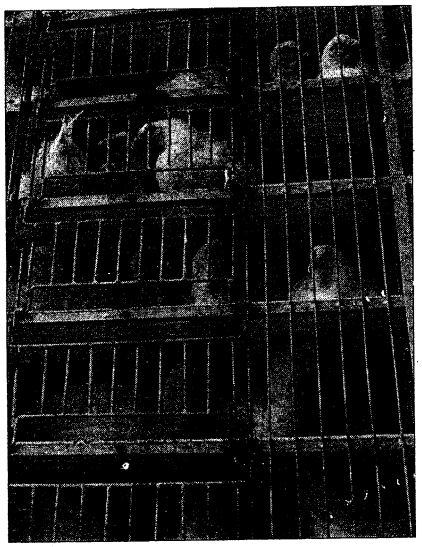
75. (1) Goods vehicles of capacity of 5 or 4 1/2.tons, which are generally used for transporting animals, shall carry not more than forty sheep or goats.

(2) In the case of large goods vehicles and wagons, partition shall be provided at every two or three metres across the width to prevent the crowding and trapping of sheep and goats.

(3) In the case of ewes, goats or lambs or kids under six weeks of age, separate panels shall be provided.

CHAPTER VII

TRANSPORT OF POULTRY BY RAIL, ROAD AND AIR



76. Definition

In this Chapter unless the context otherwise requires, "Poultry" includes day old chicks and turkey poults, chickens, quails, guinea fowls, ducks, geese and turkeys.

77. General requirement - In transport of poultry by rail, road or air

(*a*) the container shall be properly cleaned and sterilized before the poultry is placed in them;

(*b*) poultry shall not be exposed to the sunlight, rain and direct blast of air during transport;

(*c*) poultry shall not be transported when the temperature exceeds 25 degree Celsius or when the temperature falls below 15 degree Celsius.

78. Day-old chicks and turkey poults

In transport of day old chicks and poultry by rail, road and air

(*a*) chicks and poults shall be packed and dispatched immediately after hatching and shall not be stored in boxes for any length of time before dispatch;

Note : In the said transport endeavour shall be made by the consignor or his agent so that consignments shall arrive at destination within the shortest possible time after being taken out of the incubator. Seventy two hours shall normally be regarded as the maximum period to be taken from incubator to brooder in winter and 48 hours in summer;

(*b*) chicks or poults shall not be fed or watered before and during transportation;

(*c*) every effort shall be made to ensure that chicks and poults arrive as quickly as possible at the dispatching site;

(*d*) personal attention shall be given by the consignor or the forwarding agent to ensure that all consignments are kept out of direct sunlight, rain and heat;

(*e*) care shall be taken to carry the boxes in a level position so that chicks are not in danger of falling over on to their backs an' 11 The putting up of other merchandise over and around chick boxes shall be avoided.

79. Poultry other than day-old chicks and turkey poults

In transport of poultry other than day old chicks and turkey poult by rail, road or air-

(*a*) the poultry to be transported shall be healthy and in good condition and shall be examined and certified by a veterinary doctor for freedom from infectious diseases and fitness to undertake the journey;

(*b*) poultry transported in the same container shall be of the same species and of the same age group;

(*c*) poultry shall be properly fed and watered before it is placed in containers for transportation and extra feed and water shall be provided in suitable troughs fixed in the containers;

(*d*) arrangements shall be made for watering and feeding during transportation and during hot weather, watering shall be ensured every six hours;

(*e*) male stock shall not be transported with female stock in the same container.

80. Road Travel

In transport of poultry by road the container shall not be placed one on the top of the other and shall be covered properly in order to provide light, ventilation and to protect from rain, heat and cold air.

81. Rail Travel

In transport of poultry by rail -

(*a*) in case the journey is for more than twelve hours, an attendant shall accompany the consignment;

(*b*) poultry shall not be exposed to rain or direct blast of air;

(*c*) as far as possible poultry shall be transported in wagons having adequate facilities for ventilation and no other merchandise which may result in mortality of birds shall be loaded in the same wagon.

82. Air travel

In transport of poultry by air or for international transport the containers carrying poultry shall be kept in pressurized compartments with regulated temperature and the container shall preferably be kept near the door and shall be unloaded immediately on arrival.

83. Containers for transportation

In transport of poultry by rail, road or air -

(*a*) containers used to transport poultry shall be make of such material which shall not collapse or crumble and they shall be well ventilated and designed to protect the health of poultry by giving it adequate space and safety;

(*b*) the containers shall be so designed as to render impossible for birds to crowd into the corners during transportation, and to avoid the danger of boxes being stocked so close together as to interfere with ventilation;

(*c*) all the containers shall be clearly labelled showing the name, address and telephone number of the consignor and the consignee;

(*d*) the minimum floor space per bird and the dimension of the containers for transporting poultry shall be a specified in the Table below, namely:

TABLE

Sr. No.	Kind of Poultry	Minimum	Dimension			
		Floor space cm^2	Length cm	Width cm	Height cm	Number in a container
(i)	Month old chickens	75	60	30	18	24
(ii)	Three month old chickens	230	55	50	35	12
(iii)	Adult sock (excluding geese and turkeys)	480	115	50	45	12
(iv)	Geese and turkeys	900	120	75	75	10 young's
		1300	75	35	75	2 growing
		1900	55	35	75	1 grown up
(v)	Chicks	—	60	45	12	80
(vi)	Poult	—	60	45	12	60

84. Special requirement of containers for chicks and poults - In transport of poultry by road, rail or air

(*a*) wire mesh or a net of any material shall not be used as a bottom for the containers;

(*b*) the container shall be properly secured to avoid pilferage;

(*c*) the following instruction shall be printed on a label and fixed to the lid or printed directly on sides, namely "Care in Transit";

(*d*) the consignee shall be informed about the train, transport or flight number and its time of arrival well in advance;

(*e*) poultry shall not be transported continuously for more than 6 hours and whole batch shall be inspected at every 6 hours interval;

(*f*) the transportation shall not remain stationary for more than 30 min and during this period, it shall be parked in shade and arrangements shall be made for feeding and watering;

(*g*) all precautions against fire shall be taken and provision of fire extinguishers in transport shall be provided.

CHAPTER VIII
TRANSPORT OF PIGS BY RAIL OR ROAD

85. Definition

In this chapter, unless context otherwise requires-

"pigs" includes piglets, hogs, hoglets and animals of pigs family.

86. Duration of travel

Rules 87 to 95 shall apply to the transport of pigs by rail or road involving journeys of more than six hours.

87. Health certificate

(1) A valid health certificate by a veterinary doctor to the effect that the pigs are in a fit condition to travel by rail or road and are not suffering from infectious or contagious or parasitic disease shall accompany each consignment in the transport of pigs by rail or road.

(2) In the absence of a certificate under sub-rule (1), the carrier shall refuse to accept the consignment for transport.

(3) The certificate under sub rule (1) shall be in a form specified in Schedule K

88. Identification of consignor and consignee

For the purpose of this Chapter -

(*a*) each consignment shall bear a label showing in bold red letters the name, address and telephone number (if any) of the consignor and consignee, the number and type of pigs being transported and quantity of rations and food provided to them;

(*b*) the consignee shall be informed in advance about the train or vehicle in which the consignment of pigs is being sent and its arrival time;

(*c*) the consignment of pigs shall be booked by the next train or vehicle and shall not be detained after the consignment is accepted for booking.

89. First aid

In transport of pigs by rail or road-

(*a*) first-aid equipment shall accompany the pigs;

(*b*) suitable ramps shall be provided for loading and I unloading the pigs;

(*c*) in the case of a railway wagon, when the loading or unloading is done on the platform the dropped door of the wagon shall be used as a ramp.

90. Group of pigs

In transport of pigs by rail or road, male young stock shall not be mixed with female stock in the same compartment.

91. Facility of food and water

In transport of pigs by rail or road, sufficient food and fodder shall be carried to last during the journey and watering facility shall be provided at regular intervals.

92. Padding of floor during travel

In transport of pigs by rail or road, material for padding, such as straw, shall be placed on the floor to avoid injury if an animal lies down, and this shall be not less than 5 cm thick.

93. Ban on fettering

In transport of pigs by rail or road, the animals shall not be fettered unless there is a risk of their jumping out and their legs shall not be tied down.

94. Space requirement during rail travel

In transport of pigs by rail-

(*a*) no railway wagon shall accommodate more than the number of pigs as specified in the Table below :

Broad gauge (1)		Metre gauge (2)		Narrow gauge (3)
Area of wagon	Area of wagon	Area of wagon	Area of wagon	
< 21.1 sq m	More than 21.1 sq m	Less than 12.5 sq m	More than 12.5 sq m	
Number of Pigs -35	Number of Pigs -50	Number of Pigs -25	Number of Pigs 30	not allowed

(*b*) adequate ventilation shall be provided in every wagon and the upper door of one side of wagon shall be kept open and properly fixed and the upper door of the wagon shall have wire gauge closely welded mesh arrangements to prevent burning cinders from the engines entering the wagon and leading to fire breakout.

95. Space requirement during road travel–

In transport of pigs by road -

(*a*) goods vehicles of capacity of 5 or 4.5 tons, which are generally used for transportation of animals, shall car not more than twenty pigs.

(*b*) in the case of large goods vehicles and containers, Explanation : For the purpose of this rule the certificate partition shall be provided at every two or three metres shall be issued in such form as may be specified for this across the width to prevent the crowding and trapping purpose by the Central Government of pigs

(*c*) in the case of pigs under six weeks of age, separate panels shall be provided.

CHAPTER IX
MISCELLANEOUS

96. Issue of certificate before transportation

(1) A valid certificate issued by an officer or any person or Animal Welfare Organization duly recognized and authorized for this purpose by the Animal Welfare Board of India or the Central Government shall be procured by any person making transport of any animal before transportation of such animal verifying that all the relevant Central and State Acts, rules and orders pertaining to the said animals including the rules relating to transport of such animals have been duly complied with and that the animal is not being transported for any purpose contrary to the provision of any law.

(2) In the absence of such certificate, the carrier shall refuse to accept the consignment for transport.

97. Cancellation of permit or authorization for transport

(1) In the event of contravention or noncompliance of any of the rules contained in these rule for transport of animals, if it is pointed out in writing by any officer or persons or Animal Welfare Organizations authorized for this purpose by the Animal Welfare Board of India or the Central Government, then, any permit or authorization issued for such transport shall be immediately cancelled by the concerned authority and it shall be the duty of the police to stop the further transport even from the intermediary station and proceed against the said offenders and deal with the animal in accordance with law.

(2) The custody of the animals immediately after unloading from the rail wagons, truck or any other vehicle shall be given to the authorized Animal Welfare Organization if available, till the competent authority or the magistrate having jurisdiction decides about their care and upkeep.

98. General conditions of transport

(1) Animals to be transported shall be healthy and in good condition and such animals shall be examined by a veterinary doctor for freedom from infectious diseases and their fitness to undertake the journey; provided that the nature and duration of the proposed journey shall be taken into account while deciding upon the degree of fitness.

(2) An animal which is unfit for transport shall not be transported and the animals who are new born, diseased, blind emaciated, lame, fatigued or having given birth during the preceding seventy two hours or likely to give birth during transport shall not be transported.

(3) Pregnant and very young animals shall not be mixed with other animals during transport.

(4) Different classes of animals shall be kept separately during transport.

(5) Diseased animals, whenever transported for treatment, shall not be mixed with other animals

(6) Troublesome animals shall be given tranquilizers before loading during transport.

(7) Animals shall be transported in their on-farm social groups (established at least one week prior to journey).

Schedule - A [See rule 4]

Proforma for certificate of fitness to Travel - Dogs / Cats

This Certificate should be completed and signed by a qualified Veterinary Surgeon

Date and time of examination : . .....

Species of dogs / cats : .....

Number of cages :..... Number of Dogs / cats .....

Breed and identification marks, if any .....

Transported from ..... To .....Via.....

I hereby certify that I have read rules 8 to 14 in Chapter 11 of the Transport of Animals Rules, 1978.

1. That, at the request of (consignor) I have examined the above mentioned dogs / cats in their travelling cages not more than 12 hours before their departure.
2. That each of the dogs / cats appeared to be in good health, free from signs of injury, contagious and infectious disease including rabies and in a fit condition to travel by rail / road / inland / waterway / sea / air.
3. That the dogs / cats were adequately fed and watered for the purpose of the journey.
4. That the dogs / cats have been vaccinated.
   (*a*) Type of vaccine/s: .....
   (*b*) Date of vaccination/s: .....

Date .....

Signed .....

Address .....

Qualifications .....

Schedule - B [See rule 11]

Size and type of crate for transport of dogs

The design of the cage mentioned in rule 11 in Chapter 11 of the Transport of Animals Rules, 1978 shall be as per the design as printed on page 7 of IS: 4746 - 1968 published by the Indian Standards Institution.

- All dimensions in centimetres

By Rail / Road / Inland Waterways Sea, By Air

Length (L)	A × 1 1/2	A + C + 10	Length - tip of nose to root of tail (A)
Width (W)	A	D + 2 + 10	Width - width across the shoulders (D)
Height (H)	B + 15	B + 0	Height - Tip of ears to toe while standing (B)
			Elbow size - Toe to tip of elbow (C)

Note : Cages, Cartons or crates, used to transport dogs, shall be of such material which will not tear or crumble. They shall be well constructed, well ventilated and designed to protect the health of dogs by giving them adequate space and safety. It is essential that wire mesh should be nose and paw proof; suitable material is that welded wire mesh of not less than 3mm with a spacing 12 × 12 mm. Expanded metal and wire netting are unsuitable for this purpose. There should be no protruding nails or unprotected edges of wire. Dogs Kennels in rail coaches shall be so placed as to give protection to dogs from extremes of temperature and disturbance from birds and by giving them adequate space for health and safety.

Schedule - C [See rule 11]

Size and type of crate for transport of cats

The design of the cage mentioned in rule 11 in Chapter 11 of the Transport of Animals Rules, 1978 shall be as per the design as printed on page 8 of ISI 4746 - 1968 published by the Indian Standards Institution.

By rail / road / inland waterways sea by air (All dimensions in Centimeters)

Length (L)	A × 2	A × 2	Length - Tip of nose to root of tail (A)
Width (W)	A	A	Width - Width across the shoulders (D)
Height (H)	B + 15	B + 10	Height - Tip of ears to toe while standing (B)
			Elbow size - Toe to tip of elbow (C)

Note: Cages, cartons or crates, used to transport cats, shall be of such material, which will not tear or crumble. They shall be well constructed, well ventilated and designed to protect the health of the cats by giving them adequate space and safety. It Is essential that wire mesh should be nose and paw proof; suitable material is a welded wire mesh of not less than 3mm with a spacing 12 x 12 mm. Expanded metal wire netting are unsuitable for this purpose. There should be no protruding nails or unprotected edges of wire. Cats Kennels in rail coaches shall be so placed as to give-protection to cats from extremes of temperature and disturbance from birds and by giving them adequate space for health and safety.

Schedule- D

[See Rule 16 and 32]

Proforma for certificate of fitness to travel monkeys

This Certificate should be completed and signed by a qualified Veterinary Surgeon.

Date & time of examination: .....

Species of Monkeys : .....

Number of Cages ..... Number of Monkeys .....

Sex.....Age.....

Breed and identification marks, if any .....

Transported from..... To..... Via .....

I hereby certify that I have read rules 15 to 45 in Chapter III of the Transport of Animals Rules, 1978.

1. That, at the request of (consignor) I have examined the above mentioned monkeys in their travelling cages not more than 12 hours before their departure.
2. That each monkey appeared to be in a fit condition to travel from the trapping area to the nearest rail-head / from the nearest rail-head to another rail-head / from the rail - head to the nearest airport / by air and is not showing any signs of infectious or contagious diseases.
3. That the monkeys appeared to be under 6 months of age and that no animal appeared to be pregnant.
4. That the monkeys were adequately fed and watered for the purpose of the journey.

5. That the monkeys have been vaccinated.

(*a*) Type of vaccine/s:

(*b*) Date of vaccination/s:

Date .....

Signed .....

Address .....

Qualifications .....

Schedule- E

[See Rule 23(5) (*a*) and Rule 23(6)]

Size and type of crate for transport of monkeys from trapping area to nearest rail-head

The construction details of two types of cages mentioned in rule 22(5) (*a*) in Chapter III of the Transport of Animals Rules, 1978 shall be as per the dimensions and design as printed on page 5 of IS: 3699 (Part - 1) - 1966 published by Indian Standards Institution.

Schedule- F

[See Rule 40 (4)]

Size and type of crate for transport of monkeys by air

The construction details of two types of cages mentioned in rule 40(3) (*a*) and (*b*) in Chapter III of the Transport of Animals Rules, 1978 shall be as per the dimensions and design as printed on page 6 of IS: 3059 - 1965 published by Indian Standards Institution.

Schedule - G

[See Rule 40 (5)]

Size and type of crate for transport by air of pregnant and nursing monkeys and monkeys weighing over 5 kg.

The construction details of two types of cages mentioned in rule 40(5) in Chapter III of the Transport of Animals Rules, 1978 shall be as per the dimensions and design as printed on page 7 of IS: 3059 -1965 published by Indian Standards Institution.

Schedule- H

[See Rule 47]

Proforma for certificate of fitness to travel cattle

(This Certificate should be completed and signed by a qualified Veterinary Surgeon)

Date and time of examination : .....

Species of cattle : .....

Number of Trucks / Railway Wagons .....

Number of cattle ..... Sex..... Age .....

Breed and identification marks, if any .....

Transported from ..... To .....Via.....

I hereby certify that I have read rules 46 to 56 in Chapter IV of the Transport of Animals Rules, 1978.

1. That, at the request of (consignor) I have examined the above-mentioned Cattle in the goods vehicle/ railway wagons not more than 12 hours before their departure.

2. That each cattle appeared to be in a fit condition to travel by rail/road and is not showing any signs of infectious or contagious or parasitic disease and that it has been vaccinated against rinderpest and any other infectious or contagious or parasitic diseases(s).

3. That the cattle were adequately fed and watered for the purpose of the journey.

4. That the cattle have been vaccinated.

(*a*) Type of vaccine :

(*b*) Date of vaccination:

Date .....

Signed .....

Address .....

Qualifications .....

Schedule- I

[See Rule 58]

Proforma for Certificate of fitness to travel Equines

(This Certificate should be completed and signed by a qualified Veterinary Surgeon)

Date and time of examination : .....

Species of Equines: .....

Number of Equines: ..... Sex..... Age .....

Breed and identification marks, if any .....

Transported from ..... To .....Via.... .....

I hereby certify that I have read rules 57 to 63 in Chapter V of the Transport of Animals Rules, 1978.

1. That, at the request of (consignor) I examined the above mentioned equines not more than 12 hours before their departure.
2. That each equine appeared to be in a fit condition to travel by rail/road/sea and is not showing any signs of any infectious or contagious disease(s) and that it has been vaccinated against any infectious or contagious diseases(s).
3. That the equines were adequately fed and watered for the purpose of the journey.
4. That the equines have been vaccinated.

(*a*) Type of vaccine (s) :

(*b*) Date of vaccination:

Date .....

Signed .....

Address .....

Qualifications .....

Schedule - J

[See Rule 651]

Proforma for certificate of fitness to travel - sheep and goats

(This Certificate should be completed and signed by a qualified Veterinary Surgeon)

Date and time of examination : .....

Species of Animals : .....

Number of Animals : ..... Sex..... Age .....

I hereby certify that I have read rules 64 to 75 in Chapter VI of the Transport of Animals Rules, T978.

1. That, at the request of (consignor) I have examined the above mentioned animals not more than 12 hours before their departure.
2. Thai each animal appeared-to be in a fit condition to travel by rail/road and is not showing any signs of any infectious or contagious or parasitic disease(s) and that it has been vaccinated against any infectious or contagious or parasitic disease(s),
3. That the animals were adequately fed and watered for the purpose of the journey.
4. That the animals have been vaccinated.

   (*a*) Type of vaccine(s):

   (*b*) Date of vaccination:

Date .....

Signed .....

Address .....

Qualifications .....

Schedule K

[see rule 87 (3)]

Proforma for certificate of fitness to travel Pigs

(This certificate should be completed and signed by a Veterinary doctor)

Date and time of examination : .....

Species of Animals : .....

Number of Animals : ..... Sex..... Age .....

I hereby certify that I have read Rules 86 to 95 in Chapter VIII of the Transport of Animal Rules, 1978

1. That, at the request of (consignor) 12 hours before their departure I examined the above mentioned animals not more than
2. That each appeared to be in a fit condition to travel by rail/road/sea and is not showing any signs of any infectious or contagious or parasitic disease(s) and that it has been vaccinated against any infectious or contagious disease(s)
3. That the animals were adequately fed and watered for the purpose of the journey.
4. That the animals have been vaccinated.

   (*a*) Type of vaccine(s)

   (*b*) Date of vaccination

Date .....

Signed .....

Address .....

Qualifications .....

PREVENTION OF CRUELTY TO ANIMALS (TRANSPORT OF ANIMALS ON FOOT) RULES, 2001

S.O.268 (E) [26th Mareh, 2001]



In exercise of the powers conferred by sub-sections (1) and (2) of section 38 of the Prevention of Cruelty to Animals Act, 1960 the Central Government hereby makes the following rules, namely:

1. Short title and commencement

These rules may be called the Prevention of Cruelty to Animals (Transport of Animals on Foot) Rules, 2001.

2. Definitions

In these rules unless the context otherwise requires-

(*a*) "animal" means livestock and includes the following animals namely:

(*i*) cattle including cow, bulls and bullocks, buffalo bulls and bullocks, cows, buffaloes, mithuns, yaks and calves;

(*ii*) equines including horses, ponies, mules and donkeys;

(*iii*) horse including stallions, geldings, brood mare colts and fillies;

(*iv*) goat including adult goat, male or female of two years age and above;

(*v*) buck including male goat;

(*vi*) kid young goat below one year of age;

(*vii*) nanny female goat ;

(*viii*) sheep including adult sheep, male or female of two years age and above;

(*ix*) ewe female sheep;

(*x*) lamb young sheep below one year of age;

(*xi*) ram male sheep;

(*xii*) wether includes male lamb that has been castrated before reaching sexual maturity;

(*xiii*) pig includes adult pig, male or female of one year of age or above;

(*xiv*) piglet includes young pig below one year of age;

(*b*) "veterinary doctor" means a person registered with the Veterinary Council of India established under the Indian Veterinary Council Act, 1984 (52 of 1984);

(*c*) "Schedule" means a schedule appended to these rules.

3. Application of the rules

These rules shall apply to transport of animals on foot, when the distance from the boundary of village or town or city of the origin of such transport to the last destination is 5 km or more than 5 km.

4. Condition of health of animals transported on foot

(1) Every animal to be transported on foot shall be healthy and in good condition for such transport.

(2) A certificate of a veterinary doctor in respect of each animal to be transported to the effect that such animal is in a fit condition for such transportation and is not suffering from any infectious, contagious or parasitic diseases and that it has been vaccinated against any infectious, contagious or parasitic diseases shall accompany such animal.

(3) The certificate under sub rule (1) shall be in the form as specified in the First Schedule.

5. Certain animals not to transport on foot

New born animals of which the navel has not completely healed, diseased, blind, emaciated, lame, fatigued, or having given birth during the preceding seventy two hours or likely to give birth during transport shall not be transported on foot.

6. Transport in on-farm social group

Animal shall be transported in their on farm social groups (established at least one week prior to journey).

7. First aid equipment to accompany animals transported on foot

The owner of the animals shall provide veterinary first aid equipment to be accompanied with such animals while transported on foot.

8. Certificate to be carried during transportation

In case the person transporting the animals on foot is not the owner of the animal then such person shall carry a certificate as specified in the Second Schedule during such transportation.

9. Watering arrangement during transportation of animals

The owner of the animals shall make watering arrangement in route during transport of such animals on foot.

10. Feed and fodder arrangements during transportation of animals

Sufficient feed and fodder with adequate reserve of such feed and fodder for the animals shall be made available by their owner during their transport on foot.

11. Prohibition of the use of whip, etc. during transportation of animals on foot

(1) No person shall use a whip or a stick in order to make the animal to walk or to hasten the pace nor such person shall apply chilies or any such substance to any part of the body of the animal for this purpose during their transportation on foot.

(2) If any animal needs to be tied during transport on foot, it shall be tied by a rope covered with suitable cushioning such as cloth around its leg and such animal shall not be tied by its nose, all legs or any other part of the body except by its neck.

(3) If more than one animal is to be tied adjacent to one another by a single rope during their transport on foot, the space between any two of such animals shall be minimum two feet and animals so tied shall be of similar physical condition and strength and no more than two such animals shall be tied adjacent to each other by a single rope.

12. Certain prohibition on transport of animals on foot

(1) No person shall transport on foot an animal before sunrise or after sunset.

(2) No animal shall be transported on foot beyond the distance, time, rest interval and temperature specified for such animal in the Table below, namely:

Species (Animal)	Max distance covered/ day/hour	Max. no. of walking/ day (hrs)	Period of rest (interval)	Temp range Min-Max (°C)
Cattle (Cows)	30 km/day 4 km/hr	8 hours	At every 2hrs for drinking and at every 4 hrs for feeding	12 to 30
Buffaloes	25 km/day 3 km/hr	8 hours	At every 2 hrs for drinking and at every 4 hrs for feeding	12 to 30
Cows and Buffaloes Calves	16 km/day 2.5 km/hr	6 hours	At every 1_ hrs for drinking and at every 3 hrs for feeding	15 to 25
Horses, Ponies, Mules, Donkeys	45 km/day 6 km/hr	8 hours	At every 3 hrs for drinking and at every 6 hrs for feeding	12 to 30
Young ones (Foal)	25 km/day 4 km/hr	6 hours	At every 2 hrs for drinking and at every 4 hrs for feeding	15 to 25
Goats and Sheep	30 km/day 4 km/hr	8 hours	At every 2 hrs for drinking and at every 4 hrs for feeding	12 to 30
Kids and Lambs	16 km/day 2.5km/hr	6 hours	At every 1 _ hrs for drinking and at every 3 hrs. for feeding	15 to 25
Pigs	15 km/day 2 km/hr	8 hours	At every 1 _ hrs for drinking and at every 3 hrs for feeding	12 to 25
Piglets	10 km/day 1.5 km/hr	6 hours	At every 1 _ hrs for drinking and at every 3 hrs for feeding	15 to 25

Note : After being provided with water every animal shall be given a break of 20 minutes before the commencement of the transport of the animal on foot and in case of feeding the break shall be given for one hour before the commencement of the transport of the animal on foot.

(3) No animal shall be made to walk under conditions of heavy rain, thunderstorms or extremely dry or sultry conditions during its transport on foot.

13. Transportation of animals in certain cases not permitted without shoes

Animals whose hooves are not provided with shoes (as in the case of pack or draught animals) shall not be transported on foot on hard cement, bitumen-coated or metaled roads, steep gradients or hilly and rocky terrain, irrespective of weather conditions (summer or winter).

14. Power of Police to require the owner to take animal to nearest Magistrate

(1) If any police officer or any other person authorized on this behalf by the Government or by the Animal Welfare Board of India, has reason to believe that an offence has been or is being committed in respect of an animal in contravention of these rules, he may require the owner or other person in charges of such animal to take the animal to the nearest magistrate.

(2) If the owner or the person in charge of the animals referred to in sub rule (1) refuses to comply with the demands of the police officer under that sub rule, it shall be lawful for such police officer or such other persons to take the animal to the nearest magistrate.

FIRST SCHEDULE

FORM FOR CERTIFICATE OF FITNESS FOR TRANSPORT OF ANIMALS

See rule 4 (3)

This Certificate should be completed and signed by a qualified Veterinary Doctor

Date and time of examination _____ Species _____

Number of Trucks/Railway Wagons _____

Number of Cattle _____ Sex _____ Age _____ Identification _____

Breed (giving characteristics): Area where it is found with status regarding general resistance and heat tolerance

Individual Features of the animal:

Body colour _____ Height _____ Body weight (approx) _____ Animal length _____

Breadth (measured between pelvic bones)

Colour of the eyes _____

Shape of the horns _____

General conditions (like fleshy, bony projections) _____

History of the animal, feed status whether or not sign of anorexia/ diarrhea _____

Health Status:

1. Record Body Temperature _____
2. Examine eyes for bulging or protrusion of eyeball, blindness, corneal opacity and specify
3. Condition of skin, (including signs of dehydration, injuries), check for presence of warts on the skin
4. Ears: Examine ears-(check for animal body response to hearing, check for any infection, inflammation or secretion (*a*) excess of wax, blood or any fluid) _____

5. Examine sub maxillary area for swelling (for any abnormality or pain)
6. Check for status of pregnancy of female animal If yes - which stage (1st, 2nd or 3rd stage)
7. Examine udder and teats and specify _____
   (*a*) Relative size of quarters _____
   (*b*) Check for signs of swelling/ atrophy/ fibrous _____
   (*c*) Induration on palpation of individual quarter and specify _____
   (*d*) Check teat canal for teat tumor or fibrosis of teat canal and specify
8. (*a*) If female- check for sign of vaginal discharge on examination of the vulva and specify
   (*b*) In male- check testicles-size, any sign of penis-injury, abrasions or the sheath, discharges to be recorded _____
9. Sign of abdominal pain (check for gait or posture of the animal, check for signs of abdominal distention, left flank to be checked for rumen examination (full, empty), tympany _____
   Check abnormalities for monogastric animals _____
10. Digestive System:
    Examine mouth and specify
    (*a*) Detail dentition _____
    (*b*) Specify-evidences of
    - tooth damage .....
    - broken or worn incisors .....
11. Respiratory system:
    (*a*) Record respiration rate _____
    (*b*) Auscultation & specify for signs of dyspnea, respiratory distress and specify
12. In cows possessing horns check and specify:
    (*a*) Shape of horns _____
    (*b*) Number of horn rings _____
    (*c*) Any difference in the direction _____
    (*d*) Or appearance of two horns _____
13. Examine ribs for fracture and specify _____
14. Examine abdominal wall for presence of ventral or umbilical hernia and specify
15. Examine limbs and joints for bony enlargements or synovial distensions & specify check for signs of lameness and specify
16. Examine inter-digital space for any lesions check and specify
17. Any indications of foot soreness, excessive wear of soles or laminitis
18. Examine circulatory system:
    (*a*) Specify pulse rate _____
    (*b*) Check for presence of edema dependent portion or ascites and specify

19. Transported from _____ to _____ via _____

I hereby certify that I have read the Prevention of Cruelty to Animals (Transport of Animals on Foot) Rules, 2001.

1. That, at the request of (consignor) I examined the above mentioned cattle in the goods vehicle/railway wagons not more than 12 hours before their departure.
2. That each cattle appeared to be in a fit condition to travel by rail/road and is not showing any signs of infectious or contagious or parasitic disease and that it has been vaccinated against rinderpest and any other infectious or contagious or parasitic disease(s)
3. That the cattle were adequately fed and watered for the purpose of the journey.
4. That the cattle have been vaccinated.
   (*a*) Type of vaccine _____
   (*b*) Date of vaccination _____

Signed_____

Address_____

Qualifications_____

SECOND SCHEDULE

AUTHORIZATION CERTIFICATE (See rule 8)

1. Name and Age of the Owner _____
2. Father's Name _____
3. Address of the Owner _____
4. No. of animals for transport specifying species, age and sex of each animal _____
5. Name of the person(s) transporting the animals _____
6. Specify the place of origin and the place of last destination of such animals for transport _____
7. Attach a copy of the veterinary certificate granted under Rule 8
8. Details of feed, fodder and watering arrangements provided during transport of such animals _____

I do hereby declare that I am the owner of the aforementioned animals. I have authorized Shri _____ S/o_____

R/o _____

to transport the said animals. I have read and understood the Transport of Animals on Foot Rules, 2001 and undertake that the said Rules have been and would be complied with during transport.

I do hereby state that the above information is true and correct.

To be filled in by the Transporter

I _____ S/o_____

R/o _____

do hereby give my consent to transport the afore-mentioned animals from the aforesaid place of origin to the place of destination.

I have read and understood the Transport of Animals on Foot Rules, 2001 and undertake that the said Rules would be complied with during transport.

THE PREVENTION OF CRUELTY TO ANIMALS (REGISTRATION OF CATTLE PREMISES) RULES, 1978

[30 Nov, 1978]



In exercise of the powers conferred by sub section (2) of the section 38 of the prevention of cruelty to Animals Act, 1960 the Central Government makes the following rules.

1. Short title and application

These rules may be called the Prevention of Cruelty to Animals (Registration of Cattle Premises) Rules, 1978.

This rule shall apply only to cities or towns, which have a population exceeding one lakh.

2. Definitions

In these rules, unless the context otherwise requires-

(*a*) "cattle" means oxen, buffaloes, cows, bullocks and horses including their young ones;

(*b*) "registering authority" means such officers of the Veterinary Department of the State Government or of local authority as the State Government may specify.

3. Registration of premises

In these rules every person having a premises in which there are more than five heads of cattle should apply to a registering authority for the registration of such premises.

4. Application for registration

Every application should contain full information regarding the number and type of animals kept or to be kept, the purpose for which they are being kept and provisions made

with respect to floor space, flooring, ventilation, supply of food and water, disinfection, drainage, disposal of dung, boundary wall etc.

5. Certificate of registration

If the registering authority is satisfied with respect to the welfare of the animals then it will issue a certificate, the validity of which will be three years. This certificate may be renewed every three years.

6. Inspection of premises

All premises registered under these rules shall be open for inspection by any Veterinary or Public Health officer at all reasonable times.

7. Cancellation of registration

If any premises are not maintained in the prescribed way; its certificate can be cancelled.

8. Appeal

An appeal can be made against refusing or cancelling the registration of any premises.

9. Display of Section 12 of the Act

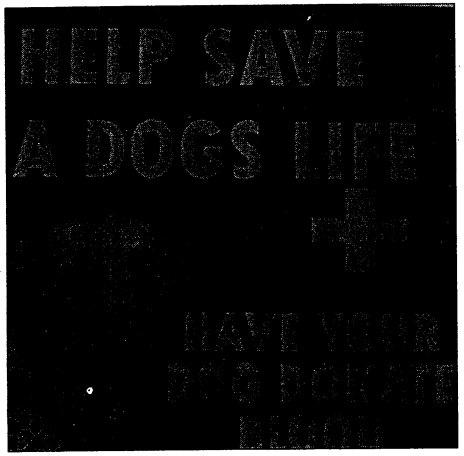
If milch cattle are kept in any premises, there shall be displayed by the owner of cattle prominently in or near the premises, a copy of the section 12 (description of Phooka and its penalties) of The Prevention of the Cruelty to Animals Act, 1960 in the local language.

10. Saving

If in any area, to which these rules apply, is regulated by any local authority, which contains the provisions for the registration of premises, in that situation these rules shall be of no avail.

THE PREVENTION OF CRULTY TO ANIMALS (APPLICATIONS OF THE FINES) RULES, 1978

[15 Feb, 1978]



In exercise of the powers conferred by sub section (2) of the section 38 of the prevention of cruelty to Animals Act, 1960 the Central Government makes the following rules.

1. Short title

These rules may be called the Prevention of Cruelty to Animals (Application of Fines) Rules, 1978.

2. Definitions

In these rules, unless the context otherwise requires-

(*a*) "Act" means The Prevention of Cruelty to Animals, 1960;

(*b*) "Board" means the Animal Welfare Board of India established under this Act;

(*c*) "fines" means fines levied under this Act.

3. Fines, after deducting cost of collection, to be made over to Board

(1). Fines levied and realized under the Act shall, subject to any deductions relating to thecost of collection, be made over by the State Government to the Board as soon as may beafter due appropriation by law (State Legislature) in this behalf.

4. Application of fines made over to Board

(1) Fines made over by any State Government to the Board shall be applied exclusivelyfor the following purposes, namely:-

(*i*) the grant of financial assistance to societies dealing with the Preventionof Cruelty to Animals or organization actively interested in animalwelfare work which are for the time being recognized by the Board.

(*ii*) the maintenance of infirmaries, pinjrapoles and veterinary hospitals.

(2) Fines realized in one State and made over to the Board shall be utilized only for thebenefit of such societies or other organizations within the jurisdiction of the State andnot otherwise.

5. Principles to govern application of fines

In applying the fines for the benefit of societies or other organizations in any State, the Boardshall have due regard to the following principles, namely:-

(*i*) Financial assistance shall first be given to societies dealing with the prevention ofcruelty to animals within the jurisdiction of the state which are for the time beingrecognized by the Board.

(*ii*) In granting financial assistance to such societies, due regard shall be had to theamounts they had been receiving from the State Government prior to the coming intoforce of these rules, and consistently with the amount of fines at its disposal andhaving regard to the revenues of the Societies concerned, the objects for whichassistance is to be given and other relevant matters, the Board shall make everyendeavor to ensure that there is no diminution in the amounts such societies had beenreceiving earlier.

(*iii*) If after the grant of financial assistance to the societies earlier referred to in this rule,there is any unspent balance, it may be applied by the Board at its discretion for thebenefit of any other organization actively interested in animal welfare work includinginfirmaries, pinjrapoles and veterinary hospitals.The fines collected under this Act shall be made available to the Animal Welfare Board.

THE PRVENTION OF CRUELTY TO ANIMALS (CAPTURE OF ANIMALS) RULES, 1979

S.O 1056 [13 March, 1979]



In exercise of the powers conferred by sub section (2) of the section 38 of the prevention of cruelty to Animals Act, 1960 the Central Government makes the following rules:

1. Short title and commencement

These rules may be called the Prevention of Cruelty (Capture of Animals) Rules, 1979.

2. Capture of birds

No bird shall be captured for the purpose of sale, export or any other purpose except by net method.

Explanation:The following contrivance should be used in the manufacture of nets used for the capture of birds. A contrivance made of spun thread, which is soft, pliable and sufficiently strong, like cotton, jute or any synthetic fiber, woven in such a way as to form a mesh of suitable size so that the bird is captured without injury being caused to it.

3. Capture of other animals

(1) No animal shall be captured for the purpose of sale, export or for any other purpose except by sack and loop method.

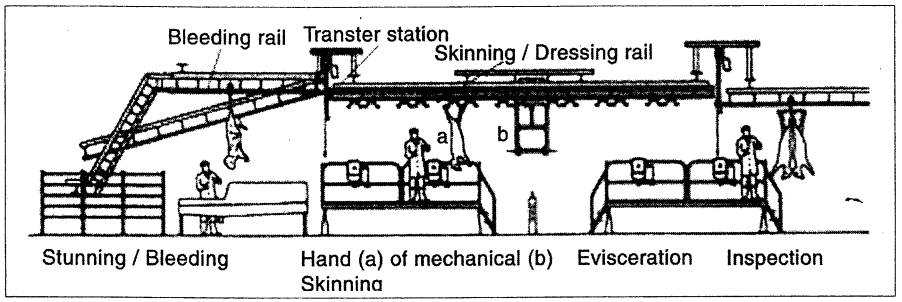
Provided that an animal which cannot be captured by reason of its size, nature of other condition or circumstances by the sack and loop method, may be captured with the help of tranquilizer guns or by any other method which renders the animal insensible to pain before capture.

(2) Nothing in this rule shall apply to the capture of birds

Explanation:An animal is said to be captured by the sack and loop method if in its capture the following contrivance is used viz. A strong canvass in the form of sac, not less than 92 cm in length and 138 cm in diameter which has a smooth rope not less than 5.5.meter in length passing through ten or more rings of not less than 4 cms in diameter each attached at the open end, thus forming a loop, the sack having small holes at convenient places to enable the animal to breathe during captivity and the animal is captured by the sack being thrown on it and secured by having a loop pulled.

PREVENTION OF CRUELTY TO ANIMALS (SLAUGHTER HOUSE) RULES, 2001

S.O.270 (E) [26 March, 2001]



Line slaughtering of small ruminants (Photo courtesy - Abattoir development-FAO publication)

In exercise of the powers conferred by sub-sections (1) and (2) of section 38 of the Prevention of Cruelty to Animals Act, 1960, the Central Government hereby makes the following rules, namely:

1. Short title and commencement

These rules may be called the Prevention of Cruelty to Animals (Slaughterhouse) Rules 2001.

2. Definitions

In these rules the context otherwise requires-

(*a*) "Act" means the Prevention of Cruelty to Animals Act, 1960 (59 of 1960);

(*b*) "slaughter" means the killing or destruction of any animal for the purpose of food and includes all the processes and operations performed on all such animals in order to prepare for being slaughtered;

(*c*) "slaughterhouse" means a slaughterhouse wherein 10 or more than 10 animals are slaughtered per day and is duly licensed or recognized under a Central, State or Provincial Act or any rules or regulations made thereunder;

(*d*) "veterinary doctor" means a person registered with the Veterinary Council of India.

3. Animals not to be slaughtered except in recognized or licensed houses

(1) No person shall slaughter any animal within a municipal area except in a slaughterhouse recognized or licensed by the concerned authority.

(2) No animal which;

(*i*) is pregnant; or

(*ii*) has an offspring less than three months old; or

(*iii*) is under the age of three months; or

(*iv*) has not been certified by a veterinary doctor that it is in a fit condition to be slaughtered, shall be slaughtered.

(3) The municipal or other local authority shall, having regard to the capacity of the slaughterhouse and the requirement of the local population of the area in which a slaughterhouse is situated, determine the maximum number of animals that may be slaughtered in a day.

4. Reception area or resting grounds

(1) The slaughterhouse shall have a reception area of adequate size sufficient for livestock subject to veterinary inspection.

(2) The veterinary doctor shall examine thoroughly not more than 12 animals in an hour and not more than 96 animals in a day.

(3) The veterinary doctor after examining the animal shall issue a fitness certificate in the form specified by the Central Government for this purpose.

(4) The reception area of slaughterhouse shall have proper ramps for direct unloading of animals from vehicles or railway wagons and the said reception area shall have adequate facility sufficient for feeding and watering of animals.

(5) Separate isolation pens shall be provided in slaughterhouse with watering and feeding arrangements for animals suspected to be suffering from contagious and infectious diseases and ferocious animals in order to segregate them from the remaining animals.

(6) Adequate holding area shall be provided in a slaughterhouse according to the class of animals to be slaughtered and the said holding area shall have water and feeding facilities.

(7) The resting grounds in slaughterhouse shall have overhead protective shelters.

(8) Ante-mortem and pen area in slaughterhouse shall be paved with impervious material such as concrete non-slippery herring-bone type suitable to stand wear and tear by hooves or brick, and pitched to suitable drainage facilities.

5. Lairage

(1) Every animal after it has been subject to veterinary inspection shall be passed to a lairage for resting for 24 hours before slaughter.

(2) The lairage of the slaughterhouse shall be adequate in size sufficient for the number of animals to be lamed.

(3) The space provided in the pens of such lairage shall be not less than 2.8 sq.mt. per large animal and 1.6 sq.mt. per small animal.

(4)The animals shall be kept in such lairage separately. Depending upon their type and class and such lairage shall be so constructed as to protect the animals from heat, cold and rain.

(5) The lairage shall have adequate facilities for watering and post-mortem inspection.

6. Slaughter

(1) No animal shall be slaughtered in a slaughterhouse in sight of other animals.

(2) No animal shall be administered any chemical, drug or hormone before slaughter except drug for its treatment from any specific disease or ailment.

(3) The slaughter halls in a slaughterhouse shall provide separate sections of adequate dimensions sufficient for slaughter of individual animals to ensure that the animal to be slaughtered is not within the sight of other animals.

(4) Every slaughterhouse as soon as possible shall provide a separate space for stunning of animals prior to slaughter, bleeding and dressing of the carcasses.

(5) Knocking section in slaughterhouse may be so planned as to suit the animal and particularly the ritual slaughter if any.

(6) A curbed-in bleeding area of adequate size as specified by the Central Government shall be provided in the slaughterhouse and it shall be so located that the blood could not be splashed on other animals being slaughtered or on the carcass being skinned.

(7) The blood drain and collection in a slaughterhouse shall be immediate and proper.

(8) A floor wash point should be provided in a slaughterhouse for intermittent cleaning and a hand-wash basin. A knife sterilizer shall also be provided to sterilize knife and wash hands periodically.

(9) Dressing of carcasses in a slaughterhouse shall not be done on floor and adequate means and tools of dehiding or belting of the animals shall be provided in a slaughterhouse with means for immediate disposal of hides or skins.

(10) Hides or skins shall be immediately transported from a slaughterhouse either in a closed wheelbarrow or by chute provided with self-closing door and in no case such hides or skins shall be spread on slaughter floor for inspection.

(11) Floor wash point and adequate number of hand wash basins with sterilizer shall be provided in a dressing area of a slaughterhouse with means for immediate disposal of legs, horns, hooves and other parts of animals through spring load floor chutes or sidewall doors or closed wheelbarrows.

(12) Adequate space and suitable and properly located facilities shall be provided sufficient for inspection of the viscera of the various type of animals slaughtered in a slaughterhouse.

(13) Its owner shall make adequate arrangements in a slaughterhouse for identification, inspection and correlation of carcass, viscera and head.

(14) In a slaughterhouse, a curbed and separately drained area or an area of sufficient size, sloped 33 mm per meter to a floor drain, where the carcasses may be washed with a jet of water, shall be provided by the owner of such slaughterhouse.

7. Slaughterhouse building

For the construction of the slaughterhouse specifications related to plant building, floors, walls, ceilings, windows, doorways, washing and drainage, lighting and ventilation, vehicular areas for trucks are described in this section. The materials such as copper, cadmium, and lead should not be used in abattoir.

8. Engagement in slaughterhouse

(1) No owner or occupier of a slaughterhouse shall engage a person for slaughtering animals unless he possesses a valid license or authorization issued by the municipal or other local authority.

(2) No person who has not attained the age of 18 years shall be employed in any manner in a slaughterhouse.

(3) No person who is suffering from any communicable or infectious disease shall be permitted to slaughter an animal.

9. Inspection of slaughterhouse

The Animal Welfare Board of India or any person authorized by it may inspect slaughterhouse at any time during the working hours to ensure that the provisions of these rules are being complied with. After the inspection he shall send its report to Animal Welfare Board of India as well as to the municipal or local authority for appropriate action in the event of violation of any provisions of these rules.

ANIMAL BIRTH CONTROL (DOGS) RULES, 2001

S.O. 1256 (E) [24th December, 2001]



In exercise of the powers conferred by the sub-sections (1) (2) of section 38 of the Prevention of Cruelty to Animals Act, 1960, the Central Government hereby makes the following rules, namely:

1. Short title and commencement

These rules may be called the Animal Birth Control (Dogs) Rules, 2001.

2. Definition

In these rules, unless the context otherwise requires-

(*a*) "Act" means the Prevention of Cruelty to Animals Act, 1960;

(*b*) "Animal Welfare Organization" means and includes the Society for Prevention of Cruelty to Animals and any other welfare organization for animals;

(*c*) "Board" means the Animal Welfare Board of India, established under section 4 and as reconstituted under Section 5A of the Act;

(*d*) "committee" means a committee appointed under these rules;

(*e*) "local authority" means a municipal committee, district board or other authority for the time being invested by law with the control and administration of any matters within a specified local area;

(*f*) "owner" means the owner of an animal and includes any other person in possession or custody of such animal whether with or without the consent of the owner;

(*g*) "veterinary doctor" means a person who holds a degree of a recognized veterinary college and is registered with the Indian Veterinary Council.

3. Classification of dogs and their sterilization

(1) All dogs shall be classified in one of the following two categories:

(*i*) pet dogs;

(*ii*) street dogs.

(2) The owner of pet dogs shall be responsible for the controlled breeding, immunization, sterilization and licensing in accordance with these rules.

(3) The street dogs shall be sterilized and immunized by participation of animal welfare organizations, private individuals and the local authority.

4. Formation of committee

A monitoring committee consisting of the following persons shall be constituted by the local authority namely-

(*a*) Commissioner/ Chief of the local authority, who shall be the ex-officio Chairman of the Committee.

(*b*) A representative of the Public Health Department of the local authority.

(*c*) A representative of the Animal Welfare Department.

(*d*) A veterinary doctor.

(*e*) A representative of the district Society for Prevention of Cruelty to Animals (SPCA).

(*f*) At least two representatives from the Animal Welfare Organizations operating within the said local authority.

5. Functions of the committee

The committee constituted under rule 4 shall be responsible for planning and management of dog control programme in accordance with these rules. The committee may-

(*a*) Issue instructions for catching, transportation, sheltering, sterilization, vaccination, treatment and release of sterilized vaccinated or treated dogs.

(*b*) Authorize veterinary doctor to decide on case to case basis the need to put to sleep critically ill or fatally injured or rabid dogs in a painless method by using sodium thiopental. Any other method is strictly prohibited.

(*c*) Create public awareness, solicit co-operation and funding.

(*d*) Provide guidelines to pet dog owners and commercial breeders from time to time.

(*e*) Get a survey done of the number of street dogs by an independent agency.

(*f*) Take such steps for monitoring the dog bite cases to ascertain the reasons of dog bite, the area where it took place and whether it was from a stray or a pet dog.

(*g*) Keep a watch on the national and international development in the field of research pertaining to street dogs' control and management, development of vaccines and cost effective methods of sterilization, vaccination, etc.

6. Obligations of the local authority

(1) The local authority shall provide for-

(*a*) establishment of a sufficient number of dog pounds including animal kennels/shelters which may be managed by animal welfare organizations;

(*b*) requisite number of dog vans with ramps for the capture and transportation of street dogs;

(*c*) one driver and two trained dog catchers to be provided for each dog van;

(*d*) an ambulance cum clinical van to be provided as mobile center for sterilisation and immunization;

(*e*) incinerators to be installed by the local authority for disposal of carcasses;

(*f*) periodic repair of shelter or pound.

(2) If the Municipal Corporation or the local authority thinks it expedient to control street dog population, it shall be incumbent upon them to sterilize and immunize street dogs with the participation of animal welfare organizations and private individuals.

(3) The animal welfare organizations shall be reimbursed the expenses of sterilization/ immunization at a rate to be fixed by the Committee on fortnightly basis.

7. Capturing/ sterilization/ immunization/release

(1) Capturing of dogs shall be based on-

(*a*) Specific complaints (for which the local authority in consultation with the monitoring committee shall set up a dog control cell to receive complaints about dog nuisance, dog bites and information about rabid dogs); and

(*b*) General:

(*i*) On receipt of specific complaint about nuisance or dog bite the same shall be attended on priority basis.

(*ii*) Capturing for general purpose will be on such dates and time to be specified by the Committee.

(2) The dog capturing squad shall consist of:

(*i*) The driver of the dog van;

(*ii*) Two or more trained employees of the local authority who are trained in capturing of dogs;

(*iii*) One representative of any of the animal welfare organization.

Each member of the dog squad shall carry, a valid identity card issued by the local authority.

(3) On receipt of a specific complaint for capturing dogs in normal course, the dog squad will visit the concerned area and capture the dogs. All the dogs caught will be tagged for identification purposes and to ensure that the dogs are released in the same area after sterilization and vaccination. A record of dogs captured shall be maintained in a register.

(4) The dogs shall be captured by using humane methods such as lassoing or soft-loop animal catchers such as those prescribed under the provisions of Prevention of Cruelty (Capture of Animals) Rules, 1979.

(5) While the dogs are being captured in any locality the representative of the local authority or of the animal welfare organization accompanying the dog squad will make announcements on a public address system that dogs are being captured from the area for the purpose of sterilization and immunization and will be released in the same area after sterilization and immunization.

(6) The captured dogs shall be brought to the dog kennels/ dog pounds managed by the Animal Welfare Organizations (AWOs). On reaching the dog pounds all the dogs shall be examined by the veterinarians and healthy and sick dogs should be segregated. Sick dogs should be given proper treatment and only after they are treated they should be sterilized and vaccinated under the supervision of the veterinarians. After necessary period of follow up, the dogs shall be released at the same place or locality from where they were captured and the date, time and place of their release shall be recorded.

(7) At a time only one lot of dogs shall be brought for sterilization, immunization at one dog kennel or dog pound and these dogs shall be from one locality. Two lots from different areas or localities shall not be mixed at the same dog pound or dog kennel.

(8) The dog kennel must have sufficient space for proper housing and feeding of animals of different age groups.

(9) Female dogs found to be pregnant shall not undergo abortion (irrespective of stage of pregnancy) and sterilization and should be released till they have litter.

8. Identification and recording

Sterilized dogs shall be vaccinated before release and the ears of these dogs should either be clipped and/ or tattooed for being identified as sterilized or immunized dogs. In addition, the dogs may be given token or nylon collars for identification and detailed records of such dogs shall be maintained. Branding of dogs would not be permitted.

9. Euthanasia of street dogs

Incurably ill and mortally wounded dogs shall be euthanized in a humane manner by administering sodium thiopental for adult dogs and thiopental intra-peritoneal for puppies by a qualified veterinarian. No dog shall be euthanized in the presence of another dog.

10. Furious or dumb rabid dogs

(1) On the receipt of complaints from the public to the Dog Control Cell of the Local Authority or on its own, the dog squad of the Local Authority would catch such dogs, suspected to be rabid.

(2) The caught dog would then be taken to the pound where it would be isolated in an isolation ward.

(3) The suspected rabid dog would then be subjected to inspection by a panel of two persons i.e.

(*i*) A veterinary surgeon appointed by the Local Authority and

(*ii*) A representative from an Animal Welfare Organization.

(4) If the dog is found to have a high probability of having rabies it would be isolated till it dies a natural death. Death normally occurs within 10 days of contracting rabies. Premature killings of suspected rabid dogs prevent the true incidence of rabies from being known and appropriate action being taken.

(5) If the dog is found not to have rabies but some other disease it would be handed over to the AWOs who will take the necessary action to cure and rehabilitate the dog.

11. Disposal of carcasses

The carcasses of such euthanized dogs shall be disposed of in an incinerator to be provided by the local authority.

12. Guidelines for breeders

(*i*) A breeder must be registered with Animal Welfare Board of India.

(*ii*) Breeder must maintain full record of the number of pups born/ died from individual bitches.

(*iii*) Breeder must maintain record of the person buying the pups.

13. Application of rules where local bye-laws etc., exist

If there is in force in any area to which these rules extend, any Act, rule, regulation or bye-low made under any law or the time being in force by the State or the Local Authority in respect of any of the matters for which provision is made in these rules, such rule, regulation or bye-law shall to the extent to which

(*a*) it contains provisions less irksome to the animal than those contained in these rules, shall prevail;

(*b*) it contains provisions more irksome to the animal than those contained in these rules, be of no effect.

PREVENTION OF CRUELTY TO ANIMALS (ESTABLISHMENT AND REGULATION OF SOCIETIES FOR PREVENTION OF CRUELTY TO ANIMALS) RULES, 2001

S.O.271 (E) [26th March, 2001]

In exercise of the powers conferred by sub-sections (1) and (2) of section 38 of the Prevention of Cruelty to Animals Act, 1960 (59 of 1960) the Central Government hereby makes the following rules, namely:

1. Short title and commencement

These rules may be called the Prevention of Cruelty to Animals (Establishment and Regulation of Societies for Prevention of Cruelty to Animals) Rules, 2001.

2. Definitions

- "Animal Welfare Organization" means a Welfare Organization for animals which is registered under the Societies Registration Act of 1860 (21 of 1860);
- "Board" means the Animal Welfare Board of India established under the Act;
- "local authority, means a municipal board of municipal committee, a State Animal Welfare Board, district board for the control and administration of any matter relating to animals within a specified local areas;
- "Society" means Society for Prevention of Cruelty to Animals (referred as SPCA) established in any district under the Societies Registration Act, 1860 (21 of 1860).

3. Society for Prevention of Cruelty to animals in a district

(1) Every State Government shall establish a society for every district in the State to be the SPCA in that district.

(2) The Managing Committee of the Society shall be appointed by the State Government or the local authority. It includes a Chairperson; and

(*i*) at least two members shall be representatives of the Animal Welfare Organizations preferably from within the district;

(*ii*) at least two members shall be the persons elected by the general body of members of the Society.

(3) The duties and powers of the Society shall be to aid the Government, the Board and local authority in enforcing the provisions of the Act.

(4) The Society, or any person authorized by it in this behalf, if it or he has reasonable grounds for believing that any person has committed an offence under the Act, he may stop any vehicle or enter into any premises in order to conduct a search and may seize an animal and deal with it in accordance with law.

(5) In addition to the powers conferred by these rules, the State Government may confer such other powers upon any Society for exercising the powers and discharging the functions assigned to it under these rules.

4. Setting up of infirmaries and animal shelters

(1) Every State Government shall provide adequate land and other facilities to the Society for the purpose of constructing infirmaries and animal shelters.

(2) Every infirmary and animal shelter shall have:

(*i*) a full time veterinary doctor and other staff;

(*ii*) an administrator who shall be appointed by the Society.

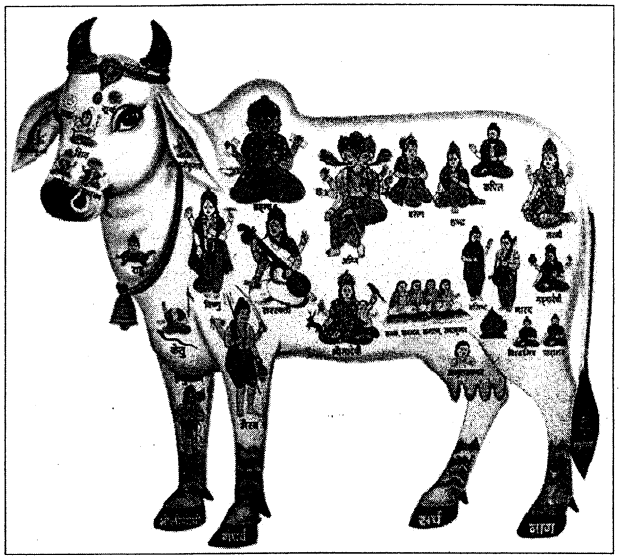
(3) Every Society shall, supervise the overall functioning of the infirmaries and animal shelters under its control.

(4) All cattle pounds and pinjrapoles owned and run by a local authority shall be managed by such authority jointly with the Society or Animal Welfare Organizations.

5. Regulation of SPCAs

Every Society shall submit its annual report to the Board incorporating therein the activities undertaken by it for the welfare of animals along with annual accounts. Subsequently the Board may give any directions to it for improvement of its functioning.

COW SLAUGHTER ACT



Cattle slaughter in India is a taboo subject because of the cow's traditional status as a sacred animal in Hinduism. On October 26, 2005, the Supreme Court of India, upheld the constitutional validity of anti-cow slaughter laws enacted by different state governments in India. The laws governing cattle slaughter vary greatly from State to State. Out of 29 states in India, 24 states have various regulations prohibiting either the slaughter or sale of cows. Some States allow the slaughter of cattle with restrictions like a "fit-for-slaughter" certificate which may be issued depending on factors like age and gender of cattle, continued economic viability etc. Others completely ban cattle slaughter, while there is no restriction in a few states. The main features of legislations enacted by the States / UTs on cow slaughter are as follows.

S. No.	State / Title of Legislation	Gist of Provisions
1.	**ANDHRA PRADESH** THE ANDHRA PRADESH PROHIBITION OF COW SLAUGHTER AND ANIMAL PRESERVATION ACT, 1977	**Definitions:** • "Cow"- includes heifer, or a calf, whether male or female of a cow. • "Calf"- age not defined. **Ban on slaughter:** • Slaughter of "Cow" prohibited • Slaughter of bull, bullock allowed on 'fit-for-slaughter' certificate, to be given only if the animal is not economical or is not likely to become economical for the purpose of breeding or draught / agricultural operations.

		Penal provisions: • Imprisonment up to maximum of 6 months or fine of up to Rs 1,000 or both. **Offences:** • cognizable
2.	**ASSAM** THE ASSAM CATTLE PRESERVATION ACT, 1950	**Definitions:** " Cattle" means `Bulls, bullocks, cows, calves, male and female buffaloes and buffalo calves. "Calf" not defined. **Ban on slaughter:** Slaughter of all cattle allowed on 'fit-for-slaughter' certificate, to be given if cattle is over 14 years of age or has become permanently incapacitated for work or breeding due to injury, deformity or any incurable disease. **Penal provisions:** • Imprisonment up to maximum of 6 months or fine of up to Rs. 1,000 or both. **Offence:** • Cognizable only
3	**BIHAR** THE BIHAR PRESERVATION AND IMPROVEMENT OF ANIMALS ACT, 1955	**Definitions:** • "Bull" – uncastrated male of above 3 years. • "Bullock" - castrated male of above 3 years. • "Calf" - male or female below 3 years. • "Cow" - female above 3 years. **Ban on Slaughter:** • Slaughter of cow and calf totally prohibited • Slaughter of bull or bullock of over 15 years of age or has become permanently incapacitated for work or breeding due to injury, deformity or any incurable disease. **Penal provisions:** • Imprisonment up to maximum of 6 months or fine of up to Rs. 1,000 or both. **Offence:** Cognizable only • **Ban on Export:** Export of cows, calves, bulls and bullocks from Bihar is not allowed for any purpose.
4.	**DELHI** THE DELHI AGRICULTURAL CATTLE PRESERVATION ACT, 1994	**Definitions:** "Agricultural Cattle"- cows of all ages, calves of cows of all ages, bulls and bullocks. **Ban on Slaughter:** • Slaughter of all agricultural cattle is totally prohibited. • Ban on Transport or Export for slaughter is also prohibited. • Export for other purposes permitted on declaration that cattle will not be slaughtered.

		• Export to a State where slaughter is not banned by law will not be permitted. **Penal provisions :** • Imprisonment upto five years and fine upto Rs 10,000, provided that normally imprisonment should not be less than 6 months and fine not less than Rs 1,000. • Burden of proof is on the accused. **Offences:** • Both cognizable and non-bailable.
5 & 6.	**GOA** Goa has two laws regarding cattle slaughter concerning cows and other cattle respectively, and prescribes varying offences and penalties for contravening their provisions THE GOA , DAMAN & DIU PREVENTION OF COW SLAUGHTER ACT, 1978 THE GOA ANIMAL PRESERVATION ACT, 1995	**Definitions :** • "Cow"-includes cow, heifer or calf. • Age of calf not defined. **Ban on Slaughter :** • Total ban on slaughter of cow except when cow is suffering pain or contagious disease or for medical research. • Prohibition of sale of beef or beef products in any form. **Penalty Provisions:** • Imprisonment up to 2 years or fine up to Rs.1,000 or both. **Offences :** • Both cognizable and non-bailable. **Definitions:** Applicable to bulls, bullocks, male calves and buffaloes of all ages. **Ban on Slaughter:** All the animals can be slaughtered on 'fit-for-slaughter' certificate which is not given if the animal is likely to become economical for draught, breeding or milk (for she/buffaloes) purposes Prohibition of sale of beef obtained in contravention of above provisions, except beef imported from other States. **Penal provisions:** • Imprisonment up to maximum of 6 months or fine of up to Rs. 1,000 or both. **Offences:** • Cognizable only.
7.	**GUJARAT** THE BOMBAY ANIMAL PRESERVATION ACT, 1954 (APPLIED TO GUJARAT)	**Definitions:** Applicable to bulls, bullocks, cows, calves and male/female buffalo calves. **Ban on Slaughter:** • Slaughter of cow, calf, bull or bullock totally prohibited.

		• Slaughter of buffaloes permitted on certain conditions. **Penal provisions:** • Imprisonment up to maximum of 6 months or fine of up to Rs. 1,000 or both. **Offences:** • Cognizable only.
8.	**HARYANA** GAUVANSH SANRAKSHAN AND GAUSAMVARDHAN BILL, 2015	The Haryana Assembly on 16th March, 2015 passed a bill under which cow slaughter and the sale of beef have been banned in the state. As per the bill • A person found guilty of cow slaughter can get rigorous imprisonment not less than three years, which may extend upto 10 years along with a fine ranging from Rs. 30,000 to Rs. 1 lakh. • The sale of beef will be completely banned in the state; the offence will be punishable with rigorous imprisonment for not less than three years and upto five years with fine of upto Rs. 50,000 • Any person who exports cows for slaughter either directly or through somebody can get rigorous imprisonment not less than three years which may extend upto seven years, along with a fine from Rs. 30,000 to Rs. 70,000. • Any vehicle used in the commission of such offence would be liable to be confiscated • Killing of a cow in an accident or self-defense would not be considered as slaughter under the Act • Any person who has to export cows will have to seek permit for the same, stating the reasons for export. Besides, no permit would be issued for export of cows to states where cow slaughter is not banned by law.
9.	**HIMACHAL PRADESH** THE PUNJAB PROHIBITION OF COW SLAUGHTER ACT, 1955 (APPLICABLE TO THE STATE OF HIMACHAL PRADESH)	All provisions same as for Punjab.
10.	**JAMMU & KASHMIR** THE RANBIR PENAL CODE, 1932	Voluntary slaughter of any bovine animal such as ox, bull, cow or calf shall be punished with imprisonment of either description which may extend to 10 years and shall also be liable to fine. Fine may extend to five times the price of the animals slaughtered as determined by the Cour Possession of flesh of killed or slaughtered animals is also an offence punishable with imprisonment up to 1 year and fine up to Rs.500.

11.	**KARNATAKA** THE KARNATAKA PREVENTION OF COW SLAUGHTER AND CATTLE PRESERVATION ACT, 1964	**Definitions:** "Animal" - means bull, bullock, and all buffaloes. "Cow" – includes calf of a cow, male or female. **Ban on Slaughter:** • Slaughter of cow, calf of a cow or calf of a she-buffalo totally prohibited. • Slaughter of bulls, bullocks and adult buffaloes permitted on 'fit-for-slaughter' certificate provided cattle is over 12 years of age or is permanently incapacitated for breeding, draught or milk due to injury, deformity or any other cause. • Transport for slaughter to a place outside a state not permitted. • Sale purchase or disposal of cow or calf for slaughter not permitted. **Penal provisions:** • Imprisonment up to maximum of 6 months or fine of up to Rs.1,000 or both. **Offences:** • Cognizable only.
12.	**KERALA** (No state legislation - only Panchayat Act / Rules) Kerala Panchayat (Slaughter Houses and Meat Stalls) Rules, 1964	Panchayat laws provide for prohibition of slaughter of useful animals in Panchayat (non-municipal) areas in the State. Under the Kerala Panchayat (Slaughter Houses and Meat Stalls) Rules, 1964, no certificate shall be granted under Rule 8 in respect of a bull, bullock, cow calf, he-buffalo or she-buffalo or buffalo calf unless the animal is over 10 years of age and is unfit for work or breeding or the animal has become permanently incapacitated for work or breeding due to injury or deformity. In 1976, the Kerala Government issued an executive order banning the slaughter of useful animals in the Municipal areas as well.
13.	**MADHYA PRADESH** THE MADHYA PRADESH AGRICULTURAL CATTLE PRESERVATION ACT, 1959.	**Definitions:** • Agricultural cattle means cows of all ages, calves of cows, bull, bullocks and all buffaloes. **Ban on Slaughter:** • Slaughter of cow, calf of cow, bull, bullock and buffalo calf prohibited. • However, bulls and bullocks are being slaughtered in the light of Supreme Court judgment, provided the cattle is over 15 years or has become unfit for work or breeding. • Transport or export for slaughter not permitted. • Export for any purpose to another State where cow slaughter is not banned by law is not permitted. • Sale, purchase, disposal of cow and its progeny and possession of flesh of cattle is prohibited.

		Penal provisions: • Imprisonment up to 3 years and fine of Rs. 5,000. • Normally imprisonment shall not be less than 6 months and fine not less than Rs.1,000. • Burden of proof is on the accused. **Offences :** • Cognizable only.
14.	**MAHARASHTRA** THE MAHARASHTRA ANIMAL PRESERVATION ACT, 1976	**Definitions:** 'Cow' includes a heifer or male or female calf of a cow. **Ban on Slaughter:** • Slaughter of cow totally prohibited. • Slaughter of bulls, bullocks and buffaloes allowed on fit-for-slaughter certificate, if it is not likely to become economical for draught, breeding or milk (in the case of she-buffaloes) purposes. **Penal provisions:** Imprisonment up to maximum of 6 months and fine of up to Rs.1,000. Burden of proof is on the accused. **Offences:** • Cognizable only.
15.	**MANIPUR** PROCLAMATION BY MAHARAJA - DARBAR RESOLUTION OF 1936	"According to Hindu religion the killing of cow is a sinful act. It is also against Manipur Custom. I cannot allowed such things to be committed in my State. So if anyone is seen killing a cow in the State he should be prosecuted."
16.	**MEGHALAYA**	NO LEGISLATION
17.	**NAGALAND**	NO LEGISLATION
18.	**ORISSA** THE ORISSA PREVENTION OF COW SLAUGHTER ACT, 1960	**Definitions:** 'Cow' includes heifer or calf. **Ban on Slaughter:** • Slaughter of cow totally prohibited. • Slaughter of bull, bullock on fit-for-slaughter certificate if cattle is over 14 years of age or has become permanently unfit for breeding, draught. **Penal provisions:** • Imprisonment up to maximum of 2 years or fine up to Rs. 1,000 or both. **Offences:** • Cognizable only.
19.	**PONDICHERRY** THE PONDICHERRY PREVENTION OF COW SLAUGHTER ACT, 1968	**Definitions:** • 'Cow' includes heifer or calf. **Ban on Slaughter:** • Slaughter of cow totally prohibited. • Slaughter of bull or bullock permitted on 'fit-for-slaughter' certificate provided it is over age of 15 years or has become permanently unfit for breeding or draught.

		• Prohibition on sale, transport of beef. • Penal provisions: Imprisonment up to maximum of 2 years or fine up to Rs. 1,000 or both. **Offences:** • Cognizable and non-bailable.
20.	**PUNJAB** THE PUNJAB PROHIBITION OF COW SLAUGHTER ACT, 1955	**Definitions:** • "Cow" includes bull, bullock, ox, heifer or calf. **Ban on Slaughter:** • Slaughter of cow (and its progeny) totally prohibited. • Export for slaughter not permitted. • Sale of beef prohibited. **Penal provisions :** • Imprisonment up to maximum of 2 years or fine up to Rs 1,000 or both. • Burden of proof is on the accused. **Offences:** • Cognizable and non-bailable.
21.	**RAJASTHAN** THE RAJASTHAN BOVINE ANIMAL (PROHIBITION OF SLAUGHTER AND REGULATION OF TEMPORARY MIGRATION OR EXPORT) ACT, 1995	**Definitions:** • 'Bovine' - means and includes cow, calf, heifer, bull or bullocks. • 'Bull' - means un-castrated male above 3 years • 'Bullock' - means castrated male above 3 years • 'Calf' - means castrated or un-castrated male of 3 years and below. • 'Cow' - means female above 3 years; 'Heifer' is female of 3 years or below. **Ban on Slaughter:** • Slaughter of all bovine animals prohibited. • Possession sale, transport of beef and beef products is prohibited. Export of bovine animal for slaughter is prohibited. • Custody of seized animals to be given to any recognized voluntary animal welfare agency failing which to any Goshala, Gosadan or a suitable person who volunteers to maintain the animal. **Penal provisions:** Rigorous imprisonment of not less than 1 year and up to maximum of 2 years and fine up to Rs.10,000. Burden of proof is on the accused.
22.	**TAMIL NADU** THE TAMIL NADU ANIMAL PRESERVATION ACT, 1958	Government orders banning cow slaughter dt. 30th Aug, 1976. **Definitions:** 'Animal' means bulls, bullocks, cows, calves; also, buffaloes of all ages.

		Ban on Slaughter: • All Animals can be slaughtered on 'fit-for-slaughter' certificate • Certificate given if animal is over 10 years of age and is unfit for work and breeding or has become permanently incapacitated for work and breeding due to injury deformity or any incurable disease. **Penal Provisions:** • Imprisonment of up to 3 years or fine up to Rs. 1,000 or both. • Slaughter of cows and heifers (cow) is banned in all slaughterhouses in Tamil Nadu.
23.	**UTTAR PRADESH** THE UTTAR PRADESH PREVENTION OF COW SLAUGHTER ACT, 1955	**Definitions:** 'Beef' means flesh of cow and of such bull or bullock whose slaughter is prohibited under the Act, but does not include such flesh contained in sealed containers and imported into U.P. 'Cow' includes a heifer and calf. **Ban on Slaughter:** • Slaughter of cow totally prohibited. • Slaughter of bull or bullock permitted on 'fit-for-slaughter' certificate provided it is over the age of 15 years or has become permanently unfit for breeding, draught and any agricultural operations. • Transport of cow outside the State not permitted for slaughter. • Prohibition on sale of beef. **Penalty provisions:** • Rigorous imprisonment up to 2 years or fine up to Rs. 1,000 or both. **Offences :** • Cognizable and non-bailable.
24.	**WEST BENGAL** THE WEST BENGAL ANIMAL SLAUGHTER ACT, 1950	**Definitions :** • Scheduled animals – bulls, bullocks, cows calves and buffaloes of all types / ages. **Ban on Slaughter :** • Slaughter of all animals permitted on 'fit-for-slaughter' certificate • Certificate given if animal is over 14 years of age and unfit for work or breeding or has become permanently incapacitated for work and breeding due to age, injury, deformity, or any incurable disease. **Penal provisions:** • Imprisonment up to maximum of 6 months or fine up to Rs. 1,000 or both. **Offences**: • Cognizable only.

THE CATTLE TRESPASS ACT, 1871

[13 Jan, 1871] (As amended upto 1921)



An Act to consolidate and amend the law relating to trespasses by cattle.

CHAPTER I
PRELIMINARY

1. Title and extent

This Act may be called the Cattle Trespass Act, 1871 and it extends to whole of India except the territories comprised in part B states.

2. (Repealed)

3. Interpretation clause

In this Act-

(*a*) "officer of police" includes also village watchman;

(*b*) "cattle" includes also elephants, camel, buffaloes, horses, mares, geldings, ponies, colts, fillies, mules, asses, pigs, ewes, sheep, lambs, goats and kids;

(*c*) "local authority" means anybody of persons for the time being invested by law with the control and administration of any matters within the specified local area.

17. Disposal of fines, expenses and surplus proceeds of sale

The fines will be sent to the District Magistrate after deducting charges for the feed and water provided to the cattle.

18. (Rep. By the Government of India (A.L.O), 1937)

19. Officers and pound-keepers not to purchase cattle at sale under Act:

No officer or pound keeper shall purchase any cattle at a sale under this Act.

CHAPTER V
COMPLAINTS OF ILLEGAL SEIZURE OR DETENTION

20. Power to make complaints

Any person whose cattle have been seized under this Act, can make a complaint within ten days from the date of seizure to the District Magistrate.

21. Procedure of complaint

The complaint shall be made by the complainant in person, or by an agent personally acquainted with the circumstances. It may be either in writing or verbal. If it be verbal the substance of it shall be taken down in writing by the Magistrate.

If the Magistrate, on examining the complainant or his agent, sees reason to believe the complaint to be well founded, he shall summon the person complained against, and make an inquiry into the case.

22. Compensation for illegal seizure or detention

If the seizure or detention be adjudged illegal, the Magistrate shall award to the complainant, for the loss caused by the seizure or detention, reasonable compensation, not exceeding one hundred rupees, to be paid by the person who made the seizure or detained the cattle, together with all fines paid and expenses incurred by the complainant in procuring the release of the cattle.

Release of cattle- and, if cattle have not been released, the Magistrate shall besides awarding such compensation, order their release, and direct that the fines and the expenses leviable under this Act shall be paid by the person who made the seizures or detained the cattle.

23. Recovery of compensation

The compensation, fines and expenses mentioned in section 22 may be recovered as if they were fines imposed by the Magistrate.

CHAPTER VI
PENALTIES

24. Penalty for forcibly opposing the seizure of cattle

The person who forcibly opposes the seizure of cattle liable to be seized, is liable to be punished with imprisonment for a period not exceeding six months or fine not exceeding five hundred rupees or with both.

25. Recovery of penalty for mischief committed by causing cattle to trespass

Any fine imposed for allowing the cattle to trespass may be recovered by the sale of cattle by which the trespass was committed.

26. Penalty for damage caused to land or crops or public roads by pigs

Any pig owner responsible for causing damage to any land may be punished on conviction with a fine of Rs ten.

27. Penalty on pound keepers failing to perform duties

Any pound keeper who fails to perform his duties is liable to a fine not exceeding fifty rupees.

28. Applications of fines recovered under sections 25, 26 or 27

All fines recovered under section 25, 26 or 27 may be appropriated in whole or in part as compensation for loss or damage proved to the satisfaction of the magistrate.

CHAPTER VII
SUITS FOR THE COMPENSATION

29. Saving of right to sue for compensation

Nothing herein contained prohibits any person whose crops or other produce of land have been damaged by trespass of cattle from suing for compensation in any competent Court.

30. Set off

Any compensation paid to such person under this Act by order of convicting Magistrate shall be set off and deducted from any sum claimed by or awarded to him as compensation in such suit.

CHAPTER VIII
SUPPLEMENTAL

31. Power of the state Government to transfer certain functions to local authority

The State Government may transfer to any local authority all or any of the functions under this Act.

ACT/ RULES RELATED TO WILD LIFE

THE WILD LIFE (PROTECTION) ACT, 1972

53 of 1972[9 Sept, 1972](As amended upto 2006)



(Arrangement of chapters)

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HIGHLIGHTS OF THE ACT

THE WILDLIFE (PROTECTION) ACT 1972

(with Amendment Acts of 2003, 2006 and bill 2013)



This is an Act which provides for the protection of wild animals, birds and plants and matters connected with them, with a view to ensure the ecological and environmental security of India.This Act covers wildlife all over India except in the state of Jammu & Kashmir. The term 'wildlife' includes any animal, aquatic or land vegetation which form part of any habitat.

VARIOUS AUTHORITIES CONSTITUTED UNDER THE ACT

At the Central Government level

- A Director of Wild Life Preservation and other officers (Section 3).
- National Board for Wild Life with the Prime Minister as the Chairperson, with the following important functions (Section 5A and 5C).
  - Framing policies and advising Central and State Government on promotion of wildlife conservation and controlling poaching and illegal trade of wildlife and its products.
  - Making recommendations for setting up and managing national parks, sanctuaries and other protected areas.
  - Suggesting measures for improvement of wildlife conservation.
  - Preparing and publishing a statement report, at least once in 2 years on wildlife.
- A National Tiger Conservation Authority (See Part 9 below).

- A Tiger and Other Endangered Species Crime Control Bureau (Section 38Y & Z), with the following functions:
  - To collect intelligence related to organized wildlife crime activities and to disseminate the same to other enforcement agencies for action.
  - Coordinate actions of various officers, State Governments and other relevant authorities.
  - Implement obligations under various international agreements which are in force in India.

At the State Government level

- A Chief Wildlife Warden (CWLW), Wildlife Wardens, Honorary Wild Life Wardens and other officers (Section 4).
- A State Board for Wildlife, with the Chief Minister as the Chairperson, with the following key functions (Section 6 and 8):
  - Selection and management of protected areas.
  - Formulation of policy in granting license and permits.
  - Advice on measures to be taken for harmonizing the needs of the tribal and other forest-dwellers, with the protection and conservation of wildlife.
- Tiger Steering Committee and Tiger Conservation Foundation (See Part 9 below)

THE PROVISIONS REGARDING HUNTING OF WILD ANIMALS UNDER THIS ACT

- Various species of wild animals are listed in 5 Schedules annexed to the Act.
- No hunting is permitted for any animal in Schedules I to IV, those in Schedule I and Part 2 of Schedule II (considered especially threatened) are given stronger provisions relating to trade and penalties.
- Schedule V is that of 'vermin', and hunting of animals listed therein is allowed under specified conditions.
- Hunting of an animal in Schedules I, II, III & IV is allowed only when the CWLW is satisfied that such an animal has become dangerous to human life, or is disabled or diseased to an extent as to be beyond recovery (Section 9 and 11).
- Hunting includes {Section 2 (16)}:
- Killing or poisoning of any wild animal or captive animal and every attempt to do so.
- Capturing, coursing, snaring, trapping, driving and baiting any wild animal or captive animal and every attempt to do so.
- Injuring or destroying or taking any part of the body of any such animal or in the case of wild birds or reptiles, damaging the eggs of such birds or reptiles, or disturbing the eggs or nests of such birds or reptiles. The Act does not affect hunting rights of Scheduled Tribes of Nicobar Islands (Section 65).

THE PROVISIONS FOR PROTECTION OF WILD PLANTS UNDER THIS ACT

- The Act provides for protection of 'specified' plants (listed in Schedule VI).
- No person is allowed to willfully pick, uproot, damage, acquire or collect any specified plant from forest land and area specified by the Central Government (Section 17A).
- A person may however do so on being granted a permit by the CWLW for educational and scientific purposes (Section 17B).
- No-one is allowed to possess, sell, transfer or transport any specified plant, dead or alive.
- A member of a schedule tribe may however pick, collect or possess any specified plant in the district he resides, for his bona fide personal use (Section 17A).
- No person will be allowed to cultivate a specified plant, or do business in it, except under a license (Section 17C & D).

THE PROVISIONS REGARDING PROTECTED AREAS, AND RIGHTS WITHIN



- Five kinds of protected areas can be notified in the Act.
- Of these, four are dealt with below, and the fifth is a tiger reserve dealt with in Part 9.
- A comparison of the various provisions relevant to each of these four Protected Areas is given at the End.

While the provisions below are regarding what a State Government can do, sanctuaries and national parks can also be notified by the Central Government (a power that has so far not been used).

Sanctuaries

- The State Government may by notification declare its intention to constitute any area as a sanctuary for protecting wildlife and the environment (Section 18).
- The State Government will then appoint an Officer to act as the Collector within 30 days of issue of the notification, to determine the nature and extent of rights of persons in or over the land within the sanctuary (Section 18B).

Finally the sanctuary will be notified and all provisions of the Act including restrictions and prohibitions of various activities, will then apply.

No person can enter or reside in a sanctuary, other than

(*i*) a public servant on duty,

(*ii*) a person permitted by the CWLW,

(*iii*) a person who has right over immovable property within the sanctuary and the dependents of such persons, or

(*iv*) a person passing through the sanctuary along a public highway (Section)

National parks

- The State Government may declare an area, whether inside a sanctuary or not, as a national park for the purpose of protecting and developing wildlife and its environment (Section 35).
- The State Government cannot alter the boundaries of a national park except on the recommendation of the National Board for Wildlife {Section 35(5)}.
- No grazing is allowed inside a national park {Section 35(7)}.
- All provisions applicable to a sanctuary are also applicable to a national park {Section 35(8)}.

Conservation reserves

- The State Government after consultations with local communities can declare any area owned by the Government, particularly areas adjacent to national parks or sanctuaries, as conservation reserves (Section 36A).
- The State Government then has to constitute a Conservation Reserve Management Committee to advise the CWLW to manage and conserve the conservation reserve.

Community reserves

- The State Government can, where the community or an individual has volunteered to conserve wildlife, declare any private or community land as community reserve.
- A Community Reserve Management Committee shall be constituted by State Government for conserving and managing the reserve. It will have the power to prepare and implement management plans.
- There shall be no change in the land use pattern within a community reserve except in accordance with a resolution passed by the Management Committee with the approval of the State Government (Section 36C).

RECOGNITION OF ZOOS

- Zoo shall be operated without being recognized by the authority.
- The person intends to operate a Zoo shall apply to the Authority in such form and pay such fee prescribed.
- No recognition to a Zoo shall be granted unless the Authority having due regard to interest of protection and conservation of wild life and such standards, norms and other matters as may be prescribed, is satisfied that recognition may be granted.
- Such Zoo shall acquire or transfer any wild animal specified in this Act with the previous permission of the Authority.
- No person shall tease, molest, injure or feed any animal or cause disturbance to the animals by noise, or otherwise or litter the grounds in a zoo.

REGULATION OF TOURISM UNDER THIS ACT

- The CWLW can permit entry and residence in a sanctuary for tourism (Section 28).
- No construction of commercial tourist lodges, hotels, zoos and safari parks will be undertaken inside a sanctuary or national park except with the approval of National Board for Wildlife (Section 33).
- The CWLW has the powers to regulate tourism in ways that are appropriate for protection of wildlife.

REGULATION OF TRADE OR COMMERCE IN WILD ANIMALS AND ANIMAL ARTICLES UNDER THIS ACT

- Meat includes blood, bones, sinew, eggs, shell or carapace, fat and flesh with or without skin, whether raw or cooked, of any wild or captive animal, other than a vermin.
- Trophy means the whole or any part of any captive or wild animal, other than vermin, which has been kept or preserved by any means, whether artificial or natural and includes,
- (*a*) Rugs, skins and specimens of such animals mounted in whole or in part through taxidermy, and
- (*b*) Antler, bone carapace, shell, horn, rhino horn, hair, feather, nail, tooth, tusk musk, eggs, nests and honeycomb.
- All the wild animals, animal articles and trophies shall be the property to the State Government.
- No person is entitled to hunt any wild animals.
- No person, without the previous permission in the writing of the Chief Wild Life Warden or the Authorized Officer, acquire or keep in his possession, custody, or

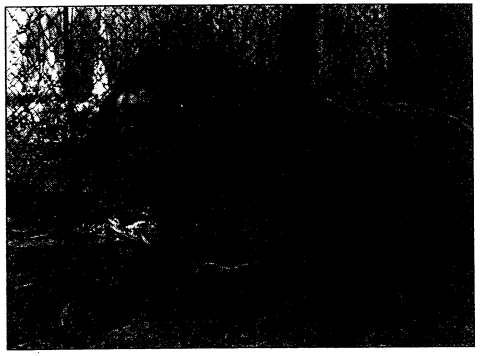
control, or transfer to any person whether by a way of gift, sale or otherwise or destroy or damage.

- At the commencement of this Act, If any person possesses any animal specified in this Act or any uncured trophy derived from such animal or salted or dried skins of such animal or the musk or a musk deer or dorm of a rhinoceros shall declare and obtain the permission from the Chief Wild Life Warden or the authorized person.
- After the commencement of this Act no person shall acquire, receive, keep in his control, custody or possession sell, offer for sale or otherwise transfer or transport any animal specified in the Act or any uncured trophy or meat derived from such animal or the skins or musk or horn without the previous permission in writing of the Chief Wild Life Warden or the Authorized person.
- A license is needed for any business in animal articles (other than for peacock tail feathers) (Section 44).
- No such business is allowed for animals in Schedule I or Part 2 of Schedule II (Section 48).
- Purchase of animal: The person who obtains wild animals with the previous permission of the Authorities shall not sell it. He shall keep it in a habitat and healthy conditions.
- Power of entry, search, arrest, and detention: Any authorized person under this Act is entitled and has power of entry, search, arrest and detention of any premises. He can stop vehicle or vessel. He can enter any premises. He can seize any captive animal - wild animal, animal article, meat, trophy or uncured trophy or any specified plant or part of derivative thereof forms the possessor.

PROVISIONS FOR PREVENTION AND DETENTION FOR OFFENCES UNDER THE ACT

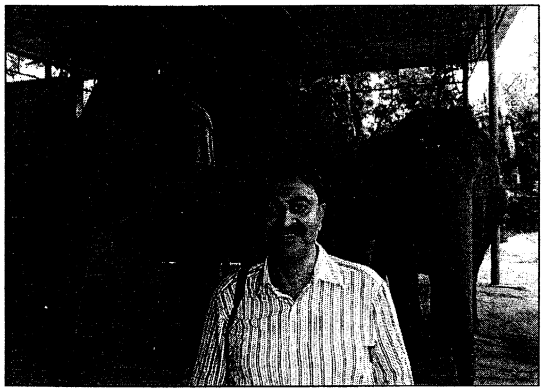
- Any authorized official has the power to inspect, require persons to show plants or animals, stop vehicles/vessels and issue search warrants if he has reasonable ground to believe that the persons concerned have committed an offence against this Act (Section 50).
- Fisherpersons who inadvertently enter a protected area are exempt from this.
- Penalties for violating the Act range from imprisonment up to a period of seven years, and/or fines upto Rs. 25,000 (Section 51).
- When an offence is committed by a company, every person who at the time of the offence was in charge and responsible for the conduct of the company, as well as the company, will be liable for the offence (Section 58).
- The State Government may give the CWLW the power to reward informants with upto Rs. 10,000 (Section 60B).

SPECIAL PROVISIONS REGARDING TIGER RESERVES



- A National Tiger Conservation Authority (NTCA) has come about due to The Wildlife (Protection) Amendment Act, 2006. The Central Government shall constitute this body with the Minister for Environment and Forests as the Chairperson (Section38L).The powers and functions of the NTCA are to (Section 38O):
  - Approve Tiger Conservation Plans prepared by the State Governments.
  - Disallow ecologically unstable land use within tiger reserves.
  - Provide for measures to address conflicts of humans and wild animals, and to emphasize on coexistence in forest areas.
  - Provide information on protection measures including future conservation plans in tiger reserves.
  - Coordinate research and monitoring on tiger and its habitat.
  - Ensure that tiger reserves and areas linking one reserve with another are not diverted for ecologically unsustainable use except in public interest and with the approval of the National Board for Wildlife.
- The Tiger Conservation Authority can issue directions for the protection of tigers and reserves, but such directions should not interfere with the rights of local people, particularly Scheduled Tribes {Section 38O (2)}.
- Each State Government will constitute a Steering Committee with the Chief Minister as the Chairperson for ensuring conservation of tigers (Section 38U). It will also establish a Tiger Conservation Foundation for tiger reserves to facilitate the conservation of tigers (Section38X).
- The State Government on the recommendation of the Tiger Conservation Authority may notify an area as a tiger reserve, for which it has to prepare a Tiger Conservation Plan. In this Plan it has to ensure the agricultural, developmental, livelihood and other interests of the people living in tiger bearing forests or reserves (Section 38V).
- In a tiger reserve the Scheduled Tribes and other forest dwellers can be relocated or their rights can be curtailed only on mutually agreed terms and only when a set of stringent conditions have been satisfied.

WILD LIFE (PROTECTION) AMENDMENT BILL, 2013



The Government has introduced the Wild Life (Protection) Amendment Bill, 2013 in the Rajya Sabha for stricter enforcement of laws to protect wildlife. This Act may be called the Wild Life (Protection) Amendment Act, 2013. It shall come into force on such date as the Central Government may, by notification in the Official Gazette.

- The bill seeks to further amend the Wild Life (Protection) Act, 1972.
- The Bill seeks to deal with the serious wildlife crime, such as the offence related to any animal specified in Schedule I or Part II of Schedule II or the meat of such animal or animal article, trophy, or uncured trophy derived from such animal. If a crime of this sort is committed, the bill seeks to punish the culprits with imprisonment for a term which shall not be less than five years, but may extend to seven years and also with fine which shall not be less than 1 lakh rupees but may extend to 25 lakh rupees.
- In the case of a second or subsequent offence of the same nature, the terms of imprisonment shall not be less than 7 years and also with fine which shall not be less than 5 lakh rupees but may extend to 50 lakh rupees.
- The bill also has the provisions for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
- The Tiger and Other Endangered Species Crime Control Bureau has been changed to the Wild life Crime Control Bureau.
- It provides for prohibition on use of animal traps except under certain circumstances. It provides for protection of hunting rights of the Scheduled Tribes in Andaman and Nicobar Islands.



REFERENCES

http://tusharifs.blogspot.in/2009/08/briefing-note-wildlife-protection.html

THE WILD LIFE (PROTECTION) ACT, 1972

SCHEDULE I

Part 1—Mammals

1. Andaman wild pig (Sus andamanensis)
1A. Bharal (Ovis nahura)
1B. Binturong (Arctictis binturong)
2. Blackbuck (Antilope cervicapra)
3. Brown-antlered deer or thamin (Cervus eldi)
3A. Himalayan brown bear (Ursus arctos)
3B. Capped langur (Presbytis pileatus)
4. Caracal (Felis caracal)
4A. Catacean specils
5. Cheetah (Acinonyx jubatus)
5A. Chinese pangolin(Manis pentadactyla)
5B. Chinkara or Indian gazelle (Gazella gazella bennetti)
6. Clouded leopard (Neofelis nebulosa)
6A. Crab-eating macaque (Macaca irus umbrosa)
6B. Desert cat (Felis Libyca)
6C. Desert fox (Vulpes bucopus)
7. Dugong (Dugong dugong)
7A. Ermine (Mustela erminea
8. Fishing cat (Felis viverrina)
8A. Four-horned antelope (Tetraceros quadricorins)
8D. Ermine (Mustela erminea
8E. Gaur or Indian bison (Bos gaurus)
9. Golden cat (Felis termmincki)
10. Golden lungur (Presbytis geei)
10A. Giant squirrel (Ratufa macroura)
10B. Himalayan ibex (Capra ibex)
10C. Himalayan tahr (Hermitragus jemlahicus)
11. Hispid hare (caprolagus hispidus)
11A. Hog badger (Arctonyx collaris)
12. Hoolock gibbon (Hylobates hoolock)
12B. Indian elephant (Elephas maximus)
13. India Lion (Panthera leo persica)
14. Indian wolf ass (Equus hemionous Khur)
15. Indian wolf (Canis lupus pallipes)
16. Kashmir stag (cervus elaphus hanglu)
16A. Leaf monkey (Presbytis phayrei)
16B. Leopard cat (Felis bengalensis)
17. Leopard cat (Felis benegalensis)
18. Lessor or red panda (Ailurus fulgens)
19. Lion-tailed macaque (Macaca silenus)
20. Loris (Loris tardigradus)
20A. Little Indian porpoise (Neomeris
21. Lynx (Felis lynx isabellinus)
22. Malabar civet (Viverra megaspila)
22A. Malay or sun bear (Helarctos malayanus)
23. Marbled cat (Felis marmorata)
24. Markhor (Capra falconeri)
24A. Mouse deer (Tragulus meminna)
25. Musk deer (Moschus moschiferus)

25A. Nilgiri langur (Presbytis johni)

25B. Nilgiri tahr (Hemitragus hylocrius)

26. Nayan or great Tibetan sheep (Ovis ammon hodgsoni)

27. Pallas cat (Felis manul)

28. Pangolin (Manis crassicaudata)

29. Pygmy hog (Sus salvanius)

29A. Ratel (Mellivora capensis)

30. Rhinoceros (Rhinoceros unicornis)

31. Rusty-spotted cat (Felis rubiginosa)

31A. Serow (Cparicorns sumatraensis)

31B. Clawless otter (Aonyx cinerea)

31C. Sloth bear (Melursus ursinus)

32. Slow loris (Nyeticebus coveang)

32A. Small Travancore flying squirrel (Petinomys fuscopapillus)

33. Snow leopard (Panthera uncia)

33A. Snubfin dolphin (Orcaella brevirostris)

34. Spotted linasng (Panthera uncia)

35. Swamp deer (all sub-species of Cerves duvauceli)

36. Takin or Mishmi takin (Budorcas taxicolor)

36A. Tibetan antelope or chiru (Panthelopes hodgsoni)

36B. Tibetan fox (Vulpes ferilatus)

37. Tibetan gazella (Procapra picticaudata)

38. Tibetan wild ass (Equus hemincus kiang)

39. Tiger (Panthera tigris)

40. Urial or shapu (Ovis vignel)

41. Wild buffalo (Bubalus buballs)

41A. Wild yak (Bos grunniens)

41B. Tibetan wolf (Canis lupus chanco)

Part II—Amphibians and Reptiles

1. Agra Monitor Lizard [Varanus griseus (Daudin)]

1B. Audithia furtle (Pelochelys bibroni)

1C. Barred, oval, or yellow monitor lizard (Varanus flavescens)

1D. Crocodile (including estuarine or saltwater corcodile) (Crocodile proosus and Crocodilus palustris)

1E. Terrapin (Batagur baska)

1F. Eastern hill terrapin (Melanochelys tricarinata)

2. Gharial (Gavialis gangeticus)

3. Ganges soft-shelted turtle (Trionyx gangeticus)

3A. Golden gecko (Caloductyloides aureus)

4. Green sea turtle (Chelonia mydas)

5. Hawksbill turtle (Eretmochelys imbricata imbricata

7. Indian egg-eating snake (Elachistodon westermanni)

8. Indian soft-shelled turtle (Lissemys punctata)

9. Indian tent turtle (Kachuga tecta tecta)

9A. Kerla forest terrapin (Hoesemys sylratiea)

10. Leathery turtle (Dermochelys coriscea)

11. Loggerhead turtle (Caretta caretta)

12. Oliveback loggerhead turtle (Lepidochelys olivacea)

13. Peocock-marked soft-shelled turtle (Trionx hurum)

14. Pythons (Genus Phython)

14A. Sail terrapin (Kachuga kachuga)

14B. Spotted black terrapin (Geoclemys hamiltoni)

15. Water Lizard (varanus salvator)

Part IIA—Fishes

1. Whole shark (Rhincodar typus]

2. Shark & Ray (All Elasmobranchio]

3. Sea horse (All Sygnathidiang)

4. Giant Grouper (Epinephelus larceolatus)

Part III—Birds

1. Andaman teal (Anas gibberifrons albogularis)

1A. Assam bamboo partridge (Bambusicola fytchii)

1B. Bazas (Aviceda jerdoni and Aviceda leuphotes)

1C. Bengal florican (Eupodotis bengalensis)

1D. Black-necked crane (Grus nigricollis)

1E. Blood pheasants (Ithaginis cruentus tibetanus, Ithaginis cruentus kuseri)

2. Cheer pheasant (Catreus wallichi)

2A. Eastern white stork (Ciconia ciconia boyciana)

2B. Forest spotted owlet (Athene blewitti)

2C. Frogmouths (Genus batrachostomus)

3. Great Indian bustard (Choriotis nigriceps)

4. Great Indian hornbill (Buceros bicornis)

4A. Hawks (family Accipitridae)

4B. Hooded crane (Grus monacha)

4C. Hornbills (Ptiloaemus tickelli austeni, Aceros nipalensis, Rhyticeros undulatus ticehursti)

4D. Houbara bustard (Chlamydotis undulata)

4E. Hume's bar-backed pheasant (Syrmaticus humiae)

4F. Indian pied hornbill (Anthracoceros malabaricus)

5. Jerdon's courser (Cursorius bitorquatus)

6. Lammergeier (Gypaetus barbatus)

7. Large falcons (Falco peregrinus, Falco biarmicus, Falco chicquera)

7A. Large whistling teal (Anatidae)

7B. Lesser florican (Sypheotides indica)

7C. Monal pheasants (Lophophorus impejanus, Lophophorus sclateri)

8. Mountain quail (Ophrysia supercilios)

9. Narcondam hornbill (Rhyticeros (undulatus) narcondami)

10. Nicobar megapode (Megapodius freycinet)

10A. Nicobar pigeon (Caloenas nicobarica pelewensis)

10B. Osprey or Fish-eating eagle (Pandion haliaetus)

10C. Peacock pheasants (Polyplectron bicalcaratum)

11. Peafowl (Pavo cristatus)

12. Pink-headed duck (Rhodonessa saryophyllacea)

13. Scalater's monal (Lophophorus sclateri)

14. Siberian white crane (Grus leucogeranus)

14B. Tibetan snow cock (Tetraogallus tibetanus)

15. Tragopan pheasants (Tragopan melanocephalus, Tragopan blythii, Tragopan satyra, Tragopan temminckii)

16. White-bellied sea eagle (Haliaetus leucogaster)

17. White-eared pheasant (Crossoptilon crossoptilon)

17A. Platalea leucorodia)

18. White-winged wood duck (Cairina scutalata

Part IV- Crustacea and Insects

(Detailed list of Butterflies and moth under this heading)

Part IVA Coelenterates

1. Reef Building Coral (All Scleractinians)
2. Black Coral (All Antipatharians)
3. Organ Pipe Coral (Tubipora musica)
4. Fire Coral (All Millipora Species)
5. Sea Fan (All Gorgonians)]

Part IVB —Mollusca

1. Cassis cornuta
2. Charonia tritonis
3. Conus milneedwardsi
4. Cypraecassis rufa
5. Hippopus hippopus
6. Nautilus pompilius
7. Tridacna maxima
8. Tridacna squamosa
9. Tudicla spirallus.

Part IV-C—Echinodermata sea cucumber

(all holothurians)

SCHEDULE II

Part I

1A. Assamese macaque (Macaca assamensis)

2. Bengal Porcupine (Altherurus mecrourus assamensia)

3A. Bonnet macaque (Macaca radiata)

3C. Cetatean spp. (other than those listed in Sch. I and Sch. II, Part II)

4A. Common langur (Presbytis entellius)

7. Ferret Badgers (Melogate moschata, Melogale personata)

11. Himalayan Crestless Porcupine (Hystrix hodgsoni)

11A. Himalayan Newtor Salamander (Tyletotrition verrucosus)

16. Pig-tailed macaque (Macaca nemestrina)

17A. Rhesus macaque (Macaca mulatta)

19. Stump-tailed macaque (Macaca speciosa)

22. Wild dog or dhole (Cuon alpinus)

24. Chameleon (Chameleon calcaratus)

25. Spiny-tailed Lizard or Sanda (Uromastix hardwickii)

Part II

1. Long list of Beetals are given in this section)

1A. Civets (all species of Viverridae except Malabar civet)

1B. Common fox (Vulpes bengalensis)

1C. Flying squirreis (all species of the genera Bulopetes, Petaurista, Pelomys, and Eupetaurus)

1D. Giant squirreis (Ratufa indica, and Ratufa bicolor)

2. Himalayan Brown bear (Ursus arctos)

2A. Himalayan black bear (Selenarctos thibetanus)

2B. Jackal (Canis aureus)

2C. Jungle cat (Felis chaus)

2D. Marmots (Marmota bobak himalayana, Marmota caudata)

2E. Martens (Martes foina intermedia, Martes flavigula, Martes watkinsii)

4. Otters (Lutra perspicillata)

4A. Pole cats (Volmela peregusna, Mustela putorius

4B. Red fox (Vulpes vulpes, Vulpes montana, Vulpes griffithi)

5. Sloth bear (Melursus ursinus)

5A. Sperm Whale (Physeter macrocephalus)

7. Weasels (Mustela sibirica, Mustela kathian, Mustela altaica)

8. Checkered keelback snake (Xeno chrophis piscator)

9. Dhaman or rat snake (Ptyas musosus)

10. Dog-faced water snake (Cerberus rhynchopi)

11. Indian cobras (Ophiophagus hannah)

12. King cobra (Vipera ruselli)

13. Olivecerous keelback snake (Artretium schistosum)

14. Russel's viper (Vipera ruselli)

Varanus species (excluding yellow monitor lizard)

SCHEDULE III

(Sections 2, 8,9, 11 and 61)

2. Barking deer or muntjac (Munticacus munrjak)

5. Chital (Axix axis)

7. Gorals (Nemorhaedus goral, Nemorhaedus hodgsoni)

11. Hegdeer (Axis porcinus)

12. Hyaena (Hyaena hyaena)

14. Nilgai (Boselaphus tragocamelus)

16. Sambar (Cervus unicolor)

19. Wild pig (Sus scrofa)

20. Sponges (all calcareans)

SCHEDULE IV

(Sections 2, 8, 9,11 and 61)

3-A. Five-striped plam squirrel (Funambulus pennanti)]

4. Hares (Black Naped, Common Indian, Desert, Himalayan mouse hare)

4-A. Hedge hog (Hemiechinus auritus)]

4. E. Indian porcupine (Hystrix indica)]

7-A. Pole cats (Vormela peregusna, Mustela putorius)

11. Birds (other than those which appear in other Schedules)

1. Avadavat(Estrildinae)
2. Avocet (Recurvirostridae)
3. Babblers (Timaliinae)
4. Barbets (Capitonidae)
5. Barnowls (Tytonknae)
6. Bitterns (Ardeidae)
7. Brown-headed gull (Larus brunnicephalus)
8. Bulbuls (Pycnonotidae)
9. Buntings (Emberizidae)
10. Bustorda (Otididae)
11. Bustard-Qualis (Turnicidae)
12. Chloroppsis (Irenidae)
13. Comb duck (Sarkidiornis melanotes)
14. Coots (Rallidae)

15. Cormorants (Phalacroeoracidie)
16. Cranes (Gruidae)
17. Cuckoos (Cuculidae)

17-A. Curlews (Seoalopacinae)

18. Darters (Phalacrocoracidae)
19. Doves including the Emerald Dove (Columbidae)
20. Drongos (Dicruridae)
21. Ducks (Anatidae)
22. Egrets (Ardeidae)
23. Fairy Blue Birds (Irenidae)
24. Falcons (Falconidae), excepting the Shaheen and Peregrine falcons (Falco peregrinus), the shaker or chorrug, shanghar and lagger falcons (F. biarmicus), and the redheaded merlin (F. chicquera)
25. Finches including the chaffinch (Fringillidae)
26. Falmingos (Phoenicopteridae)
27. Flowerpeckers (Dicaeidae)
28. Flycatchers (Muscicapidae)
29. Geese (Anatidae)
30. Goldfinch and allies (Carduelinae)
31. Grebes (Pooicipididae)
32. Gerons (Ardeidae)
33. Ibises (Thereskiornithidae)
34. Iorars (Irenidiae)
35. Jays (Corvidae)
36. Jacanas Gacanidae)

36. AJunglefowl (Phasianidae)

37. Kingfishers (Alcedinidae)
38. Larks (Alcedinidae)
39. Lorikeets (Psittacidae)
40. Magpies including the Hunting magpie (Corvidae)
41. Mannikins (Estrildinae)
42. Megapodes(Megapodidae)
43. Minivest (Campephagidae)
44. Munias (Estrildinae)
45. Mynas (Sturnidae)
46. Nightijara (Caprimalgidae)
47. Orioles (Oriolidae)
48. Owls (Strigidae)
49. Oystercatchers (Haematopodidae)
50. Parakeets (Psittacidae)
51. Partridges (Phasianidae)
52. Pelicans (Pelecanidae)
53. Pheasants (Phasianidae)
54. Pigeons (Columbidae) except the Blue Rock Pigeon (Columba livia)
55. Pipits (Motacillidae)

55-A. Pittas (Pittidae)

56. Plovers (Charadriinae)
57. Quails (Rhasianidae)
58. Rails (Rallidae)
59. Rollers or Blue Jays (Coraciidae)
60. Sandgrouses (Pteroclididae)
61. Sandpipers (Scolopacinae)
62. Snipes (Scolopacinae)
63. Spurfowls (Phasianidae)
64. Starlings (Sturnidae)
65. Stone Curlew (Burhinidae)
66. Storks (Ciconiidae)
67. Stilts (Recurvirostridae)
68. Sunbirds (Nectariniidae)
69. Swans (Anatidae)

70. Teals (Anatidae)
71. Thurushes (Turadinae) (Columba livia)
72. Tits (Paridae)
73. Tree pies (Corvidae)
74. Trogons (Trogonidae)
75. Vultures (Accipitridae)
76. Waxbills (Extrildinae)
77. Weaver Birds or Bayas (Ploceidae)
78. White-eyes (Zosteropidesa)
79. Woodpeckers (Picidae)
80. Wrens (Troglodytidae)

12. Snakes [other than those species listed in Sch. II; Pt. II; and Sch. II, Pt. II]:
    - (i) Amblycaphalidae
    - (ii) Amilidae
    - (iii) Boidae
    - (iv) Colubridae
    - (v) Dasypeptidae (Egg-eating snakes)
    - (vi) Elapidae (Cobras; Kraits, and Coral Snakes)
    - (vii) Glauconndae
    - (viii) Hydrophidae (Fresh water and sea snakes)
    - (xi) Tlysiidae
    - (x) Leptotyphlopidae
    - (xi) Typhlopidae
    - (xii) Uropeltidae
    - (xiii) Viperidae
    - (xiv) Xenopeltidae
13. Fresh Water Frogs (Rana spp.)
14. Three-keeled Turtle (Geoemydas tricarinata)
15. Tortoise (Testudinidae, Tryonychidae)
16. Vivipaous toads (Nectophyrynoides sp.)
17. Voles
18. Butterflies and Moths

    Family Danaidae

    Euploca core simulatrix

    Euploca crassa

    Euploca dioclctianus ramsayi

    Euploca muleiber

    Family Hesperilidae

    Baoris farri

    Hasora vitta

    Hyarotis adrastus

    Oriens concinna

    Pelopidas assamensis

    Pelopidas sinensis

    Polytrema discreta

    Polytrema rubricans

    Thoressa horiorei

    Family Lycaenidae

    Tarucus ananda

    Family Nymphalidae

    Euthalia lubentina

    Family Pieridae

    Aporia agathon ariaca

    Appias libythea

    Appiad nero galba Prioneris sita

19. Mollusca
    - (i) Cypraea lamacina
    - (ii) Cypraea mappa
    - (iii) Cypraea talpa
    - (iv) Fasciolaria trapezium
    - (v) Harpulina arausiaca

(vi) Lambis chiragra
(vii) Lambis chiragra arthiritica
(viii) Lambis crocea
(ix) Lambis millepeda
(x) Lambis scorpious
(xi) Lambis truncata
(xii) Placenta placenta
(xiii) Strombus plicatus sibbaldi
(xiv) Trochus niloticus
(xv) Turbo marmoratus

SCHEDULE V

(Sections 2, 8, 61 and 62)

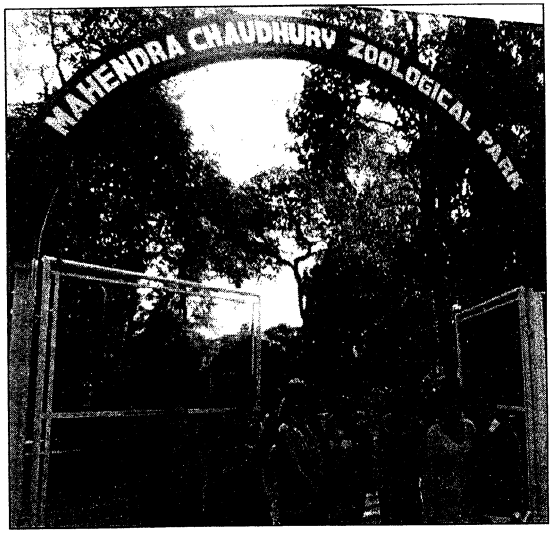
1. Common crow
3. Fruit bats
5. Mice
6. Rats

SCHEDULE VI

(See section 2)

1. Beddomes' cycad (Cycas beddomei)
2. Blue Vanda (Vanda soerulec)
3. Kuth (Saussurea lappa)
4. Ladies slipper orchids (Paphiopedium spp.)
5. Pitcher plant (Nepenthes khasiana)
6. Red Vanda (Rananthera imschootiana)

RECOGNITION OF ZOO RULES, 1992



In exercise of the powers conferred by clauses (*f*) and (*g*) of sub-section (*i*) of Section 63 of the Wild Life (Protection) Act 1972 (53 of 1972), the Central Government hereby makes the following rules, namely:

1. Short title and commencement

These rules may be called the Recognition of Zoo Rules, 1992.

2. Definitions

In these rules, unless the context otherwise requires;

(*a*) "Act" means the Wild Life (Protection) Act, 1972;
(*b*) "enclosure" means any accommodation provided for zoo animals;
(*c*) "enclosure barrier" means a physical barrier to contain an animal within an enclosure;
(*d*) "endangered species" means species included in Schedule I of the Act;
(*e*) "form" means form set forth in Appendix A to these rules;
(*f*) "performing purposes" means any effort to force the animal to carry out unnatural act including performance of circus tricks;
(*g*) "stand-of barrier" means a physical barrier set back from the outer edge of an enclosure barrier;
(*h*) "zoo operator" means the person who has ultimate control over the affairs of the zoo.

3. Application for recognition

An application under section 38H of the Act for recognition of a zoo shall be made to the Central Zoo Authority in Form A.

4. Fees for application

There shall be paid in respect of every application under rule 3 a fee of rupees five hundred.

5. Documents to be filed along with the application and particulars it should contain

Every application shall be accompanied by the prescribed fee and shall contain clear particulars as to the matters specified in Form A.

6. Power to make inquiries and call for information

Before granting recognition to a zoo under section 38H of the Act, the Central Zoo Authority may make such inquiries, as it deems necessary.

7. Form of recognition

The recognition granted to a zoo shall be subject to the following conditions, namely:

(*a*) that the recognition unless granted on a permanent basis, shall be for such period not less than one year.

(*b*) that the zoo shall comply with such standards and norms as are or may be prescribed or imposed under the provisions of the Act and these rules from time to time.

8. Renewal of recognition

(*a*) Three months before the expiry of the period of recognition, a recognized zoo desirous of renewal of such recognition may make an application to the Central Zoo Authority in Form A.

(*b*) The provisions of rules 3, 4, 5, 6 and 7 shall apply in relation to renewal of recognition as they apply in relation to grant of recognition except that, the fee payable in respect of an application for renewal of recognition shall be Rs. 200/- .

9. Classification of Zoos

For the purposes of deciding standards and norms for recognition of Zoos, they shall be classified into four categories as specified below:

Zoo Category	Large	Medium	Small	Mini
Area of the zoo in hectares	>75 hectares	50-75 hectare	20-50 hectare	<20 hectare
Number of animals exhibited	>750	500-750	200-499	200
Animals variety exhibited	>75 numbers	50-75 numbers	20-49 numbers	20 numbers
Number of endangered species exhibited	>15	15	9	Less than 5
Annual attendance of visitors per year	>7.5 lakhs	5-7.5 lakhs	5 lakhs	<2 lakhs

10. Standards and norms subject to which recognition under section 38H of the Act shall be granted

The Central Zoo Authority shall grant recognition with due regard to the interests of protection and conservation of wild life, and such standards, norms and other matters as are specified below:

General

(1) The primary objective of operating any zoo shall be the conservation of wildlife and no zoo shall take up any activity that is inconsistent with the objective.

(2) No zoo shall acquire any animal in violation of the Act or rules made thereunder.

(3) No zoo shall allow any animal to be subjected to the cruelties.

(4) No zoo shall use any animal, other than the elephant in plains and yak in hilly areas for riding purposes or draughting any vehicle.

(5) No zoo shall keep any animal chained or tethered unless doing so is essential for its own well being.

(6) No zoo shall exhibit any animal that is seriously sick, injured or infirm.

(7) Each zoo shall be closed to visitors at least once a week.

(8) Each zoo shall be encompassed by a perimeter wall at least two meters high from the ground level.

(9) The zoo operators shall provide a clean and healthy environment in the zoo by planting trees, creating green belts and providing lawns and flowerbeds etc.

(10) The built up area in any zoo shall not exceed twenty five per cent of the total area of the zoo.

(11) No zoo shall have the residential complexes for the staff within the main campus of the zoo.

Administrative and Staffing Pattern

(12) Every zoo shall have one full-time officer in-charge of the zoo.

(13) Every large and medium zoo shall have at least one full-time curator having the sole responsibility of looking after the upkeep of animals and maintenance of animal enclosures.

(14)Each large zoo shall have at least two full-time veterinarians and medium and small zoo shall have at least one full-time veterinarian. The mini zoo may at least have arrangement with any outside veterinarian for visiting the zoo every day to look after the animals.

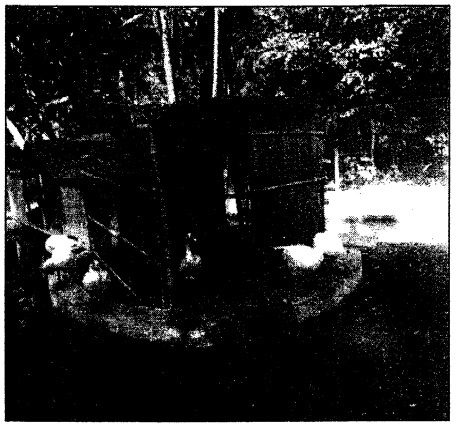
Animal Enclosures – Design, Dimensions and other Essential Features

(15) All animal enclosures in a zoo shall be so designed as to fully ensure the safety of animals, caretakers and the visitors.

(16) All animal enclosures in a zoo shall be so designed as to meet the full biological requirements of the animals housed therein.

(17) The zoo operators shall endeavor to simulate the conditions of the natural habitat of the animal in the enclosures as closely as possible.

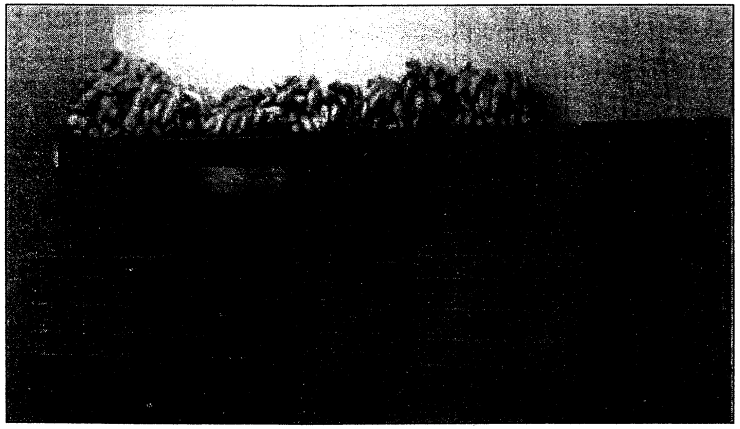
(18) The enclosures housing the endangered mammalian species, mentioned in Appendix I to these rules, shall have feeding and retiring cubicles/cell of minimum dimensions given in the said appendix.



(19) Proper arrangement of drainage of excess of water and arrangements for removal of excreta and residual water from each cell /cubicle /enclosure shall be made.

(20) Designing of any new enclosure for endangered species shall be finalized in consultation with the Central Zoo Authority.

Hygiene, Feeding and Upkeep



(21) Every Zoo shall ensure timely supply of wholesome and unadulterated food in sufficient quantity to each animal according to the requirement of the individual animals.

(22) Every Zoo shall provide for a proper waste disposal system for treating both the solid and liquid wastes generated in the zoos.

(23) All left over food items, animal excreta and rubbish shall be removed from each enclosure regularly and disposed off in a manner congenial to the general cleanliness of the zoo.

(24) The zoo operators shall make available round the clock supply of potable water for drinking purposes in each cell /enclosure /cubicle.

(25) Periodic application of disinfectants in each enclosure shall be made according to the directions of the authorized veterinary officer of the zoo.

Animal Care, Health and Treatment

(26) The animals shall be handled only by the staff having experience and training in handling the individual animals. Every care shall be taken to avoid discomfort, behavioral stress or physical harm to any animal.

(27) The condition and health of all animals in the zoo shall be checked every day by the person in-charge of their care. if any animal is found sick, injured, or unduly stressed the matter shall be reported to the veterinary officer for providing treatment expeditiously.

(28) Routine examination including parasite checks shall be carried out regularly and preventive medicines including vaccination be administered at such intervals as may be decided by the authorized veterinary officers.

(29) The zoo operators shall arrange for medical check-ups of the staff responsible for upkeep of animals at least once in every six months to ensure that they do not have infections of such diseases that can infect the zoo animals.

(30) Each zoo shall maintain animal history sheets and treatment cards in respect of each animal of endangered species, identified by the Central Zoo Authority.

Veterinary Facilities

(31) Every large and medium zoo shall have full-fledged veterinary facilities including a properly equipped veterinary hospital, basic diagnostic facilities and comprehensive range of drugs. Each veterinary hospital shall have isolation and quarantine wards for new arriving animals and sick animals.

(32) Each veterinary hospital shall have facilities for restraining and handling sick animals including tranquilizing equipment and syringe projector. The hospital shall also have a reference library on animal health care and upkeep.

(33) The small and mini zoos, where full-fledged veterinary hospital is not available, shall have at least a treatment room in the premises of the zoo where routine examination of animals can be undertaken and immediate treatment can be provided.

(34) Every zoo shall have a post-mortem room. Any animal that dies in a zoo shall be subjected to a detailed post-mortem and the findings recorded and maintained for a period of at least six years.

(35) Each zoo shall have a graveyard where the carcasses of dead animals can be buried without affecting the hygiene and the cleanliness of the zoo. The large and medium zoos shall have an incinerator for disposal of the carcasses and other refuse material.

Breeding of animals

(36) Every zoo shall formulate a program for captive breeding of only such animals as are approved by the Central Zoo Authority for that zoo. They shall abide by the guidelines and directives of the Central Zoo Authority in this regard.

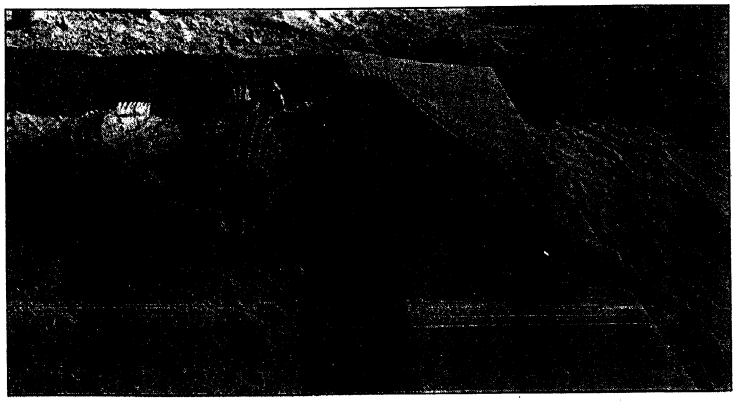
(37) Every zoo shall keep the animals in viable, social groups. No animal will be kept without a mate for a period exceeding one year unless there is a legitimate reason for doing so or if the animal has already passed its prime and is of no use for breeding purposes. In the event of a zoo failing to find a mate for any single animal within this period, the animal shall be shifted to some other place according to the directions of the Central Zoo Authority.

(38) No zoo shall be allowed to acquire a single animal of any variety except when doing so is essential either for finding a mate for the single animal housed in the said zoo or for exchange of blood in a captive breeding group.

(39) Every zoo shall take up regular exchange programs of animals so as to prevent the traits or ill effects of inbreeding. To achieve this objective each zoo shall maintain a studbook in respect of every endangered species.

(40) To safeguard against uncontrolled growth in the population of prolifically breeding animals, every zoo shall implement appropriate population control measures like separation of sexes, sterilization, vasectomy, tubectomy and implanting of pallets etc.

(41) No zoo shall permit hybridization either between different species of animals or different races of the same species of animals.



Maintenance of Records and Submission of Inventory to the Central Zoo Authority

(42) Every zoo shall keep a record of the birth, acquisitions, sales, disposals and deaths of all animals.

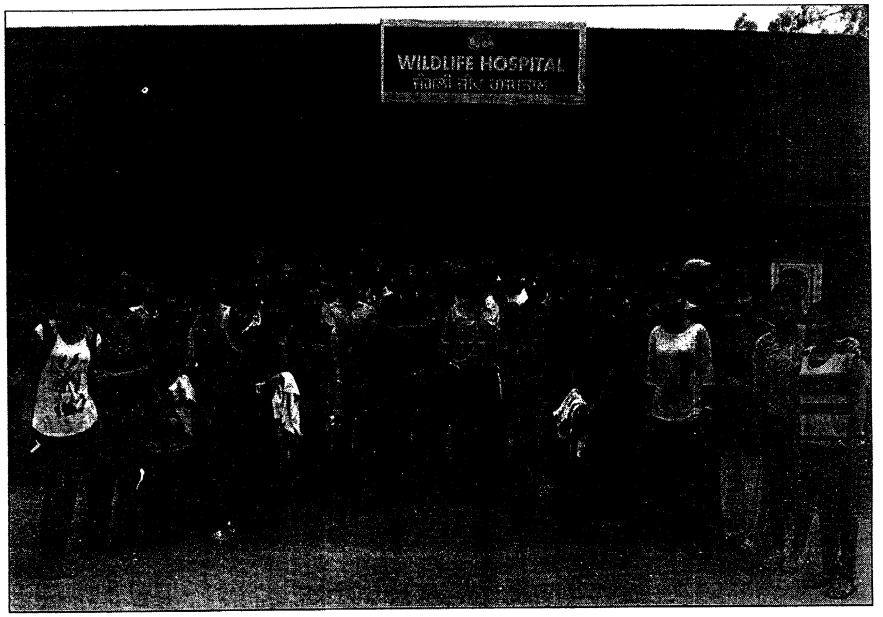
(43) Every zoo shall also submit a brief summary of the death of animals in the zoo for every financial year.

(44) Every zoo shall publish an annual report of the activities of the zoo in respect of each financial year.

Education and Research

(45) Every enclosure in a zoo shall bear a sign board displaying scientific information regarding the animals exhibited in it.

(46) Every zoo shall publish leaflets, brochures and guidebooks and make the same available to the visitors, either free of cost or at a reasonable price.



FORTHCOMING ACTS/ RULES PERTAINING TO ANIMAL WELFARE IN INDIA

Under the provision of section 38 of the Prevention of Cruelty to Animals Act, 1960 the draft of following Acts/ Rules are submitted in the Parliament.They shall come into force only if they get the parliamentary approval and published in the Official Gazette.



THE ANIMAL WELFARE ACT, 2011

An Act to provide for the welfare and wellbeing of animals, and to prevent the infliction of trauma, pain or suffering on them, and to prevent unnecessary killing of animals, and for that purpose to consolidate the law relating to prevention of cruelty to animals and providing for their welfare generally.

DOG BREEDING, MARKETING AND SALE RULES, 2010

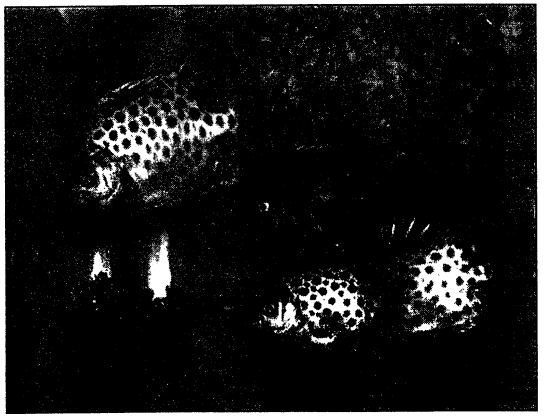
Breeding, marketing and sale of dogs has come to stay as a high-level commercial venture in India, involving thousands of breeders and pet shops in a multi-crore industry. An enormous need has also emerged for lakhs of pups of specific breeds from prospective pet owners, most of whom are ignorant regarding the basics of healthcare and management of dogs. This has resulted in the mushroomingof unscrupulous breeders indulging in backyard breeding activity in the most unhygienic conditions, cruelly exploiting the animals for easy money; and in pet shops sourcing and selling pups from such breeders, which, though seemingly of pure breed, are actually of poor quality, and often diseased, resulting in heavy mortality, or weak and unhealthy animals that are ill-treated, and in many cases simply

abandoned on the street. Not only is this compounding the street animal problem, this unethical trade also has high zoonotic potential which is a public health concern. There is hence an immediate need to discipline and regulate the process of dog breeding, marketing and sale of pups. Uniform practices and procedures have to be prescribed, and adhered to by those partaking in the profits derived from this brand of commercial activity. Consequently, the Dog Breeding, Marketing and Sale Rules have been formulated and it shall come into force on the date they are published in the Official Gazette.

PET SHOP RULES, 2010

In the last decade, with the liberalization of the economy and the increase in purchasing power, several new trades have come into being. One of these is the mushrooming, and yet unregulated pet trade in live animals, that are capable of experiencing discomfiture, pain, hunger and thirst just as humans do. Live animals are exhibited and traded like commodities in pet and pet product shops. These Rules areintended to ensure their humane handling, and to regulate this trade. Sincethe mute cannot complain, the responsibility to ensure compassionate and empathetic handling is greater. Since pet shops are commercial establishments, they have to be regulated with licenses, and parameters of operational standards. Uniform practices and procedures have to be prescribed, and adhered to by those partaking in the profits derived from this brand of commercial activity. Consequently, the Pet Shop Rules have been formulated and it shall come into force on the date they are published in the Official Gazette.

AQUARIUM FISH BREEDING AND MARKETING RULES



Breeding and selling of aquarium fish has become big business. In this process coral reefs have been damaged and many fish brought to near extinction. There is a tendency to regard fish as non-beings therefore they are sold as commodities, kept in unsuitable ways and in unsuitable places. Pain and suffering is inflicted on these animals, with no thought for their wellbeing.



13

Acts/Rules for Prevention of Animal Diseases



CHAPTER OUTLINE

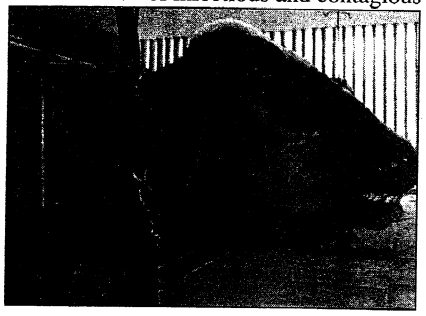
- **The Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009**
- **The Glanders and Farcy Act, 1899**
- **The Dourine Act 1910**
- **The Livestock Importation Act, 1898**
  - Livestock Importation (Amendment) Ordinance, 2001

Note: *With the implementation of The Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009, old Acts viz. The Glanders and Farcy Act, 1899 The Dourine Act 1910 will be repealed.*

THE PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES IN ANIMALS ACT, 2009

No. 27 of 2009
[20th March, 2009]

An Act to provide for the prevention, control and eradication of infectious and contagious diseases affecting animals, for prevention of outbreak or spreading of such diseases from one State to another, and to meet the international obligations of India for facilitating import and export of animals and animal products and for matters connected therewith or incidental thereto.



Whereas economic losses due to infectious and contagious diseases of animals are enormous in the country with some of these diseases constituting a serious threat to the public;

And whereas many of such animal diseases can be largely prevented by judicious implementation of vaccination programmes or by taking other appropriate and timely measures on scientific lines;

And whereas such measures are necessary to facilitate the import and export of animals and animal products and to keep in tune with international practices;

And whereas it has been realized that the prevention, control and eradication of infectious and contagious diseases of animals from India has to be tackled on a national basis so as to avoid adverse impact of such diseases on the economy of the country and for this purpose harmonize the control procedures and to prevent inter-State transmission of animal diseases;

And whereas the national level handling has to be done with the active involvement of the State Governments, particularly in regard to the precautionary measures required to be taken within their jurisdiction in respect of certain infectious and contagious diseases and the regulation of movement of animals outside their respective areas by timely adoption of appropriate measures;

And whereas India is a Member Country of the Office International Des Epizooties, Paris and it is necessary to implement the general obligations, decisions and recommendations of the said Organization and abide by the International Animal Health Code stipulated by the said Organization;

CHAPTER I
PRELIMINARY

Short title, extent and commencement

1. (*1*) This Act may be called the Prevention and Control of Infectious and Contagious Diseases in Animals Bill, 2009.

Definitions

2. In this Act, unless the context otherwise requires,—

(*a*) "animal" means,-

(*i*) cattle, buffalo, sheep, goat, yak, mithun;

(*ii*) dog, cat, pig, horse, camel, ass, mule, poultry, bees; and

(*iii*) any other animal or bird as the Central Government may, by notification, specify;

(*b*) "Check Post" means any place established as such by the Director to carry out checking of animals for the purpose of this Act;

(*c*) "Competent Officer" means any person or officer of the Government notified as a Competent Officer under section 17;

(*d*) "compulsory vaccination" means vaccination of any animal against any scheduled disease in respect of which vaccination is made mandatory under the provisions of this Act;

(*e*) "controlled area" means any local area which has been declared as such by the State Government under sub-section (1) of section 6;

(*f*) "defective vaccine" means any vaccine which is expired, breach in seal, contaminated, improperly stored, unlabelled or with mutilated label;

(*g*) "Director", in relation to a State, means any officer in charge of the Department of Animal Husbandry or Veterinary Services, or both, notified by the State Government as such for the purpose of this Act;

(*h*) "free area" means any controlled area which has been declared as such under sub-section (5) of section 6;

(*i*) "infected animal" means an animal which is infected with any scheduled disease;

(*j*) "infected area" means an area declared as such under section 20;

(*k*) "notification" means notification published in the Official Gazette;

(*l*) "prescribed" means prescribed by rules made under this Act;

(*m*) "publication" includes propagation of information through the media or newspaper or any other mass media and the means of local communication such as declaration in loud voice and by beating drums in the area;

(*n*) "Quarantine Camp" means any place declared to carry out quarantine of animals and birds for the purpose of this Act;

(*o*) "scheduled disease'- means any disease included in the Schedule;

(*p*) "Veterinarian" means a person having a recognised veterinary qualification who, under the law for the time being in force, is allowed to treat animal diseases;

(*q*) "Veterinary Officer" means any officer, appointed as such by the State Government under clause (*b*) of section 3;

(*r*) "Village Officer", in relation to a village, means any person who is authorised or designated as such in accordance with the qualifications prescribed by the State Government.

CHAPTER II
CONTROL OF SCHEDULED DISEASES

Appointment of Veterinary Officers

3. The State Government may, by notification, appoint—

(*a*) such number of persons, as it deems proper, to be Veterinarians to undertake inspection and specifying the local limits of their respective jurisdiction; and

(*b*) such number of Veterinarians, as it deems proper, to be Veterinary Officers, who shall exercise their powers and discharge their duties within the local limits of their jurisdiction as may be specified in the said notification.

Reporting scheduled diseases obligatory

4. (*1*) Every owner, or any other person, non-governmental organization, public bodies or the village panchayat, in charge of any animal which he or it has reason to believe to be infective of a scheduled disease shall report the fact to the Village Officer or village panchayat in-charge, who may report the same in writing to the nearest available Veterinarian.

(*2*) The Village Officer shall visit the area falling within his jurisdiction for reporting any outbreak of the disease.

(*3*) Every Veterinarian shall, on receipt of a report under sub-section (*1*), or otherwise, if he has reason to believe that any animal is infected with a scheduled disease, report the matter to the Veterinary Officer.

(*4*) Where in any State there is any occurrence of scheduled disease in relation to any animal, the Director shall send an intimation to the Directors of the States which are in the immediate neighborhood of the place where there is such occurrence, for taking appropriate preventive measures against the spread of the disease.

Duty to segregate infected animals

5. (*1*) Every owner or person in charge of an animal, which he has reason to believe is infective of a scheduled disease, shall segregate such animal and have it kept in a place away from all other animals which are healthy, and take all possible steps to prevent the infected animal from coming in contact with any other animal.

(*2*) The owner or other person in charge of, or having control over, the animal referred to in sub-section (*1*) shall confine that animal and prevent it from grazing in a common place or to drink water from any common source including a vessel, pond, lake or river.

(*3*) All other infected animals shall be segregated by the Municipality, Panchayat or other local administration.

Notification of controlled areas and free areas

6. (*1*) The State Government may, with the object of preventing, controlling or eradicating any scheduled disease, by notification, declare any area to be a controlled area in respect of any scheduled disease affecting any species of animal and any other species that may be susceptible to the disease specified in the said notification.

(*2*) The State Government shall also cause the substance of the notification issued under sub-section (*1*) to be published in a local newspaper in the vernacular language and by declaration in loud voice and by beating drums in the area.

(*3*) Where a notification has been issued under sub-section (*1*), all animals of the species in the controlled area shall be subjected to compulsory vaccination against that disease, and be subjected to such other measures against the disease, in such manner and within such time as the State Government, may, by public notice, direct.

(*4*) The State Government shall make available necessary vaccine and it shall be obligatory on the part of every owner, or the person in charge of an animal which is required to be vaccinated under sub-section (5), to get the animal compulsorily vaccinated.

(*5*) Where the State Government is satisfied, on a report received from the Director or otherwise, that, in any controlled area, any of the scheduled diseases affecting any species of animal is no longer prevalent, it may, by notification, declare the area to be a free area in respect of that disease in relation to the particular species of animal.

(*6*) Where a notification has been issued under sub-section (5), no animal of the species or of any other susceptible species with regard to which it is a free area shall be allowed to enter the free area unless duly immunized by vaccination against that particular disease.

Prohibition of movement of animals from controlled area

7. (*1*) Where a notification has been issued under sub-section (*1*) of section 6 declaring any area as a controlled area in relation to any disease affecting any species of animals, no animal belonging to that species shall be moved from the place where it is kept.

(*2*) The Director may, for the purpose of control, prevention or eradication of any scheduled disease, in respect of any area, by order published in the Official Gazette, prohibit the movement of all animals belonging to any species specified therein, from the place where it is kept, to any other place.

(*3*) Nothing contained in sub-sections (*1*) and (*2*) shall be deemed to prohibit—

(*a*) the movement of any animal referred to therein, from the place where it is kept, to the nearest place where it can be got vaccinated, so long as the animal is being moved for the purpose of its immunization by vaccination; or

(*b*) the movement of any such animal, so long as it is accompanied by a valid certificate of vaccination to indicate that the animal is duly immunized against the particular disease and it bears proper mark of such vaccination.

Vaccination making and issue of vaccination certificate

8. (*1*) The vaccine to an animal may be administered by any person competent under the law for the time being in force to administer it, and issue a certificate of administration of vaccination.

(*2*) Where any animal has been vaccinated for any scheduled disease in compliance with the provisions of sub-section (*1*), the person vaccinating the animal shall cause to put a mark by branding, tattooing or ear tagging, or in such other manner as the Director may, by general or special order, direct and the same shall, unless otherwise specified by the Director, shall not be removed.

(*3*) The authority issuing a certificate of vaccination shall specify the date of vaccination, dates of manufacture and expiry of the vaccine and the date up to which the vaccination of the animal with the particular vaccine shall be valid.

Contents of vaccination certificate

9. Every vaccination certificate issued under this Act shall be in such form and shall contain such particulars as may be prescribed by the Central Government.

Entry and exit of animals into controlled area and free area

10. (*1*) Where any area has been declared as a controlled area under sub-section (*1*) of section 6 in respect of any disease affecting any species of animals, no animal belonging to that species shall be taken out of, or brought into that area save as provided in section 16.

(2) The Director may, by notice duly published in the Official Gazette and at least in one daily local newspaper in vernacular language, extend the prohibition contained in sub-section (*1*) to any other species of animals, if animals belonging to that species are also likely to be infected with that disease.

(*3*) No carrier of goods or animal shall carry any animal from or out of a controlled area, free area or infected area by land, sea or air unless he complies with the provisions of section 16.

(*4*) Nothing contained in sub-sections (*1*) to (*3*) shall apply to the carriage by railway of any animal referred to in those sub-sections through any area which, for the time being, is declared as a controlled area or infected area so long as the animal is not unloaded (for whatsoever purpose or duration) in any place within that area:

Provided that the State Government may, by notification, declare that any species of animal so carried through any local area within the State shall be duly immunized against such scheduled disease, in such manner and within such time as may be specified in that notification and a certificate of vaccination shall be a pre-requisite for the transportation of the animals by the railways through that area:

Provided further that, where any notification as referred to in the first proviso has been issued, it shall be incumbent on the State Government to intimate that fact to the concerned railway authorities so as to enable them to satisfy themselves about the immunization of the animal before transporting it through the local area of the State.

Precautionary measures in relation to controlled areas

11. No person shall take out of the controlled area —

(*a*) any animal, alive or dead, which is infected with, or reasonably suspected to have been infected with, any scheduled disease notified under sub-section (1) of section 6,

(*b*) any kind of fodder, bedding or other material which has come into contact with any animal infected with such disease or could, in any manner, carry the infection of the notified disease, or

(*c*) the carcass, skin or any other part or product of such animal.

Prohibition of markets fairs, exhibition etc. , in the controlled areas

12. No person, organization or institution shall hold any animal market, animal fair, animal exhibition and carry on any other activity which involves grouping or gathering of any species of animals within a controlled area:

Provided that the Competent Officer may, *suo motu* or on application made to him in this behalf, relax the prohibition in relation to any species of animals, in a case where animals belonging to that species are not susceptible to the scheduled disease and are incapable of carrying it, if he is satisfied that in the public interest it is necessary to accord such relaxation.

Prohibition of bringing of infected animals into market and other places

13. No person shall bring or attempt to bring into market, fair, exhibition or other congregation of animals or to any public place, any animal which is known to be infected with a scheduled disease.

Check Posts and Quarantine Camps

14.(*1*) The Director may establish as many Quarantine Camps and Check Posts within the State as may be required—

(*a*) for the detention of animals suffering from any scheduled disease or of animals which have come into contact with or have been kept in the proximity of any such infected animal;

(*b*) for ensuring the prevention of entry into or exit from any controlled area or infected area or free area, of any animal belonging to the species of animals in respect of which a notification, issued under sub-section (*1*) of section 6, or an order issued under sub-section (*2*) of section 7, is in force.

(*2*) Any animal which is required to be detained, inspected, vaccinated, or marked, may be kept in the Quarantine Camp for such period as the Competent Officer may direct.

(*3*) Every animal detained at a Quarantine Camp shall be under the custody of the person in charge of the camp, and shall be vaccinated and marked.

(3)The officer in charge of the Quarantine Camp shall, at the time of release of an animal from the station, grant a permit, in such form as may be prescribed by the State Government, to the person taking charge of the animal, and every such person shall be bound to produce the permit whenever required to do so by any Competent Officer.

Inspection and detention of animals at Cheek Posts and Quarantine Camps

15.(*1*) Every person in charge of any Check Post or Quarantine Camp shall inspect any animal stopped at the Check Post, or detained therein or at the Quarantine Camp.

(*2*) The manner of inspection and the period of detention of the animal at the Check Post or at the Quarantine Camp for the purpose of inspection or for the administration of compulsory vaccination, the marking of animals and the form and manner in which permit for entry in respect of any animal may be issued, shall be such as may be prescribed by the State Government.

Entry and exist of vaccinated animals into controlled and free areas

16. Notwithstanding anything contained in section 10, an animal belonging to the species of animals in respect of which an area has been declared as a controlled or free area in relation to any scheduled disease, which has been duly vaccinated against that disease, shall be allowed to enter into or be taken out of the controlled area or free area, or to be taken out of any other place on the production of a certificate to the effect that vaccine against that disease has been administered and a period of not less than twenty-one days has elapsed thereafter.

Appointment of Competent Officers

17. The State Government may, for the proper implementation of the provisions of this Act, by notification, authorize any person to exercise any power or discharge any duty as a Competent Officer, under this Act, who shall exercise such powers and such duties within the local limits of his jurisdiction as may be specified in the notification.

Cleaning and disinfection of carriers

18. (*1*) Every common carrier whether a vessel or vehicle shall be cleaned and disinfected immediately before and after the transportation of any animal in that vessel or vehicle, and so also any other place where the animal has been kept in transit.

(*2*) Where any area has been declared as a controlled area or free area in respect of any scheduled disease affecting any species of animal, the Director may, by an order duly published in the Official Gazette and in a local newspaper in the vernacular language, direct the owner of every vehicle in which any animal belonging to that species is carried, to have the vehicle properly cleaned and disinfected.

Power of entry and inspection

19. Any Veterinary Officer or other Competent Officer may enter upon and inspect any land or building or place, vessel or vehicle, for the purpose of ensuring compliance of the provisions of this Act or the rules or orders made thereunder, by the persons responsible for such compliance.

CHAPTER III
INFECTED AREAS

Declaration of infected areas

20. If the Veterinary Officer, upon receipt of a report from a Veterinarian or otherwise, is satisfied that, in any place or premises falling within his jurisdiction, an animal has been infected with any scheduled disease, or that an animal, which he has reason to believe has been so infected, is kept, may, by notification and publication in at least one local newspaper in the vernacular language and by declaration in loud voice and by beating drums, declare such area as he may deem fit (including the place or premises aforesaid) to be an infected area.

Effect of declaration of infected areas

21. (*1*) Where an area has been declared as an infected area under section 20, all provisions of this Act which are applicable in relation to a controlled area shall *mutatis mutandis* apply thereto as if for the words "controlled area", the words "infected area" have been substituted.

(*2*) Without prejudice to the generality of the provisions contained in sub-section (*1*), the following further provisions shall apply in relation to an infected area, namely:—

(*a*) in respect of every animal in that area which is infected or reasonably believed to be infected, with any scheduled disease, the owner or other person in charge of the animal, shall forthwith get it treated by a Veterinarian;

(*b*) all articles, which are likely to have come into contact with any animal referred to in clause (*a*), shall be treated or disposed off in such a manner as the Veterinarian may direct;

(*c*) every Veterinarian shall, for the purpose of inspection, have the power to enter any place or premises where any animal is kept or is likely to be kept;

(*d*) the owner or any other person in charge of the animal referred to in clause (*a*) shall keep the animal in isolation forthwith, and also take such other measures as may be necessary for the prevention, treatment and control of the disease as the Veterinarian may direct.

Denotification of infected area

22. If the Veterinary Officer, after such enquiry as he may deem fit, is satisfied that there is no longer the threat or danger of any animal being infected with the scheduled disease in any infected area, by notification and publication in a local newspaper in vernacular language, declare that the area is no longer an infected area as aforesaid, whereupon all the restrictions referred to in section 21 shall cease to apply.

CHAPTER IV
INFECTED ANIMALS

Segregation, examination and treatment of infected animals

23. (*1*) Where the Veterinarian has, on receipt of a report or otherwise, reason to believe that any animal is infected with a scheduled disease, he may, by order in writing, direct the owner or any other person in charge of such animal—

(*a*) to keep it segregated from other apparently healthy animals; or

(*b*) to subject it to such treatment as may be required under the circumstances.

(*2*) Where any action has been taken in pursuance of sub-section (*1*), the Veterinarian shall forthwith give a detailed report of the incidence of the disease to the Veterinary Officer.

(*3*) On receipt of a report from the Veterinarian, the Veterinary Officer shall, as soon as possible, examine that animal as well as any other animal which could have come in contact with it, and for that purpose, submit the animal to such test and medical examination as may be required under the circumstances.

(*4*) If, after such test and examination, the Veterinary Officer is of the opinion that an animal is not infected with any of the scheduled diseases, he shall issue a certificate in writing that the animal is not infected with any such disease.

Resort to euthanasia for infected animals

24. (*1*) Where the Veterinary Officer considers it necessary for the purpose of ascertaining whether the animal which is suspected to have been infected with any scheduled disease or susceptible to such infection is actually infected, or for the purpose of ascertaining the nature of the scheduled disease with which an animal is infected, he may draw such samples, as may be required, from the animal for the purpose of carrying out such investigations as he may deem necessary under the circumstances.

(*2*) The Veterinary Officer or any other Competent Officer shall draw samples from any animal for the purposes of ascertaining whether the animal has been vaccinated against any disease, or whether the vaccination of the animal has been effective in conferring it immunity and have the samples examined, in such manner as he may deem necessary.

Resort to euthanasia for infected animals

25. If the Veterinary Officer deems it necessary that an animal, which is infected with a scheduled disease, euthanasia has to be resorted to, for preventing the spread of the disease to other animals in the area or to protect public health if the disease is of zoonotic importance, he may, notwithstanding anything contained in any other law for the time being in force, by an order in writing, direct euthanasia of the animal and the carcass disposed of immediately to his satisfaction.

Disposal of carcass

26. Every person in possession of carcass (or any part thereof) of any animal, which, at the time of its death, was infected with any scheduled disease or was suspected to have been infected, shall dispose it of in such manner as may be prescribed.

Disposal of carcass

27. (*1*) Where the Veterinary Officer or any Veterinarian has reason to believe that the death of an animal has been caused by an infection of any scheduled disease, he may make or cause to be made a post-mortem examination of the animal and for that purpose he may cause the carcass of any such animal to be exhumed where required followed by proper disposal after necessary examination and post-mortem.

(*2*) Every examination and post-mortem referred to in sub-section (*1*) shall be conducted in such manner, and the report of post-mortem shall be in such form, as may be prescribed.

Power of Veterinary Officer and Veterinarian to hold postmortem examination

28. Where any animal which is infected or suspected to have been infected is found without any person claiming to be its owner, or where a valid order or direction given in relation to any such animal is not promptly complied with by the owner or other person in control of the animal, it shall be open to the Veterinary Officer or any other Competent Officer, to seize the animal and remove it to a place of isolation or segregation, as he may deem proper.

CHAPTER V
ENFORCEMENT AND PENALTIES

Enforcement of orders and recovery of expenses

29.(*1*) Where by any rule, notification, notice, requisition, order or direction made under this Act, any person is required to take any measure or to do anything—

(*a*) in respect of any animal, carcass of any animal or other thing in his custody or charge, the same shall be promptly complied with by that person;

(*b*) in case of any stray or ownerless animal, carcass of such animal or parts thereof, the same shall be promptly complied with by the municipality or Panchayat, as the case may be, at its cost.

(*2*) If the measures as referred to in sub-section (*1*) are not taken within such time as may be allowed for the purpose, the authority issuing the notice, requisition, order or direction, may cause the measures to be taken at the cost of the person or municipality or Panchayat, as the case may be, who or which was required to take the measures.

(4)The costs of any measures taken under sub-section (2), shall be recoverable from the person or the municipality or Panchayat, as the case may be, concerned in the manner provided by the Code of Criminal Procedure, 1973 (2 of 1974), for the recovery of fines imposed by a Court, as if such costs were a fine imposed by a Court.

Village Officers, etc., to assist

30. All Municipal, Panchayat or Village Officers and all officers of the rural and dairy development, revenue, agriculture, animal husbandry and veterinary departments of the State Government, shall be bound—

(*a*) to give immediate information to the Veterinary Officer and to the Veterinarian having jurisdiction in the area regarding the prevalence of a scheduled disease amongst any animal or species of animals, in the area;

(*b*) to take all necessary measures to prevent the outbreak or spread of any scheduled disease; and

(*c*) to assist the Veterinary Officer and the Veterinarian in the discharge of their duties or in the exercise of their powers under this Act.

Penalty for issuing vaccination certificate without authority or administering defective vaccine

31. If any person issues a vaccination certificate,—

(*a*) without authority or competence in that behalf, or

(*b*) after administering the vaccine which is known to be defective in any manner,

he shall be guilty of an offence punishable with a fine of five thousand rupees or in case of non-payment of fine with imprisonment which may extend to one month, and in the case of any subsequent offence, with fine often thousand rupees or with imprisonment which may extend to three months.

Penalties

32. Any person who contravenes the provisions of this Act or obstructs the Competent Officer in performing his duties shall be guilty of an offence punishable with fine which may extend to one thousand rupees, and in case of failure to pay the penalty with imprisonment for a term which may extend to one month; and in the case of any subsequent offence (whether under the same provision or any other provision of this Act except in case of sections 31 and 33) with a fine of two thousand rupees, or with imprisonment for a term which may extend to two months in case of non-payment of the penalty.

Penalty for placing infected animal or carcass in river, etc.

33. Whoever places or causes or permits to be placed in any river, lake, canal or any other water body, the carcass or any part of the carcass of any animal which at the time of its death was known to be infected, shall be guilty of an offence and, on conviction, be punished, in the case of a first offence with fine of two thousand rupees or with imprisonment of one month in case of non-payment of fine and in the case of subsequent conviction with a fine of five thousand rupees or imprisonment for a term which may extend to three months or with both.

Offences by companies

34. (*1*) Where an offence under this Act has been committed by a company, every person who at the time the offence was committed was in charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded and punished accordingly:

Provided that nothing contained in this sub-section shall render such person liable to any punishment provided in this Act, if he proves that the offence was committed without his knowledge or that he had exercised all due diligence to prevent the commission of such offence.

(*2*) Notwithstanding anything contained in sub-section (*1*), where an offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Explanation.-For the purposes of this section,—

(*a*) "company" means any body corporate and includes a co-operative society registered or deemed to be registered under any law for the time being in force, a firm or other association of individuals; and

(*b*) "director", in relation to a firm, means a partner in the firm.

CHAPTER VI

PRECAUTIONARY MEASURES ON CAUSATIVE ORGANISM, ETC.

Prevention of escape of causative organism

35. (*1*) In every institution, laboratory or clinic, engaged in the manufacture, testing or research, related to vaccines; sera, diagnostics or chemotherapeutic drugs and aimed at the prevention or treatment of any scheduled disease, adequate precautionary measures shall be taken—

(*a*) to ensure that the causative organism of any scheduled disease does not escape or otherwise get released;

(*b*) to guard against any such escape or release; and

(*c*) to warn and to protect everyone concerned in the event of any escape.

(*2*) Notwithstanding anything contained in any other law for the time being in force, every animal—

(*a*) used for the manufacture, testing or research as referred to sub-section (*1*), or

(*b*) which is likely to carry or transmit any scheduled disease,

shall be promptly administered euthanasia and disposed of by the person in charge of or having control of the institution, laboratory or clinic, as the case may be, referred to in that sub-section.

(*3*) Every person who is in charge of or having control of an institution, laboratory or clinic referred to in sub-section (*1*) comply with the provisions of sub-section (*1*) and sub

section (2); and in the event of non-compliance he shall be guilty of an offence punishable with fine which may extend to twenty thousand rupees or imprisonment for a term which may extend to six months or with both, and in case the establishment is in commercial manufacturing of vaccines or medicine, a temporary suspension of licence up to a period of one year may also be imposed.

CHAPTER VII
MISCELLANEOUS

Power to delegate

36. The State Government may, by notification, delegate to any officer or authority subordinate to it, all or any of the powers conferred on it by or under this Act, except the powers to make rules under sub-section (2) of section 42.

Officers and authorities to function subject to Government control

37. All officers and authorities under this Act shall exercise their powers and discharge their duties conferred or imposed on them by or under this Act, in accordance with such orders, not inconsistent with the provisions of this Act, as the Central Government or the State Government may, from time to time, make.

Power to amend the Schedule

38.(*1*) The Central Government may, by notification, add to, or omit from the Schedule any animal disease and the said disease shall, as from the date of the notification, be deemed to have been added to, or omitted from, the Schedule.

(*2*) Every notification issued under sub-section (*1*) shall, as soon as may be after it is issued, be laid before each House of Parliament.

Power to issue directions

39. The Central Government may, with the object of prevention, control and eradication of any infectious or contagious disease of animals, issue such directions to the State Government or other authorities under this Act, from time to time, including directions for furnishing such returns and statistics on scheduled diseases, and vaccination, as it may deem fit and every such direction shall be complied with.

Certain persons to be public servants

40. Every Competent Officer, Director and Veterinary Officer, while exercising any power or performing any duty under this Act, shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code.(45 of 1860)

Power to remove difficulties

41.(*1*) If any difficulty arises in giving effect to the provisions of this Act, the Central Government may, by order published in the Official Gazette, make such provisions, not

inconsistent with the provisions of this Act, as appear to it to be necessary or expedient for removing the difficulty:

Provided that no such order shall be made after the expiry of a period of two years from the date of commencement of this Act.

(*2*) Every order made under this section shall, as soon as may be after it is made, be laid before each House of Parliament

Power of Central Government to make rules

42. (*1*) The Central Government may, subject to the condition of previous publication, by notification, make rules for carrying out the provisions of this Act.

(*2*) In particular and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

(*a*) the form of vaccination certificate and the particulars which such certificate shall contain, under section 9;

(*c*) the manner of disposal of carcass, under section 26;

(*d*) the manner of conducting examination and post-mortem under sub-section (*1*) and the form of report of post-mortem under sub-section (2) of section 27;

(*e*) any other matter which may be prescribed or in respect of which rules are required to be made by the Central Government.

Power of State Government to make rules

43.(*1*) The State Government may, by notification and with the prior approval of the Central Government, make rules for carrying out the purposes of this Act.

(*2*) In particular and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

(*a*) the form of permit to be granted by the officer in charge of a Quarantine Camp, under sub-section (4) of section 14;

(*b*) the manner of inspection and the period of detention of an animal at a Check Post or at a Quarantine Camp for the administration of compulsory vaccination and marking of animals and the form and manner of issue of entry permit, under subsection (2) of section 15;

(*c*) any other matter in respect of which rule is to be or may be made by the State Government.

Laying of rules

44. (*1*) Every rule made by the Central Government under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or

both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

(2) Every rule made by the State Government under this Act shall be laid, as soon as may be after it is made, before the State Legislature.

Repeal and savings

45. On the commencement of this Act—

(*i*) The Glanders and Farcy Act, 1 899 (13 of 1899);

(*ii*) The Dourine Act, 1910 (5 of 1910), and

(*iii*) any other corresponding law of any State, so far as it is inconsistent with the provisions of this Act, shall stand repealed:

Provided that nothing contained in this section shall—

(*a*) affect the previous operation of any such provision of law or anything duly done or suffered thereunder;

(*b*) affect any right, privilege, obligation or liability acquired, accrued or incurred under any such provision of law;

(*c*) affect any penalty, forfeiture or punishment incurred in respect of any offence committed against any such provision of law; or

(*d*) affect any investigation, legal proceeding or remedy in respect of any such right, privilege, obligation, liability, penalty, forfeiture or punishment as aforesaid; and every such investigation, legal proceeding or remedy may be continued, instituted or enforced, and any such penalty, forfeiture and punishment may be imposed, as if the aforesaid provisions of law had continued:

Provided further that, anything done or any action taken under any such provision of law, including any notification, order, notice or receipt issued or declaration made, shall in so far as it is not inconsistent with the provisions of this Act, be deemed to have been done, taken, issued or made under the corresponding provisions of this Act, and shall continue in force accordingly, unless and until superseded by anything done or any action taken under this Act.

THE SCHEDULE

(*a*) Multiple species diseases

1. Anthrax.
2. Aujeszky's disease.
3. Bluetongue.
4. Brucellosis.
5. Crimean Congo haemorrhagic fever.
6. Echinococcosis/ hydatidosis.
7. Foot and mouth disease.
8. Heartwater.
9. Japanese encephalitis.
10. Leptospirosis.
11. New world screwworm (*Cochliomyia hommivorax*).
12. Old world screwworm (*Chrysomya bezziana*).
13. Paratuberculosis.
14. Q fever.
15. Rabies.
16. Rift Valley fever.
17. Rinderpest.
18. Trichinellosis.
19. Tularemia.
20. Vesicular stomatitis.
21. West Nile fever.

(*b*) Cattle diseases

1. Bovine anaplasmosis.
2. Bovine babesiosis.
3. Bovine genital campylobacteriosis.
4. Bovine spongiform encephalopathy.
5. Bovine tuberculosis.
6. Bovine viral diarrhoea.
7. Contagious bovine pleuropneumonia.
8. Enzootic bovine leucosis.
9. Haemorrhagic septicemia.
10. Infectious bovine rhinotracheitis / infectious pustular vulvovaginitis.
11. Lumpy skin disease.
12. Malignant catarrhal fever.
13. Theileriosis.
14. Trichomonosis.
15. Trypanosomosis.

(*c*) Sheep and goat diseases

1. Caprine arthritis/encephalitis.
2. Contagious agalactia.
3. Contagious caprine pleuropneumonia.
4. Enzootic abortion of ewes (ovine chlamydiosis).
5. Maedi-visna.
6. Nairobi sheep disease.
7. Ovine epididymitis {*Brucella ovis*).
8. Peste des petits ruminants.
9. Salmonellosis (*S. abortusovis*).
10. Scrapie.
11. Sheep pox and goat pox.

(*d*) Equine diseases

1. African horse sickness.
2. Contagious equine metritis.
3. Dourine.
4. Equine encephalomyelitis (Eastern).
5. Equine encephalomyelitis (Western).
6. Equine infectious anemia.
7. Equine Influenza.
8. Equine piroplasmosis.
9. Equine rhinopneumonitis.
10. Equine viral arteritis.
11. Glanders.
12. Surra (*Trypanosoma evansi*).
13. Venezuelan equine encephalomyelitis.

(*e*) Swine diseases

1. African swine fever.
2. Classical swine fever.
3. Nipah virus encephalitis.
4. Porcine cysticercosis.
5. Porcine reproductive and respiratory syndrome.
6. Swine vesicular disease.
7. Transmissible gastroenteritis.

(f) Avian diseases

1. Avian chlamydiosis.
2. Avian infectious bronchitis.
3. Avian infectious laryngotracheitis.
4. Avian mycoplasmosis (*M gallisepticum*).
5. Avian mycoplasmosis (*M. synoviae*).
6. Duck virus hepatitis.
7. Fowl cholera.
8. Fowl typhoid.
9. Highly pathogenic avian influenza and low pathogenic avian influenza in poultry.
10. Infectious bursal disease (*Gumboro disease*).
11. Marek's disease.
12. Newcastle disease.
13. Pullorum disease.
14. Turkey rhinotracheitis.

(g) Lagomorph diseases

1. Myxomatosis.
2. Rabbit hemorrhagic disease.

(h) Bee diseases

1. Acarapisosis of honey bees.
2. American foulbrood of honey bees.
3. European foulbrood of honey bees.
4. Small hive bettle infestation (Aethina tumida).
5. Tropilaelaps infestation of honey bees.
6. Varroosis of honey bees.

(i) Fish diseases

1. Epizootic haematopoietic necrosis.
2. Infectious haematopoietic necrosis.
3. Spring viraemia of carp.
4. Viral haemorrhagic septicaemia.
5. Infectious pancreatic necrosis.
6. Infectious salmon anaemia.
7. Epizootic ulcerative syndrome.
8. Bacterial kidney disease (*Renibactehum salmoninarum*).
9. Gyrodactylosis (*Gyrodactylus salans*).
10. Red sea bream iridoviral disease.

(j) Mollusc diseases

1. Infection with Bonamia ostreae.
2. Infection with Bonamia exitiosa.
3. Infection with Marteilia refringens.
4. Infection with Mikrocytos mackini.
5. Infection with Perkinsus marinus.
6. Infection with Perkinsus olseni.
7. Infection with Xenohaliotis californiensis.

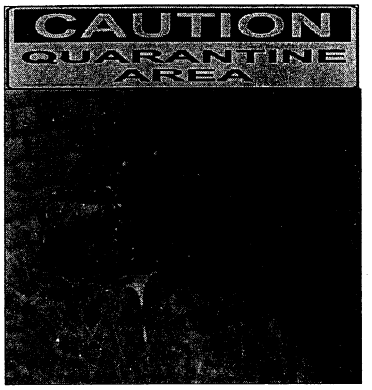
(k) Crustacean diseases

1. Taura syndrome.
2. White spot disease.
3. Yellowhead disease.
4. Tetrahedral baculovirosis (*Baculovirus penaei*).
5. Spherical baculovirosis (*Penaeus monodon-type baculovirus*).
6. Infectious hypodermal & haematopoietic necrosis
7. Crayfish plague (*Aphanomyces astaci*).

(l) Other diseases

1. Camelpox.
2. Leishmaniosis.

SUMMARY OF THE PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES IN ANIMALS ACT, 2009



Rabies in cattle

The act has been compiled by the Ministry of Law and Justice for the

(*a*) Prevent, control and eradicate infectious diseases affecting animals

(*b*) Prevent the spread of such disease from one state to another, and

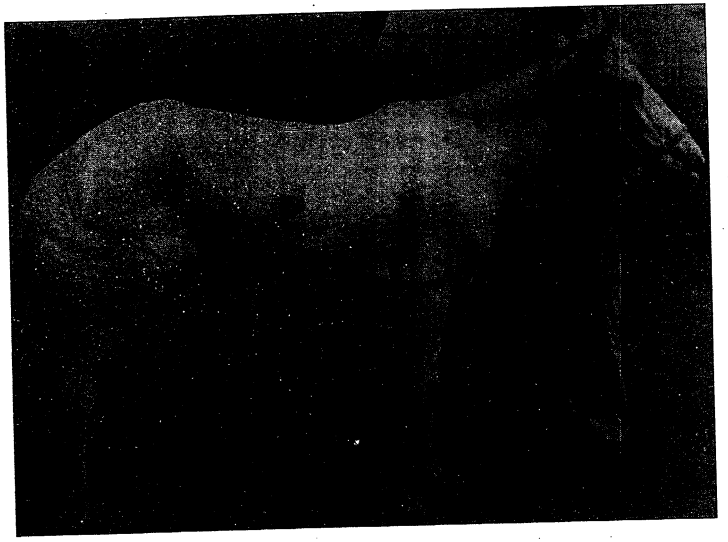
(*c*) Fulfil requirements of the International Animal Health Code for facilitating the import and export of animals and animal products, and other related issues

- The Act repeals the Glanders and Farcy Act, 1899, the Dourine Act, 1910 and any law of any state inconsistent with the provisions of the Act.
- If a person, public body or village panchayat suspects that any animal under its charge is infected with a scheduled disease (disease listed in the schedule of the Act), he is required to report the matter to the village officer and nearest veterinarian.
- Neighbouring states will be intimated about the occurrence of the scheduled disease so as to enable them to take precautionary measures.
- All animals infected or suspected to be infected with a scheduled disease will be segregated and prevented from grazing or drinking water from a common source.
- The state government can notify any area as a controlled area with respect to any scheduled disease. All animals in the area will be vaccinated by vaccines made available by the state government.
- All vaccinated animals shall be marked and a certificate of vaccination specifying date of vaccination, date of manufacture and expiry of the vaccine and the date until which the vaccine shall be valid will be issued.

- No person will be allowed to take out of the controlled area any infected animal (whether dead or alive), fodder, bedding or any material that has come into contact with the infected animal or the carcass, skin or any other part of the animal.
- Animal fairs, exhibitions or any grouping of animals shall be prohibited unless permitted by the competent authority.
- If the state government is satisfied that the disease is no longer prevalent, it can declare the area as a free area.
- An animal of the species or any susceptible species can enter into or exit from a controlled or free area only if it has been vaccinated at least 21 days before the date of movement.
- A veterinary officer can notify an area within his jurisdiction as an infected area if an animal is infected with any scheduled disease. Every infected animal will be treated by the veterinarian and all objects that have come into contact with the animal shall be disposed off as directed. The veterinary officer can also order euthanasia of an infected animal. All provisions of the Act applicable to controlled areas shall be applicable to infected areas.
- The veterinary officer can draw samples from an animal to ascertain
  - (*a*) whether the animal is infected, or
  - (*b*) the nature of the scheduled disease or
  - (*c*) whether the animal has been vaccinated or whether the vaccine has been effective. He can order the post-mortem of a body if he believes that the death has been caused by a scheduled disease.
- Quarantine camps and check posts may be established for detention of animals that are infected or have come into contact with infected animals and for ensuring prevention of entry into or exit of such animals from the controlled, free or infected areas.
- All common carriers (vessels/ vehicles) and any place used to keep animals in transit will be cleaned and disinfected before and after transporting animals.
- Every laboratory engaged in the manufacture or research related to vaccines or drugs aimed at prevention or treatment of scheduled diseases will have to take adequate precautionary measures to prevent escape of causative organism and ensure remedial measures in case of escape. Every animal used for manufacturing, testing or research or which is likely to transmit any scheduled disease will be administered euthanasia and disposed off.
- The Act prescribes penalties for administering defective vaccines, issuing vaccination certificate without authority, obstructing competent authority from performing his duties, placing carcass of an infected animal in any water body

THE GLANDERS AND FARCY ACT, 1899

(*13 of 1899*)



Glanders in horse

An Act to consolidate and amend the Law relating to Glanders and Farcy.

1. Short title, extent and commencement

This Act may be called the Glanders and Farcy Act. 1899 and it extends to whole of the British India.

2. Definition of diseased

(1) In this Act "diseased" means affected with Glanders or Farcy or any other dangerous epidemic disease among horses;

(2) The provision of this Act relating to Horses shall apply also to Asses and Mules.

3. Application of Act to local areas by local Government

The local Government may apply this Act to any local area to be specified in such notification, within the province.

4. Local Government to appoint Inspectors

The local Government appoint such persons as it thinks fit to be Inspectors under this Act and to exercise and perform the powers conferred and the duties imposed by this Act on such officers.

5. Power of entry and search

An Inspector can enter and search any place for the purpose of ascertaining whether there is any horse, which is diseased.

6. Power of seizure

The Inspector may seize any horse, which he has reasoned to believe is diseased.

7. Horse to be examined by veterinary practitioner

On any such seizure the Inspector shall cause the horse seized to be examined as soon as possible by a veterinary practitioner who may subject the horse to any test.

8. Horse to be destroyed if found diseased: otherwise restored

If the Veterinary Practitioner certifies in writing that the horse is diseased, the Inspector shall cause the same to be immediately destroyed.

If, after completing the examination, the veterinary practitioner certifies that the horse is not diseased the Inspector shall at once deliver the same to the owner.

9. When horse diseased, place where it has been to be disinfected

If a diseased horse has been kept at a place, the inspector may issue a notice to the owner of that building, directing him to have the same disinfected.

If the owner fails to comply with the notice within a reasonable time, the Inspector shall have the place disinfected and the expense thereby incurred may be recovered from the owner as if it were a fine.

10. Owner or person incharge of diseased horse to give notice

The owner of a diseased horse shall give immediate information to the inspector about the sickness of the horse.

11. Prohibition against removal, without license, of horse, which has been with diseased horse

No person in charge of any horse, which has been in the same place as, or in contact with a diseased horse, shall remove without permission.

12. Vexatious entries, searches and seizures

An inspector appointed under this Act, vexatiously and unnecessarily enters or searches a place, or detains any horse on the pretence that it is diseased, shall be punishable with imprisonment for a term which may extend to six months, or with fine which may extend to five hundred rupees, or with both.

13. Penalty for refusing to comply with notice under section 9 or for removing horse contrary to section 11

Whoever refuses or neglects to comply with any notice issued by the inspector under section 9, or removes any horse in contravention of section 11, shall be punishable with

imprisonment for a term, which may extend to one month or with fine which may extend to fifty rupees, or with both.

14. Power to make rules

The Local Government may make rules to carry out the purposes and objective of this Act and such rules may-

(*a*) regulate entries, searches and seizures by Inspector under this Act;

(*b*) regulate the use of tests and isolation of horses subjected thereto and provide for recovering the expenses of detaining isolating and testing horses from the owners or persons incharge thereof as if it were fine;

(*c*) regulate the destruction or treatment, as case may be, of horses certified under section 8 to be diseased, and the disposal of the carcass of diseased horses;

(*d*) regulate the disinfecting of the buildings and places in which diseased horses have been, and prescribe what things found therein or near thereto shall be destroyed; and

(*e*) regulate the grant of licenses under section 11.

Any breach of this Act shall be punishable, with imprisonment for a term, which may extend to one month, or with a fine, which may extend to fifty rupees, or with both.

15. Appointment of some person to be both Inspector and veterinary practitioner

Any veterinary practitioner may be appointed by the local Government to be both Inspector and veterinary practitioner for all or any of the purposes of this Act, or any rule thereunder.

16. Protection to persons acting under the Act

No legal proceeding shall be held against any person for anything, which is done in good faith under this Act.

17. Repeal

The enactment mentioned in the Schedule is hereby repealed to the extent specified in the fourth column thereof.

THE DOURINE ACT, 1910

5 of 1910 [25 Feb, 1910];
(As modified upto the Ist January, 1957)

An Act to provide, for the prevention of the spread of dourine.

1. Short title and extent

This Act may be called the Dourine Act, 1910 and it extends to whole of India except in Part B States.

2. Definition

(1) In this Act, the expressions "inspector" and "veterinary practitioner" means, respectively, the officers appointed as such under this Act.

(2) The provisions of this Act as they relate to entire horses shall also apply to Asses used for Mule-breeding purposes.

3. Registration of horses

The State Government may make orders, as it thinks fit directing and regulating the registration of entire horses maintained for breeding purposes.

4. Appointment of Inspectors and veterinary practitioners

(1) The local Government appoint such persons as it thinks fit to be Inspectors and any qualified veterinary surgeons to be veterinary practitioners under this Act and to exercise and perform the powers conferred and the duties imposed by this Act on such officers.

(2) Every person so appointed shall be deemed to be public servant within the meaning of IPC (45 of 1860).

5. Powers of Inspector

An Inspector may-

(*a*) enter and search any building, field or other place for the purpose of ascertaining whether there is any horse which is affected with dourine;

(*b*) prohibit, order in writing, the owner or keeper of any horse, which in his opinion is affected with dourine, from using such horse for breeding purposes, pending examination by the veterinary practitioner;

(*c*) direct the owner of the diseased horse to remove and segregate at a specified place.

6. Duties of Inspectors

An Inspector issuing an order under section 5 shall forward a copy to veterinary practitioner.

7. Inspection of horses

A veterinary practitioner receiving a copy of an order examines the horse mentioned therein, and for such purpose he may enter any building, field or other place.

8. Powers of veterinary practitioner

A veterinary practitioner may –

(*a*) cancel any order issued under section 5; or

(*b*) if by microscopic examination or by other scientific test he finds that any horse is affected with dourine:

(*i*) in the case of an entire horse, cause it to be castrated;

(*ii*) in case of a mare cause it to be destroyed.

9. Compensation

To provide the compensation for a horse destroyed under Section 8, the market value of such a horse immediately before it became affected with dourine shall be ascertained and the State Government shall pay as compensation to the owner thereof:

(*a*) In the case of a mare, which has been destroyed or of an entire horse which has died as a consequence of castration;

(*b*) In the case of an entire horse, which survives castration, half the amount to which such value has been diminished owing to infection with dourine and castration.

10. Settlement of compensation

(1) The compensation in respect for each horse castrated or destroyed under section 8, is a sum not exceeding two hundred and fifty rupees.

(2) If in the opinion of the veterinary practitioner the amount, which should be paid as compensation, exceeds two hundred and fifty rupees, he shall report accordingly to the Collector, who shall decide the amount to be so paid.

11. Committees for hearing appeals

The State Government shall make provisions for constitution appeals, of a committee for the hearing of appeals against decisions under section 10.

12. Appeals

Any owner may, within two months from the date of decision under section 10, appeal against a decision to the committee constituted on the behalf of rules made under Section 11, and the decision of such a committee shall be final.

13. Vexatious entries and searches

Similar to that mentioned in Glanders and Farcy Act, 1899.

14. Rules

The State Government may make rules for the purpose of carrying into effect the provisions of this Act and such rules may

(*a*) regulate the powers conferred in Inspector under section 5; and

(*b*) regulate the action to be taken by the veterinary practitioner under section 8;

and a breach of it shall be punishable with fine, which may extend to fifty rupees.

15. Penalties

Whoever uses horse for breeding purpose-

(1) Which has either not been registered in accordance with the requirements notification under section 3, or

(2) Any horse in respect of which an order under clause (*b*) or clause (*c*) of section 5 is force, shall be punishable with fine which may amount, in the case of a first conviction, fifty rupees, or in the case of a second or subsequent conviction, to one hundred rupees.

16. Protection to persons acting under

No suit, prosecution or other legal proceeding shall lie against any person for anythi which is done or intended to be done in good faith, under this Act.

THE LIVSTOCK IMPORTATION ACT, 1898

9 of 1898[12 Aug, 1898]

An Act to make better provision for the regulation of the importation of livestock. The import of animals is regulated according to the Livestock Importation Act, 1898. It was amended in 1953 and subsequently Model Livestock Importation rule, 1961 have been framed under this Act.

1. Short title and local extent

This Act may be called the Livestock Importation Act, 1898.

2. Definition

(*a*) The expression "infectious or contagious disorder" includes tickpest, anthrax, glanders, farcy, scabies and any other disease or disorder, which may be specified by the Central Government;

(*b*) "livestock" includes horse, swine, camel and any other animal which may be specified by the Central Government;

(*c*) "import" means the bringing or taking by sea, land or air into the territories to which this Act extends.

3. Power to regulate importation of livestock

(1) The Central Government regulates restricts or prohibits the import of livestock from foreign countries in such a manner or to such an extent, as it may deem fit, into the territories to which this Act extends, or any specified places therein of any livestock, which may be liable to be affected by fodder, dung stable, litter, clothing harness or fittings appertaining to livestock or that may have been in contact therewith.

Generally it is necessary to obtain import license for import of livestock. However there are following provisions in this rule, which are exempted from the restriction of the Import Trade Control on furnishing the health certificate to the customs authorities.

Provision 4: The clearance of one dog, pet animals and birds in a limited number may be allowed without Import Trade Control restrictions on furnishing the following certificates to the custom authorities:

(*i*) A health certificate from the veterinary officer in the country of export to the effect that the dog is free from Aujesky's disease, Distemper, Rabies, Leishmaniasis and Leptospirosis and in case of cats from Rabies and Distemper.

(*ii*) If rabies exists in the country of origin then the details and the types of the rabies vaccination.

(*iii*) In case of parrots ascertain freedom from psittacosis.

Import of horses

Brood mares and stallions if imported solely for breeding purpose and not for racing are exempt from the custom duty. These horses should be free from any contagious or infectious disease.

Model Rules, 1961

The diseases or disorders which were declared to be contagious or infectious for the purpose of this Act are given in Schedule II of the model Rules, 1961.

1. These rules may be called the Livestock (Import) Quarantine Rules.

   In these rule unless the context otherwise requires,

   (*a*) "carcass' means the carcass of livestock and includes part of a carcass and the flesh, bones, skin, hooves, offal or any other part of any dead livestock separately or otherwise any portion thereof;

   (*b*) "diseased" means suffering from any infectious or contagious disorder;

   (*c*) "import" means to bring by sea into the state from any place outside India;

   (*d*) "importer" means a person in whose name the bill of landing is made;

   (*e*) "exporter" means the person who is the owner of livestock in the country or export;

   (*f*) "Quarantine" means detention and segregation of livestock newly arrived (landed from on board a ship) for observation and testing in order to keep such livestock separate from other livestock for the prescribed period;

   (*g*) "Schedule" means Schedule annexed to these rules.

   (*h*) "valid certificate' means a certificate which is in respect of (1) livestock (other than poultry) imported from any country included in column (2) of the Schedule I granted by the authority specified in column (3) thereof to the effect that such livestock was examined within thirty days prior to the embarkation and found to be free from all signs and symptoms of diseases specified in Schedule III such livestock was subjected to the tests specified therein with negative results within thirty days prior to actual embarkation.

2. Poultry, including the day old chicks, imported from any country, as specified in Schedule I, require prior to embarkation statement signed by authority thereof to the effect that:

   (*i*) The flock from which the consignment of poultry is drawn has been free from the diseases listed at E2 to E14 in Schedule II for a period of at least one-year prior to embarkation.

   (*ii*) In respect of Avian Leucosis Complex mentioned at E1 in Schedule II, the flock from which the consignment of poultry is drawn have been free from the diseases for a period of at least one year prior to embarkation.

   (*iii*) In respect of diseases listed in Schedule III the adult poultry birds, which are either themselves being exported or from which day old chicks or immature chicks are included in the consignment are subjected to the tests specified therein with negative results immediately prior to embarkation.

3. No livestock shall be imported, except along with a valid certificate.

4. A declaration by the exporter that the chicks were:

   (*i*) Hatched in an incubator in which no eggs from infected birds had been hatched and the incubator was properly fumigated and disinfected prior to hatching.

   (*ii*) Packed directly from the incubator into new boxes for export and there was no contact with any birds other than day old chicks.

5. The imported birds shall be kept under observation for a period of twenty-one days and imported baby chicks for a period of fifty-six days on the importer's premises. The importer will immediately inform of any bird dying during the observation period.

6. The officer in charge of the aircraft or the vessel, on entering the port will allow the veterinary officer to inspect the livestock on board and furnish him the following information:

   - Number and kind of livestock on board
   - The occurrence of any sickness/death during voyage

7. The veterinary officer will go on to board the vessel and inspect the livestock.

8. The veterinary officer may order quarantine of any imported livestock.

   - Any livestock at the time of importation is the property of the Government and the imported livestock is kept in the quarantine for a specified period.

9. The duration of quarantine may, at the discretion of the veterinary officer, extend to a period not exceeding ninety days.

10. All livestock detained in quarantine shall be removed from the vessel/aircraft by the importer or his authorized agent and taken to the place of quarantine.

11. All livestock detained in quarantine shall be under the control of the veterinary officer.

12. All expenses in connection with the landing till the removal of the quarantine are borne by the importer.

13. (*a*) Unvaccinated dogs and cats originating from countries where rabies exists shall be vaccinated on arrival and quarantined for a period of 30-45 days.

    (*b*) Unvaccinated dogs and cats originating from countries free from rabies shall be vaccinated on arrival and kept under restraint by the importer for one month.

    The cost of vaccination, feeding and other expenses shall be borne by the importer.

14. In case any eggs are laid during the transit and remain un-hatched, they shall be disposed of in a manner prescribed by the veterinary officer.

15. Any imported animals, which the veterinary officer finds are diseased, shall be destroyed and the carcass buried or cremated and no compensation shall be payable to the importer.

16. All fodder, dung or other things in contact with the diseased animal shall be disposed off.

17. The veterinary officer may be, by notice informs the officer in charge to disinfect the aircraft/vessel or vehicle.

18. With respect to every head of livestock detained in quarantine, the importer shall deposit within five days of landing of such livestock, a sum of money as prescribed by the Government.

19. After the specified period if all livestock in detention are free from any disease, then the veterinary officer will give the health certificate and the livestock will be released after clearing dues paid by the importer.

20. In default payment of charges due on any livestock or if the livestock is not removed by the importer within seven days of the issue of notice, such livestock shall be sold by public auction and the charges shall be deducted from the amount released.

21. The importer on payment of fee shall be entitled on demand to a certificate to the effect that the livestock has been subjected to the required tests and has been found free from diseases specified in Schedule III.

22. The penalty for breach of this Act will be a fine extending to one thousand rupees with respect to each such breach.

23. An appeal against an order passed by the veterinary officer, under any of these rules other than Rule 15 shall lie with the Director of Animal Husbandry within a period of 15 days from the date of such order.

24. Any order passed by the Director of Animal Husbandry under Rule 23 may be reviewed by the state Government.

LIVESTOCK IMPORTATION (AMENDMENT) ORDINANCE, 2001

[5th July, 2001]

The Livestock Importation Act, 1898 (9 of 1898) has been amended vide the Livestock Importation (Amendment) Ordinance, 2001. Prior to amendment, the said Act was applicable only for livestock whereas livestock products were not regulated under the Act. The amendment to the said Act has been made to regulate the import of livestock products in such manner that these imports do not adversely affect the human and animal health population of the country. In exercise of the powers of the Central Government under the amended Livestock Importation Act, 1898, the Department of Animal Husbandry and Dairying has issued the following notification dated 7th July, 2001 to regulate the import of livestock products as per the procedure laid down in the Schedule X.

NOTIFICATION

S.O. 655 (E) - In exercise of the powers conferred by Section 3A of the Live-stock Importation Act, 1898 (9 of 1898), the Central Government hereby restricts, with effect from the date of publication of this notification in the Official Gazette, the import into India of all live-stock products, including -

(*i*) meat and meat products of all kinds including fresh, chilled and frozen meat , tissue or organs of poultry, pig, sheep, goat;

(*ii*) egg and egg powder;

(*iii*) milk and milk products;

(*iv*) bovine, ovine and caprine embryos, ova or semen; and

(*v*) pet food products of animal origin.

2. The import of these products shall be allowed only against a sanitary import permit to be issued by this Department as per the procedure laid down in the Schedule annexed to this notification.

SCHEDULE

Procedure for import of livestock products into India

All live-stock products shall be imported into India subject to the following conditions, namely:-

(1) No live-stock product shall be imported into India without a valid sanitary import permit issued under clause (3).

(2) All applications for a permit to import consignments by land, air or sea shall be made in either Form A or Form B, whichever is relevant, and sent in triplicate to the Joint Secretary, Trade Division, Department of Animal Husbandry & Dairying, Ministry of Agriculture, Government of India.

(3) (*i*) The sanitary import permit shall be issued for import of livestock products if, after a detailed import risk analysis, the concerned authorities are satisfied that the import of the consignment will not adversely affect the health of the animal and human populations of this country.

(*ii*) The import risk analysis shall be conducted by the concerned officers of the Department on the basis of internationally recognized scientific principles of risk analysis and the analysis shall be conducted with reference to the specific product and the disease situation prevailing in the exporting country vis-a-vis the disease situation in India.

(*iii*) The issue of permits shall be refused if the results of the import risk analysis show that there is a risk of the specific product bringing in one or more specific diseases, which are not prevalent in the country and which could adversely affect the health and safety of the human and animal populations of this country.

(*iv*) The import permit shall lay down the specific conditions that will have to be fulfilled in respect of the consignment, including pre-shipment certifications and quarantine checks.

(*v*) The permit shall also specify the post-import requirements with regard to quarantine inspections, sampling and testing.

(*vi*) The import permit issued under this clause shall be valid for a period of six months, but can be extended by the concerned authority for a further period of six months, on request from the importer and for reasons to be recorded in writing.

(4) All livestock products shall be imported into India through the seaports or airports located at Delhi, Mumbai, Kolkata and Chennai, where the Animal Quarantine and Certification Services Stations are located.

(5) (*i*) On arrival at the entry point, the livestock product shall be inspected by the Officer-in-charge of the Animal Quarantine & Certification Services Station or any other veterinary officer duly authorized by the Department Of Animal Husbandry and Dairying, wherever required, in accordance with the specific conditions laid down in the sanitary import permit and with general guidelines issued by the Department of Animal Husbandry and Dairying from time to time.

(*ii*) After inspection and testing, where-ever required, the concerned quarantine or veterinary authority shall accord quarantine clearance for the entry of the livestock product into India or, if required in public interest, order its destruction or its return to the country of origin.

(*iii*) Where ever disinfection or any other treatment is considered necessary in respect of any livestock product, the importer shall, on his own or at his cost through an agency approved by the Department of Animal Husbandry and Dairying, arrange for disinfection or other treatment of the consignment, under the supervision of a duly authorized quarantine or veterinary officer.

(6) It shall be the responsibility of the importer -

(*a*) to bring the livestock product to the concerned Animal Quarantine & Certification Services Station, or to the place of inspection, disinfection or treatment or testing as directed by the Quarantine or veterinary officer duly authorized on this behalf;

(*b*) to open, repack and load into or unload from the Animal Quarantine Station and seal the consignment; and

(*c*) to remove them after inspection and treatment or testing, according to the directions of the Quarantine or veterinary officer duly authorized by the Department.

(7) The Central Government may, in public interest, relax any of the conditions specified under this Schedule relating to the permit in relation to the import of any live-stock product.



14

Acts/Rules Related to Public Health, Drugs and Poisons



CHAPTER OUTLINE

- Bio-Medical Waste (Management and Handling) Rules, 1998
- **The Drugs and Cosmetics Act, 1940**
- The Drugs and Cosmetic Rules, 1945
- **Narcotic Drugs and Psychotropic Substances Act, 1985**

Note: *Two of the laws, The Poisons Act and the Dangerous Drugs ~~Act~~ were passed in 1919 and 1930 respectively. The Opium Act was quite old having being adopted as early as 1878. In 1985, ~~the~~ Narcotic Drugs and Psychotropic Substances Act was enacted repealing the Dangerous Drugs Act 1930 and the Opium Act of 1878.*

BIO-MEDICAL WASTE (MANAGEMENT AND HANDLING) RULES, 1998

S.O. 630 (E)

(As amended upto September, 2001)



In exercise of the powers conferred by section 6.8 and 25 of the Environment (Protection) Act. 1986 the Central Government hereby notifies the rules for the management and handling of bio-medical waste.

1. Short title and commencement

These rules may be called the Bio-Medical Waste (Management and Handling) Rules, 1998.

2. Application

These rules apply to all persons who generate, collect, receive, store, transport, treat, dispose, or handle biomedical waste in any form.

3. Definitions

In these rules unless the context otherwise requires;

(1) "Act" means the Environment (Protection) Act, 1986 (29 of 1986);

(2) "animal house" means a place where animals are reared/kept for experiments or testing purpose;

(3) "authorization" means permission granted by the prescribed authority for the generation, collection. reception, storage, transportation, treatment, disposal and/or any other form of handling of bio-medical-waste in accordance with these rules and any guidelines issued by the Central Government;

(4) "authorized person" means an occupier or operator authorized by the prescribed authority to generate collect, receive, store, transport, treat, dispose and/or handle bio-medical waste in accordance with these rules and any guidelines issued by the Central Government;

(5) "bio-medical waste" means any waste, which is generated during the diagnosis, treatment or immunisation of human beings or animals or in research activities pertaining thereto or in the production of testing of biological. and including categories mentioned in Schedule I;

(6) "biologicals" means any preparation made from organisms or micro-organisms or product or metabolism and biochemical reactions intended for use in the diagnosis immunisation or the treatment of human beings or animals or in research activities pertaining there to;

(7) "bio-medical waste treatment facility" means any facility wherein treatments disposal of bio-medical waste or processes incidental to such treatment or disposal is carried out;

(8) "occupier" in relation to any institution generating biomedical waste, which includes a hospital, nursing home clinic dispensary, veterinary institution, animal house, pathological laboratory, blood bank by whatever name called, means a person who has control over that institution and/or its premises;

(9) "operator of a bio-medical waste facility" means a person who owns or controls or operates a facility for the collection, reception, storage, transport, treatment, disposal or any other form of handling of bio-medical waste;

(10) "Schedule" means schedule appended to these rules.

4. Duty of occupier

It shall be the duty of every occupier of an institution generating bio-medical waste to take all steps to ensure that such waste is handled without any adverse effect to human health and the environment.

5. Treatment and disposal

(1) Bio-medical waste shall be treated and disposed of in accordance with Schedule I and in compliance with the standards prescribed in Schedule V.

(2) Every occupier, where required, shall set up in accordance with the time-schedule in Schedule VI. Requisite bio-medical waste treatment facilities like incinerator, autoclave, microwave system for the treatment of waste, or, ensure requisite treatment of waste at a common waste treatment facility or any oilier waste treatment facility.

6. Segregation, packaging, transportation and storage

(1) Bio-medical waste shall not be mixed with other wastes.

(2) Bio-medical waste shall be segregated into containers/bags at the point of generation in accordance with Schedule II prior to its storage, transportation, treatment and disposal. The containers shall be labeled according to Schedule III.

(3) If a container is transported from the premises where biomedical waste is generated to any waste treatment facility outside the premises, the container shall, apart from the label prescribed in Schedule III, also carry information prescribed in Schedule IV.

(4) Untreated bio- medical waste shall be transported only in specified vehicles.

(5) No untreated bio-medical waste shall be kept stored beyond a period of 48 hours without permission from the concerned authority.

(6) The Municipal body of the area shall continue to pick up bio-medical wastes for disposal at municipal dumpsite.

7. Prescribed authority

The prescribed authority for enforcement of the provisions of these rules shall be the State Pollution Control Boards in respect of States and the Pollution Control Committees in respect of the Union Territories.

8. Authorization

Every occupier of an institution and every operator of disposing and/or handling bio-medical waste in any other manner shall make an application in Form I to the prescribed authority for grant of authorization.

9. Advisory committee

The Government of every State/Union Territory shall constitute an advisory committee. The committee will include experts in the field of medical and health, animal husbandry and veterinary sciences, environmental management, municipal administration, and any other related department or organization including non-governmental organizations. As and when required, the committee shall advise the Government of the State/ Union Territory and the prescribed authority on matters related to the implementation of these rules.

10. Annual report

Every occupier/operator shall submit an annual report to the prescribed authority in Form II by 31 January every year, to include information about the categories and quantities of bio-medical wastes handled during the preceding year. The prescribed authority shall send this information to the Central Pollution Control Board by 31 March every year.

11. Maintenance of records

(1) Every authorized person shall maintain records related to, disposal and/ or any form of handling of bio-medical waste in accordance with these rules and any guidelines issued.

(2) All records shall be subject to inspection and verification by the prescribed authority at any time.

12. Accident reporting

When any accident occurs where bio-medical waste is handled or during transportation of such waste, the authorized person shall report the accident in Form III to the prescribed authority forth with.

13. Appeal

Any person aggrieved by an order made by the prescribed authority under these rules may, within thirty days from the date on which the order is communicated to him, prefer an appeal to such authority.

14. Common disposal/incineration sites

The Municipal Corporations or Urban Local Bodies shall be responsible for providing suitable common disposal/incineration sites for the biomedical wastes generated in the area under their jurisdiction.

SCHEDULE I

CATEGORIES OF BIO MEDICAL WASTE

Waste Category No.	Waste Category (Type)	Treatment and Disposal (option)
1	Human Anatomical Waste (human tissues, organs, body parts)	Incineration[@]/ deep burial[*]
2	Animal Waste (animal tissues, organs, body parts carcasses, bleeding parts, fluid, blood and experimental animals used in research, waste generated by veterinary hospitals colleges, discharge from hospitals, animal houses)	Incineration[@]/ deep burial[*]
3	Microbiology & Biotechnology Waste (wastes from laboratory cultures, stocks or specimens of micro-organisms live or attenuated vaccines, human and animal cell culture used in research and infectious agents from research and industrial laboratories, wastes from production of biologicals. toxins, dishes and devices used for transfer of cultures)	Local autoclaving/ microwaving/ incineration[@]
4	Waste sharps (needles, syringes, scalpels, blades, glass, etc. that may cause puncture and cuts. This includes both used and unused sharps)	Chemical treatment[@@]/ autoclaving/ micro-waving and mutilation/ shredding [##]
5	Discarded Medicines and Cytotoxic drugs (wastes comprising of outdated, contaminated and discarded medicines)	Incineration[@]/ destruction and drugs disposal in secured landfills
6	Solid Waste (Items contaminated with blood, and body fluids including cotton. dressings, soiled plaster casts, lines, beddings, other material contaminated with blood)	Incineration[@] autoclaving/ microwaving
7	Solid Waste (wastes generated from disposable items other than the waste sharps such as tubings, catheters, intravenous sets etc),	Chemical treatment[@@] autoclaving/ microwaving and mutilation/ shredding[##]
8	Liquid Waste (waste generated from laboratory and washing, cleaning, house-keeping and disinfecting activities)	Disinfection by chemical treatment[@@] and discharge into drains.

9	Incineration Ash (ash from incineration of any bio-medical waste)	Disposal in municipal landfill
10	Chemical Waste (chemicals used in production of biologicals. chemicals used in disinfection, as insecticides, etc.)	Chemical treatment@@ and discharge into drains for liquids and secured landfill for solids

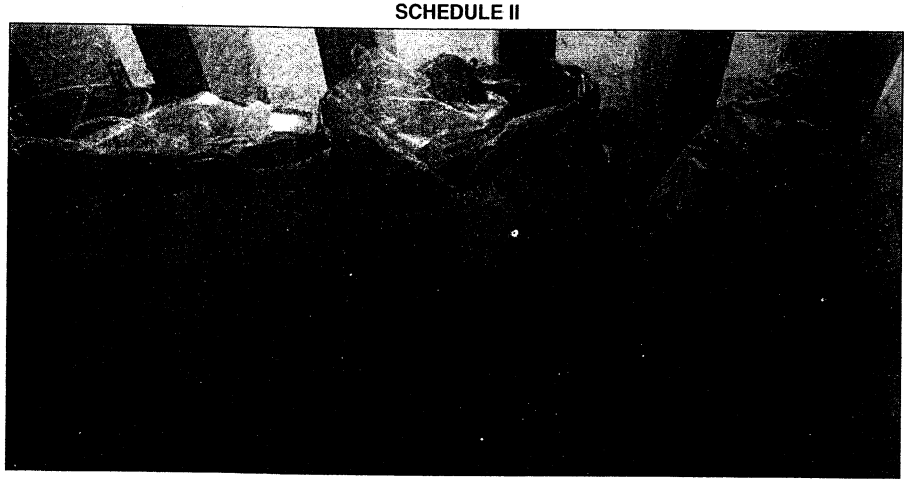
@@ Chemical treatment using at least 1% hypochlorite solution or any other equivalent chemical regent. It must be ensured that chemical treatment ensures disinfection.

Mutilation/shredding must be such so as to prevent unauthorized reuse

@ There will be no chemical pretreatment before incineration. Chlorinated plastics shall not be incinerated.

* Deep burial shall be option available only in towns with population less than five lakhs and in rural areas.

SCHEDULE II



COLOUR CODING AND THE TYPE OF THE CONTAINER FOR DISPOSAL OF BIOMEDICAL WASTES

Colour	Type of Container	Coding	Treatment option
Yellow	Plastic bag	Cat. 1, Cat. 2, Cat. 3, Cat. 6	Incineration/deep burial
Red	Disinfected container/ Plastic bag	Cat. 3, Cat. 6, Cat. 7	Autoclaving/Micro-waving/Chemical Treatment
Blue/White translucent	Plastic bag/puncture proof container	Cat. 4, Cat. 7	Autoclaving/Micro-waving/Chemical Treatment and destruction/ shredding
Black	Plastic bag	Cat. 5 and Cat. 9 and Cat. 10 (solid)	Disposal in secured landfill

Notes

- Colour coding of waste categories with multiple treatment options as defined in Schedule I, shall be selected depending on treatment option chosen, which shall be as specified in Schedule I.
- Waste collection bags for waste types needing incineration shall not be made of chlorinated plastics.
- Categories 8 and 10 (liquid) do not require containers/bags. Category 3 if disinfected locally need not be put in containers/bags.

DRUGS AND COSMETICS ACT, 1940

[*Act No. 23 of 1940*]

An Act to regulate the import, manufacture, distribution and sale of drugs[2]*[and cosmetics]*

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SALIENT PROVISIONS UNDER THE DRUGS AND COSMETICS ACT, 1940 TO CHECK THE PRODUCTIONS AND EXPORT OF SPURIOUS AND SUBSTANDARD MEDICINE AND MEDICAL DEVICES

The manufacture and sale of drugs is a licensed activity under the Drugs and Cosmetics Act, 1940 and the Drugs and Cosmetics Rules, 1945. The licensees are required to comply with the provisions of the Act, Rules and the condition of the license granted to them by the licensing authorities for manufacture and sale of drugs.

The Drugs and Cosmetics Act, 1940 have provisions to check the production of spurious and substandard drugs in the country. For the purposes of this Act the terms used in various chapters have been defined as under.

Drug- means all medicines for internal or external use of human beings or animals and all substances intended to be used for or in the diagnosis, treatment, mitigation or prevention of any disease or disorder in human beings or animals, including preparations applied on human body for the purpose of repelling insects like mosquitoes;]

Cosmetic- means any article intended to be rubbed, poured, sprinkled or sprayed on, or introduced into, or otherwise applied to, the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and includes any article intended for use as a component of cosmetic

Spurious drugs

- a drug shall be deemed to be spurious,-
  - (*a*) if it is manufactured under a name which belongs to another drug; or
  - (*b*) if it is an imitation of, or is a substitute for, another drug or resembles another drug in a manner likely to deceive or bears upon its label or container the name of another drug unless it is plainly and conspicuously marked so as to reveal its true character and its lack of identity with such other drug; or
  - (*c*) if the label or container bears the name of an individual or company purporting to be the manufacturer of the drug, which individual or company is fictitious or does not exist; or
  - (*d*) if it has been substituted wholly or in part by another drug or substance; or
  - (*e*) if it purpose to be the product of a manufacturer of whom it is not truly a product.'

Adulterated drugs

- a drug shall be deemed to be adulterated,-
  - (*a*) if it consists in whole or in part, of any filthy, putrid or decomposed substance; or

  - (*b*) if it has been prepared, packed or stored under insanitary conditions whereby it may have been contaminated with filth or whereby it may have been rendered injurious to health; or
  - (*c*) if its container is composed, in whole or in part, of any poisonous or deleterious substance which may render the contents injurious to health; or
  - (*d*) if it bears or contains, for purposes of colouring only, a colour other than one which is prescribed; or
  - (*e*) if it contains any harmful or toxic substance which may render it injurious to health; or
  - (*f*) if any substance has been mixed therewith so as to reduce its quality or strength.'

Misbranded drugs

- a drug shall be deemed to be misbranded,-
  - (*a*) if it is so coloured, coated, powdered or polished that damage is concealed or if it is made to appear of better or greater therapeutic value than it really is; or
  - (*b*) if it is not labelled in the prescribed manner; or
  - (*c*) if its label or container or anything accompanying the drug bears any statement, design or device which makes any false claim for the drug or which is false or misleading in any particular.'

Drugs and Cosmetics (Amendment) Act, 2008

- The Drugs and Cosmetics Act, 1940, has been amended under the Drugs and Cosmetics (Amendment) Act, 2008 and it provides strict penalties for manufacture of spurious and adulterated drugs.
- It is provided that any drug deemed to be adulterated or spurious when used by any person for or in the diagnosis, treatment, mitigation, or prevention of any disease or disorder is likely to cause his death or is likely to cause such harm on his body as would amount to grievous shall be punishable with imprisonment for a term which shall not be less than ten years but which may extend to imprisonment for life and shall also be liable to fine which shall not be less than ten lakh rupees or three times value of the drugs confiscated, whichever is more. The fines realized in such cases will be paid to the relative of the deceased or the aggrieved person.
- Any drug deemed to be spurious but not being a drug referred to above shall be punishable with imprisonment of a term which shall not be less than 7 years but which may extend to imprisonment for life and with fine which shall not be less than 3 lakh rupees or three times the value of the drugs confiscated, whichever is more.
- Offences relating to sale and manufacture of spurious and adulterated drugs have now been made cognizable and non-bailable.

- It has been provided that besides an Inspector appointed under the Act, the person aggrieved or consumer associations, a gazetted officer authorized by the Government have also been authorized to launch prosecution under the Act.
- A provision has been made for especially designated courts for trial of offences under the act. A provision for compounding of minor offences has also been introduced.

Regulatory control over the manufacture and sale of drugs

Regulatory control over the manufacture and sale of drugs is exercised by the State Licensing Authorities appointed by the State Governments which are responsible for monitoring the quality of drugs moving in the market.

As a part of their function, the Inspectors appointed by the State carry out market surveillance by drawing samples from the sales establishments, hospitals and manufacturers and get them tested at governments' laboratories. He may draw samples of a drugs or cosmetics from the manufacturing or sale premises, where he has reason to doubt the quality of drug, in a prescribed manner and send them for test and analysis to the Government analyst to check the quality. A Drug Inspector is required to inspect not less than once a year all establishment licensed for manufacture or sale within the area assigned to him and to satisfy himself that the conditions of license are being observed. The manufacturer is also required to allow an inspector to inspect all registers and records maintained by him and to take samples of manufactured products, if required, and provides such information as required for the purpose of ascertaining whether the provisions of the Act and Rules thereunder have been observed. Wherever a drug is not of standard quality, prosecutions are launched against offenders in the court of law by the concerned regulatory authorities.

Quality controls at manufacturers level

The manufacturer is required to ensure that the drugs manufactured and marketed by him are of standard quality and tested before release. Schedule M to the Drugs and Cosmetics Rules provides requirements for Good Manufacturing Practices and requirements of plant and equipment for manufacture of drugs. It specify in detail the requirements of premises, surroundings, personnel, sanitation, storage of raw materials, documentation and records, self-inspections and quality control systems and site master files etc. The manufacturer is required to comply with the requirements of Schedule M under the conditions of the license.

Good manufacturing practices

Schedule M to the Drugs and Cosmetics Rules, 1945, pertaining to Good Manufacturing Practices was amended to make it at par with the international standards and it is mandatory for the manufacturers of drugs to comply with the requirements of this Schedule for quality control of the drugs manufactured by them.

Other Measures

(*a*) To take care of the quality of import/export consignments of drugs which are presently kept along with food stuff, meat and other general cargo, it has been decided to set up exclusive pharmaceutical zones with dedicated area for storage of drugs meant for export/import at Delhi, Hyderabad and Mumbai Airport.' CDSCO is involved in negotiation/consultation with the port authorities in the matter.

(*b*) To take care of increased traffic of import and export of drugs, two Sub Zonal offices at Hyderabad and Ahmadabad airport have been converted into Zonal offices. A new Sub-Zonal office at Bangalore airport has also been set up to cope up the situation of increased traffic of import and export of drugs in that region. It has also been decided to set up a sub zonal office at Chandigarh as northern India has become a major Pharma hub due to setting up of large no. of drug manufacturing units in the excise free zones.

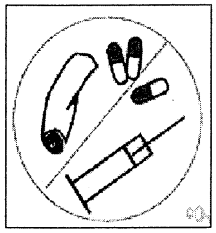
(*c*) Detailed guidelines have been issued to the State Govts to undertake focused surveillance over possible movement of spurious drugs.

(*d*) Training programme for regulatory officials of State Govts on logistics of intelligence, surveillance, prosecutions, etc. has been conducted with the assistance of FDA, Maharashtra.

(*e*) Pharma industry and traders has been motivated to fight menace of spurious drugs as a shared responsibility. No. Of cases could be successfully detected through the initiative taken by Pharma industry involving hiring of retired intelligence officers.

NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES ACT, 1985

[*Act No. 61 of 1985 dated 16th. September, 1985*]



An Act to consolidate and amend the law relating to narcotic drugs, to make stringent provisions for the control and regulation of operations relating to narcotic drugs and psychotropic substances to provide for the forfeiture of property derived from, or used in, illicit traffic in narcotic drugs and psychotropic substances, to implement the provisions of the International Conventions on Narcotic Drugs and Psychotropic Substances and for matters connected therewith.

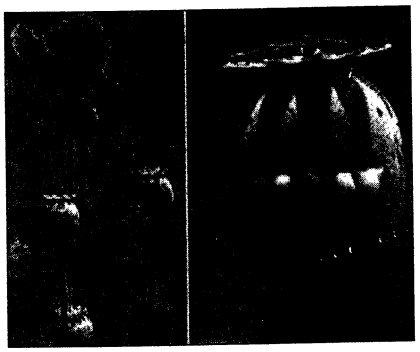
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OVERVIEW (NARCOTIC DRUGS & PSYCHOTROPIC SUBSTANCES)



- Narcotic Drugs and Psychotropic Substances Act, 1985 (NDPS Act) is the anti-drug law of India.
- The system of control of Narcotic Drugs in India has been put in place considering the requirement of narcotic drugs and psychotropic substances for medical use and the country's obligations towards the UN conventions.
- This Act prohibits cultivation of opium poppy, cannabis and coca plants.
- Production, manufacture, possession, sale, purchase, transport, warehousing, use, consumption, import, export or trans-shipment of any narcotic drug or psychotropic substance except for medical and scientific purposes and as per the rules or orders and conditions of license issued. NDPS Act empowers central government to frame rules for certain purposes and state governments to frame rules for certain others
- Thus, there are NDPS Rules, 1985 of the central government and state NDPS Rules of different states. Violation of any rule of either the state or central NDPS Rules attracts punishment under the NDPS Act.

Punishment for Offences

- NDPS Act views drug offences very seriously and penalties are stiff.
- The quantum of sentence and fine varies with the offence. For many offences, the penalty depends on the quantity of drug involved - small quantity, more than small but less than commercial quantity or commercial quantity of drugs. Small and commercial quantities are notified for each drug.
- Under NDPS Act, abetment, criminal conspiracy and even attempts to commit an offence attract the same punishment as the offence itself.
- Preparation to commit an offence attracts half the penalty.
- Repeat offences attract one and half times the penalty and in some cases death penalty.
- The penalties for various offences under the NDPS Act are as follows:

OFFENCES AND PENALTIES

Offences	Penalty	Sections of the Act
Cultivation of opium, cannabis or coca plants without license	Rigorous imprisonment-up to 10 years + fine up to Rs.1 lakh	Opium - 18(*c*) Cannabis - 20 Coca-16
Embezzlement of opium by licensed farmer	Rigorous imprisonment -10 to 20 years + fine Rs. 1 to 2 lakhs (regardless of the quantity)	19
Production, manufacture, possession, sale, purchase, transport, import inter- state, export inter-state or use of narcotic drugs and psychotropic substances	Small quantity - Rigorous imprisonment up to 6 months or fine up to Rs. 10,000 or both. More than small quantity but less than commercial quantity - Rigorous imprisonment. up to 10 years + fine up to Rs. 1 Lakhs. Commercial quantity - Rigorous imprisonment 10 to 20 years + fine Rs. 1 to 2 Lakhs	Prepared opium-17 Opium – 18 Cannabis - 20 Manufactured drugs or their preparations-21 Psychotropic substances -22
Import, export or transhipment of narcotic drugs and psychotropic substances	Same as above	23
External dealings in NDPS-i.e. engaging in or controlling trade whereby drugs are obtained from outside India and supplied to a person outside India	Rigorous imprisonment 10 to 20 years + fine of Rs. 1 to 2 lakhs (Regardless of the quantity)	24
Knowingly allowing one's premises to be used for committing an offence	Same as for the offence	25
Violations pertaining to controlled substances (precursors)	Rigorous imprisonment up to 10 years + fine Rs. 1 to 2 lakhs	25A
Financing traffic and harboring offenders	Rigorous imprisonment 10 to 20 years + fine Rs. 1 to 2 lakhs	27A
Attempts, abetment and criminal conspiracy	Same as for the offence	Attempts-28 Abetment and criminal conspiracy - 29
Preparation to commit an offence	Half the punishment for the offence	30
Repeat offence	One and half times the punishment for the offence. Death penalty in some cases.	31 Death - 31A
Consumption of drugs	Cocaine, morphine, heroin - Rigorous imprisonment up to 1 year or fine up to Rs. 20,000 or both. Other drugs- Imprisonment up to 6 months or fine up to Rs. 10,000 or both. Addicts volunteering for treatment enjoy immunity from prosecution	27 Immunity - 64A
Punishment for violations not elsewhere specified	Imprisonment up to six months or fine or both	32

SMALL AND COMMERCIAL QUANTITIES

For several offences under the NDPS Act, the punishment depends on whether the quantity of drug involved is small, is more than small but less than commercial or is commercial. . The quantities for some common drugs are as follows:-

Drug	Small Quantity	Commercial Quantity
Amphetamine	2 grams	50 grams
Buprenorphine	1 gram	20 grams
Charas/Hashish	Charas/Hashish	1 kg
Cocaine	2 grams	100 grams
Codeine	10 grams	1 kg
Diazepam	20 grams	500 grams
Ganja	1 kg	20 kg
Heroin	5 grams	250 grams
MDMA	0.5 gram	10 grams
Methamphetamine	2 grams	50 grams
Methaqualone	20 grams	500grams
Morphine	5 grams	250 grams
Poppy straw	1 kg	50 kg

Immunities in drug cases

Officers

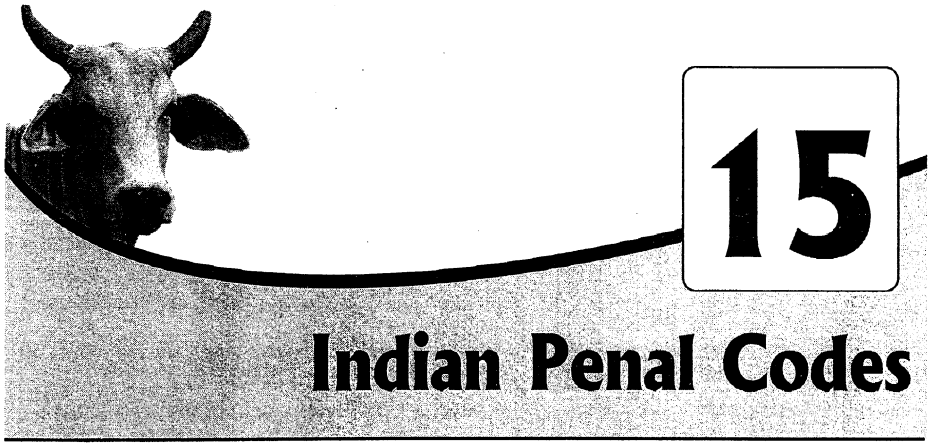
Officers acting in discharge of their duties in good faith under the Act are immune from suits, prosecution and other legal proceedings (Section 69).

Addicts

Addicts charged with consumption of drugs (section 27) or with offences involving small quantities will be immune from prosecution if they volunteer for de-addiction. This immunity may be withdrawn if the addict does not undergo complete treatment (Section 64 A).It is pertinent to note that it is not essential that the drug , if any, found with the addict in small quantity, need not be for personal use.

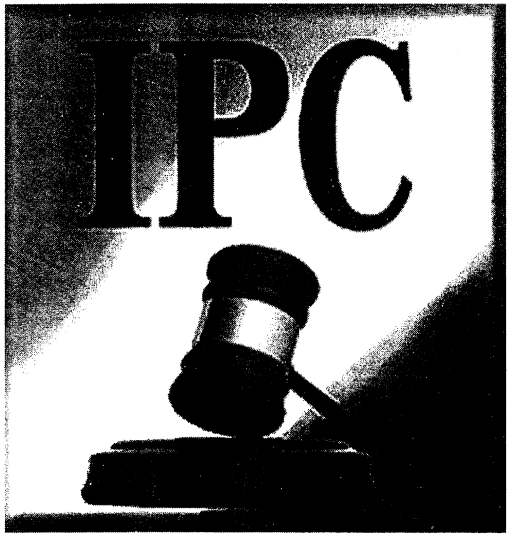
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Central or state governments can tender immunity to an offender in order to obtain his evidence in the case. This immunity is granted by the government and not by the court (Section 64).



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Indian Penal Codes



SMALL AND COMMERCIAL QUANTITIES

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Cocaine	2 grams	100 grams
Codeine	10 grams	1 kg
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Ganja	1 kg	20 kg
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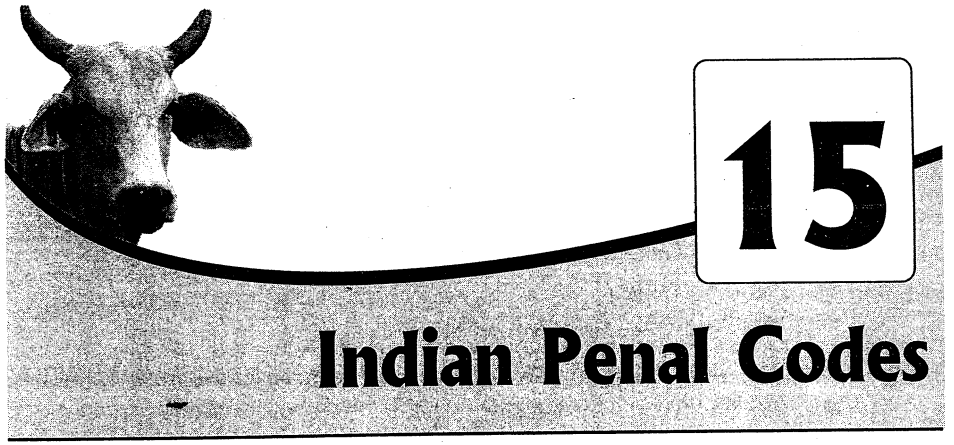
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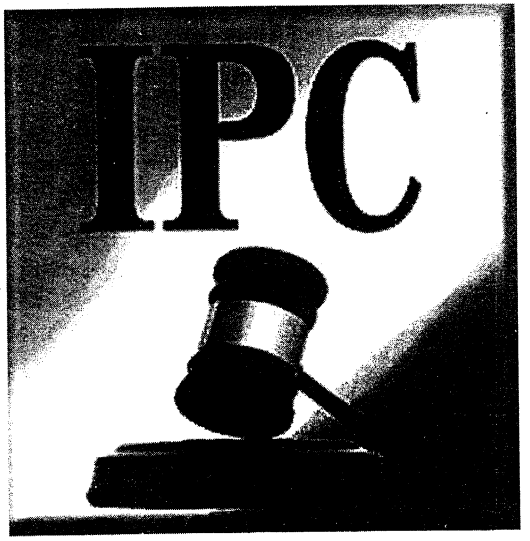
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Indian Penal Codes



Some of the important penal codes related with the veterinary profession are given below :

Section 44	The word "injury" denotes any harm whatsoever illegally caused to any person, in body, mind, reputation or property.
Section 47	The word "animal" denotes any living creature, other than a human being.
Section 51	The word "oath" includes a solemn affirmation substituted by law for an oath, and any declaration required or authorized by law to be made before a public servant or to be used for the purpose of proof, whether in a Court of Justice or not.
Section 52	Nothing is said to be done or believed in "good faith" which is done or believed without due care and attention.
Section 53	The punishments to which offenders are liable under the provisions of this Code are; • Firstly – Death; • Secondly –Transportation; • Thirdly –The words "penal servitude" were omitted • Fourthly –Imprisonment, which is of two descriptions, namely: (1) Rigorous, that is, with hard labour, (2) Simple; • Fifthly –Forfeiture of property; • Sixthly –Fine.
Section 80	Nothing is an offence, which is done by accident or misfortune, and without any criminal intention or knowledge in the doing of a lawful act in a lawful manner by lawful means and with proper care and caution.
Section 81	Nothing is an offence merely by reason of its being done with the knowledge that it is likely to cause harm, if it be done without any criminal intention to cause harm, and in good faith for the purpose of preventing or avoiding other harm to person or property.
Section 172	Whoever absconds in order to avoid being served with a summons, notice or order proceeding from any public servant legally competent, as such public servant, to issue such summons, notice or order, shall be punished with simple imprisonment for a term which may extend to one month, or with a fine which may extend to five hundred rupees, or with both; Or, if the summons or notice or order is to attend in person or by agent, or to produce a document in a Court of Justice, with simple imprisonment for a term which may extend to six months, or with a fine which may extend to one thousand rupees, or with both.

Section 173	Whoever in any manner intentionally prevents the serving on himself, or on any other person of any summons, notice or order proceeding from any public servant legally competent, as such public servant, to issue such summons, notice or orders, or intentionally prevents the lawful affixing to any place of any such summons, notice or order, or intentionally removes any such summons, notice or order from any place to which it is lawfully affixed, or intentionally prevents the lawful making of any proclamation, under the authority of any public servant legally competent, as such public servant to direct such proclamation to be made, shall be punished with simple imprisonment for a term which may extend to one month, or with fine which may extend to Rs 500/-, or with both; or if the summons, notice, order or proclamation is to attend in person or by agent, or to produce a document in a Court of Justice, with simple imprisonment for a term which may extend to six months, or with fine which may extend to Rs 1000/-, or with both.
Section 178	Whoever refuses to bind himself by an oath or affirmation to state the truth, when required so to bind himself by a public servant legally competent to require that he shall so bind himself, shall be punished with simple imprisonment for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.
Section 192	Whoever causes any circumstances to exist or make any false entry in any book or record, or makes any document containing a false statement, intending that such circumstances, false entry or false statement may appear in evidence by law before a public servant as such, or before an arbitrator, and that such circumstances, false entry or false statement, so appearing in evidence, may cause any person who in such proceeding is to form an opinion upon the evidence, to entertain an erroneous opinion touching any point material to the result of such proceeding, is said "to fabricate false evidence".
Section 193	Whoever intentionally gives false evidence in any stage of a judicial proceeding, or fabricates false evidence for the purpose of being used in any stage of a judicial proceeding, shall be punished with imprisonment of either description for a term which may extend to seven years, and shall also be liable to fine; and whoever intentionally gives or fabricates false evidence in any other case, shall be punished with imprisonment of either description for a term which may extend to three years and shall also be liable to fine.
Section 197	Whoever issues or signs any certificate required by law to be given or signed, or relating to any fact of which such certificate is by law admissible in evidence, knowing or believing that such certificate is false in any material point, shall be punished in the same manner as if he gave false evidence.

Section 204	Whoever secretes or destroys any document which he may be lawfully compelled to produce as evidence in a Court of Justice, or in any proceeding lawfully held before a public servant, as such, or obliterates or renders illegible the whole or any part of such document with the intention of preventing the same from being produced or used as evidence before such Court or public servant as aforesaid, or after he shall have been lawfully summoned or required to produce the same for that purposes, shall be punished with imprisonment of either description for a term which may extend to two years, or with fine, or with both.
Section 269	Whoever unlawfully or negligently does any act which is, and which he knows or has reason to believe to be, likely to spread, the infection of any disease dangerous to life, shall be punished with imprisonment of either description for a term which may extent to six months, or with fine, or with both.
Section 271	Whoever knowingly disobeys any rule made and promulgated by the Government for putting any vessel into a state of quarantine or for regulating the intercourse of vessels in a state of quarantine with the shore or with other vessels, or for regulating the intercourse between places where an infectious disease prevails and other places, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine, or with both.
Section 272	Whoever adulterates any article of food or drink, so as to make such article noxious as food or drink intending to sell such articles as food or drink or knowing it to be likely that the same will be sold as food or drink, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.
Section 273	Whoever sells, or offers or exposes for sale, as food or drink, any article which has been rendered or has become noxious, or is in a state unfit for food or drink, knowing or having reason to believe that the same is noxious as food or drink, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extended to one thousand rupees, or with both.
Section 274	Whoever adulterates any drug or medical preparation in such a manner as to lessen the efficacy or change the operation of such drug or medical preparation, or to make it noxious, intending that it shall be sold or used for, or knowing it to be likely that it will be sold or used for, any medicinal purpose, as if it had not undergone such adulteration, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.

Section 275	Whoever, knowing any drug or medical preparation to have been adulterated in such a manner as to lessen its efficacy, to change its operation, or to render it noxious, sells the same, or offers or exposes it for sale, or issues it from any dispensary for medicinal purposes as unadulterated, or causes it to be used for medicinal purposes by any person not knowing of the adulteration, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.
Section 276	Whoever knowingly sells, or offers or exposes for sale, or issues from a dispensary for medicinal purposes, any drug or medical preparations, as a different drug or medical preparation, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.
Section 284	Whoever does, with any poisonous substance, any act in a manner so rash or negligent as to endanger human life, or to be likely to cause hurt or injury to any person, or knowingly or negligently omits to take such order with any poisonous substance in his possession as is sufficient to guard against probable danger to human life from such poisonous substances, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both
Section 289	Whoever knowingly or negligently omits to take such order with any animal in his possession as is sufficient to guard against any probable danger to human life, or any probable danger of grievous hurt from such animal, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.
Section 304A	Whoever causes the death of any person by doing any rash or negligent act not amounting to culpable homicide shall be punished with imprisonment of either description for a term which may extend to two years, or with fine, or with both.
Section 326	Whoever, except in the case provided for by section 335, voluntarily causes grievous hurt by means of any instruments for shooting, stabbing, or cutting, or any instrument which, used as a weapon of offence, is likely to cause death, or by means of fire or any heated substance, or by means of any poison or any corrosive substance, or by means of any explosive substance, or by means of any substance which is deleterious to the human body to inhale, to swallow, or to receive into the blood, or by means of any animal, shall be punished with transportation for life or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine.

Section 377	Whoever voluntarily has carnal intercourse against the order of nature with any man, woman or animal, shall be punished with transportation for life or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine. *Explanation*: Penetration is sufficient to constitute the carnal intercourse necessary to the offence described in this section.
Section 415	Whoever, by deceiving any person, fraudulently or dishonestly induces the person so deceived to deliver any property to any person, or to consent that any persons shall retain any property, or intentionally induces the person so deceived to do or omit to do anything which he would not do or omit if he were not so deceived, and which act or omission causes or is likely to cause damage or harm to that person in body, mind, reputation or property, is said to "cheat".
Section 420	Whoever cheats and thereby dishonestly induces the person deceived to deliver any property to any person, or to make, alter or destroy the whole or any part of a valuable security, or anything which is signed or sealed, and which is capable of being converted into a valuable security, shall be punished with imprisonment of either description for a term which may extend to seven years, and shall also be liable to fine. *Comment*: Simple cheating is punishable under Section 417. But where there is delivery or destruction of any property or alteration or destruction of any valuable security resulting from the act of the person deceiving, this section comes into operation.
Section 427	Whoever commits mischief and thereby causes loss or damage to the amount of fifty rupees or upwards, shall be punished with imprisonment of either description for a term which may extend to two years, or with fine, or with both.
Section 428	Whoever commits mischief by killing, poisoning, maiming or rendering useless, any animal or animals of the value of ten rupees or upwards, shall be punished with imprisonment of either description for a term which may extend to two years, or with fine, or with both.
Section 429	Whoever commits mischief by killing, poisoning maiming or rendering useless, any elephant, camel, horse, mule, buffalo, bull, cow or ox, whatever may be the value thereof, or any other animal of the value of fifty rupees or upwards, shall be punished with imprisonment of either description for a term which may extend to five years, or with fine, or with both.
Section 430	Whoever commits mischief by doing any act which causes, or which he knows to be likely to cause, a diminution of the supply of water for agricultural purposes, or for flood or drink for human beings or for animals which are property, or for cleanliness or for carrying on any manufacture, shall be punished with imprisonment of either description for a term which may extend to five years, or with fine, or with both.

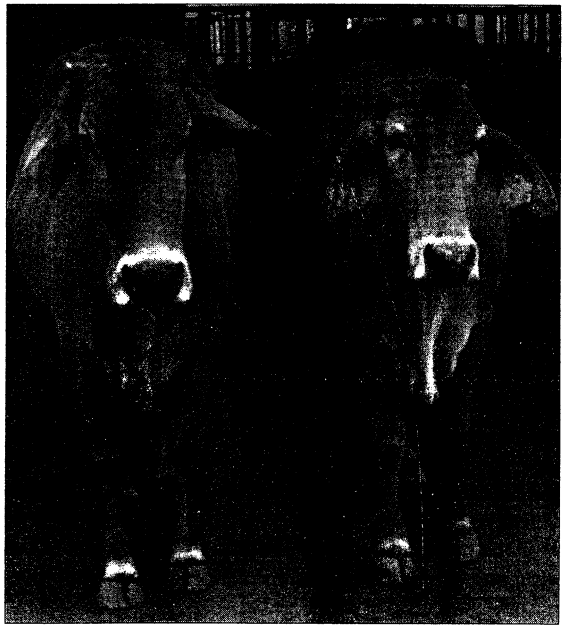


16

Animal Protection Laws for the General Guidance

(BY ANIMAL WELFARE BOARD OF INDIA)

THE PREVENTION OF CRUELTY ANIMALS ACT, 1960



Q. 1. What are cognizable and non-cognizable offences?

- Cognizable offence is an offence wherein police officer is empowered to arrest the accused/ offender without warrant (Section 2 (*c*) of the Code of Criminal Procedure, 1973).
- All cognizable offences comes under the specified offences under the Indian Penal Code (IPC) such as murder, robbery, theft, rioting, counterfeiting etc.
- Non-cognizable offences" are those offences where the police officer is not empowered to arrest the accused/offender without warrant (Section 2 (l) of the Code of Criminal Procedure, 1973)
- In the commission of any non-cognizable offences, the police officer should obtain a warrant from the magistrate concerned to arrest the accused/offender.
- The cases of public nuisance, mischief, assault, causing simple hurt, are some of the offences which are non-cognizable offences.

Q. 2. What amounts to cruelty on animals and which offences are cognizable?

Section 11 (1) (*a*) to (o) of The Prevention to Cruelty to Animals Act (PCA), 1960 prescribes and enumerates the forms of cruelty. The following tabulation/chart enumerates the forms of offences - cognizable and non-cognizable under the PCA Act, 1960.

Nature of offence	Section violated	Cognizable (Cog) or Non cognizable (Non cog)
(*a*) beats, kicks, over-rides, over-drives, over-loads, tortures or otherwise treats any animal so as to subject it to unnecessary pain or suffering or causes, or being the owner permits, any animal to be so treated.	11(1) a	Non-Cog
(*b*) employs in any work or labour or for any purpose any animal which, by reason of its age or any disease) infirmity; wound, sore or other cause, is unfit to be so employed or, being the owner, permits any such unfit animal to be employed.	11(1) b	Non-Cog
(*c*) wilfully and unreasonably administers any injurious drug or injurious substance to any animal or wilfully and unreasonably causes or attempts to cause any such drug or substance to be taken by any animal.	11(1) c	Non-Cog
(*d*) conveys or carries, whether in or upon any vehicle or not, any animal in such a manner or position as to subject it to unnecessary pain or suffering.	11(1) d	Non-Cog
(*e*) keeps or confines any animal in any -cage or other receptacle which does not measure sufficiently in height, length and breadth to permit the animal a reasonable opportunity for movement.	11(1) e	Non-Cog

(*f*) keeps for an unreasonable time any animal chained or tethered upon an unreasonably short or unreasonably heavy chain or cord.	11(1) f	Non-Cog
(*g*) being the owner, neglects to exercise or cause to be exercised reasonably any dog habitually chained up or kept in close confinement.	11(1) g	Non-Cog
(*h*) being the owner of (any animal) fails to provide such animal with sufficient food, drink or shelter.	11(1) h	Non-Cog
(*i*) without reasonable cause, abandons any animal in circumstances which tender it likely that it will suffer pain by reason of starvation thirst.	11(1) i	Non-Cog
(*j*) wilfully permits any animal, of which he is the owner, to go at large in any street, while the animal is affected with contagious or infectious disease or, without reasonable excuse permits any diseased or disabled animal, of which he is the owner, to die in any street.	11(1) j	Non-Cog
(*k*) offers for sale or without reasonable cause, has in his possession any animal which is suffering pain by reason of mutilation, starvation, thirst, overcrowding or other ill treatment.	11(1) k	Non-Cog
(*l*) mutilates any animal or kills any animal by using the method of strychnine injections, in the heart or in any other unnecessarily cruel manner	11(1) l	Cog
(*m*) solely with a view to providing entertainment.	11(1) m	Non-Cog
(*i*) confines or causes to be confined any animal (including tying of an animal as a bait in a tiger or other sanctuary) so as to make it an object or prey for any other animal.	11(1) i	Non-Cog
(*n*) organizes, keeps uses or acts in the management or, any place for animal fighting or for the purpose of baiting any animal or permits or offers any place to be so used or receives money for the admission of any other person to any place kept or used for any such purposes.	11(1) n	Cog
(*o*) promotes or takes part in any shooting match or competition wherein animals are released from captivity for the purpose of such shooting.	11(1) o	Cog
If any persons upon any cow or other milch animal the operation called practicing phooka or 21[doom dev or any other operation (including injection of any or doom dev. substance) to improve lactation which is injurious to the health of the animal] or permits such operation being performed upon any such animal in his possession or under his control.	12	Cog

Q. 3. Is cruel treatment of animal, a punishable offence?

Yes. If any animal is subjected to any form of cruelty specified under Section11 (*a*) to (o) of PCA Act , 60, the offender will have to pay fine which shall extend to fifty rupees in the case of a first offence and if it is the case of second offence or subsequent offence committed within three years of the previous offence, he will be fined with not less than twenty-five

rupees but which may extend to one hundred rupees or with the imprisonment for a term which may extend to three months or with both.

Also, in the case of second offence, the offender's vehicle is confiscated, and he will never be allowed to keep an animal again.

Q. 4. Does practicing phooka or doom dev amount to cruelty?

Yes it is cognizable offence under Section 12 of PCA Act, 1960. The person shall be punishable with a fine, which may extend upto one thousand rupees, or with imprisonment for a term which may extend upto two years, or with both and the animal on which the operation was performed shall be forfeited to the Government.

Q. 5. What should an individual should do when he see the cruelty being done on animals?

Any person under whose presence any offence under the Act is committed, can immediately lodge a written complaint with the nearest Police Station for taking action.

Q. 6. What are the powers that a police man can exercise when he see the cruelty being done on animals?

Under PCA Act, 1960 (Sec 34-35) any police officer above the rank of constable can seize the animal and produce the same for examination by the nearest magistrate or by the Veterinary Officer and send them to infirmaries for the treatment and care of animals. The animal sent for care and treatment to an infirmary cannot be released from such places unless the veterinary officer issues the certificate of its fitness for discharge. The cost of transporting the animal to an infirmary and its maintenance and treatment in an infirmary, has to be paid by the owner of the animal.

Q. 7. If a person kills another person's dog or any other pet deliberately, what action should be taken?

- Killing of an animal/pet is an offence being to cruelty on animals as defined under Section 11of PCA.
- It is a cognizable offence under Section 428 and Section 429 of the IPC in which there is a punishment for committing mischief by killing, poisoning, maiming or rendering useless any animal or animals of the value of ten rupees or upwards.
- The punishment for such acts/offences are simple or rigorous imprisonment for a term, which may extend to two years, or with a fine, or with both.
- While **Section 429 of the IPC** deals with the punishment for the same nature of crime but for the animals of the value of fifty rupees or upwards. It must be immediately lodged as an F.I.R with the area police station.
- The punishment in this case will be imprisonment of either description for a term, which may extend to five years or with a fine, or with both.

Q. 8. What kind of evidence should be looked for after filing complaint under section 428/429 of the IPC, where dog has been suspected to be poisoned by the neighbour?

- If the owner believes that the neighbour is responsible for the death of his dog, he should immediately complaint to the nearest police station.
- The police officer should visit the site and observe the condition of the dog and has to be taken to a vet, for a post-mortem examination to ascertain the cause and approximate time of death.
- He should also look for any evidence, indicating both the method used.
- He must record the statement of the witnesses who have seen the poisoning or record the attitude or history of previous cruelty of the alleged perpetrator towards the deceased.
- Thereafter, the police officer must put up a challan before the court of the concerned magistrate.

Q. 9. What is the legal action to be taken on a complaint of stealing of a dog or any other animal?

'Theft' under IPC 378 is, stated that whoever, intending to take dishonestly any moveable property out of the possession of any person without that person's consent, moves that property in order to such taking, is said to commit theft. And the property, under this section includes 'animals' too.

Section 379 of IPC, penalizes 'theft' for which the punishment is imprisonment of either description for a term, which may extend to three years, or with fine, or with both.

In case of theft, a person approaches the police station with the complaint, file an F.I.R. which should be read together with the PCA Act 1960 as forcibly taking an animal out of its environs amounting to cruelty.

Q. 10. Can people who feed animals in their areas be stopped by the RWAs or Societies or neighbour under the law?

Article 51A of the Constitutional Law of India, speaks about the duties of every citizen of India. One of these duties includes having compassion for living creatures. So the animal lover is protected under the Constitution.

Article 19 of the Constitution of India, deals with right to freedom and in this freedom comes the right to profession, occupation, trade and business. Therefore, it means that every citizen has the right to occupation and if someone has taken the caring of animals as his occupation, it is legal and he has every right to carry on with his occupation Article 21 of the constitution of India states the right to personal life and liberty.

If someone wants to feed and provide shelter to dogs, he is at liberty to do so. He has the same right to liberty that the law provides to every citizen of India.

Section 503 of the IPC 1860, anyone who threatens or intimidates any person taking care of dogs, is liable for criminal intimidation and can be arrested without a warrant.

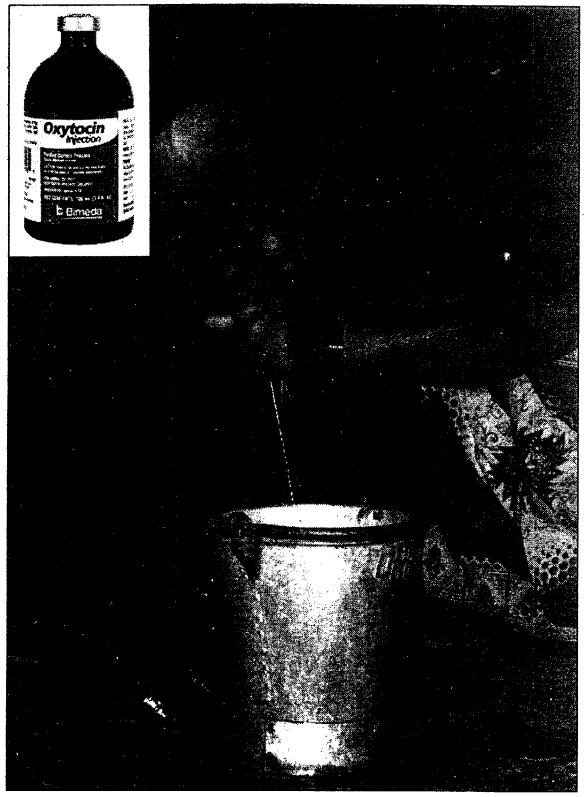
Court Judgment

In a Judgment passed by the Delhi Court, it has been stated that the Animal Welfare Board of India and the Municipal Authorities have in the guidelines issued by them specified the problem often faced by individuals and families who adopt and feed stray animals. The Court has proceeded to say that the local police and the municipal authorities are under obligation not only to encourage such adoption but also to ensure protection to such persons who come forward to take care of these animals specifically the community or neighborhood dogs so that they are not subjected to any kind of cruelty, finally, the Court has said that every individual has the right to live his life in the manner he wants and it is necessary that the society and the community recognize it.

Q. 11. Can an RWA/Society or any individual remove or have removed the dogs in a colony that are already sterilized and vaccinated and throw them away anywhere?

- As per Animal Birth Control Rules 2001, no sterilized dogs can be relocated from their area and they have to remain in their original areas. If the dog is not sterilized, a request can be made to the animal welfare organization to sterilize and vaccinate the dog. They cannot relocate the dogs because it may cause problems such as an increase in dog bites as new dogs will move into the area who are unfamiliar with residents and therefore more likely to be hostile.
- As per Section 11 of PCA Act, 1960, whoever indulges in an act of cruelty to animals (beating, kicking, over-riding, overloading, over-driving, torturing or otherwise treating any animals so as to subject it to unnecessary pain amounts to cruelty on animals) makes himself liable for action under PCA Act.
- There are designated agencies in Govt/local self-government Organizations that are authorized to deal with stray animals. All recognized and unrecognized Associations may approach such bodies for redressal of their grievances if any, with regard to stray animals. Where there is no recognized association, residents may take up grievances through the AWO/Office of the CWO.
- But these associations should not pretend to represent the residents in general.
- All problems of stray animals have to be handled within the institutional framework available. No association, recognized or unrecognized, shall take recourse to any action regarding stray animals on their own, either themselves or through any person employed by them like security guards. While residents and Associations are free to address institutional agencies for redressal of grievances in this matter, no resident/association will interfere with the freedom of other residents in caring and attending animals. Intimidating in any manner, those who feed and care for animals is a criminal offence. Apart from action under appropriate criminal law, such persons will render themselves liable for action under CCS Conduct Rules.

Q. 12. Dairies give their milch animals injections of oxytocin in order to induce milk. Is this illegal?



The use of Oxytocin injection on milching animal in order to induce milk is illegal and amounts to cruelty on animal under Section 12 of PCA Act, 1960. It is a cognizable offence and the person shall be punishable with a fine, which may extend upto one thousand rupees, or with the imprisonment for a term which may extend upto two years, or with both and the animal on which the operation was performed shall be forfeited to the Government.

Acknowledging the negative effects of oxytocin, The Government of India has declared it as a scheduled drug under the provisions of the Drugs and Cosmetics Act The proprietor of the shop selling these drugs to a dairy shall be liable to lose his license as a pharmacist and shopkeeper in addition to criminal charges with punishment of upto 5 years in prison.

Q. 13. How can one tell dairymen or milkmen are using oxytocin?

If oxytocin is being used on dairy animals for inducing the milk, there will be needle pricks over the body of the cow. Besides this needles, syringes, discarded vials, blood soaked cotton can be also found near the milch animal.

THE PERFORMING ANIMALS RULES, 1973 AND THE PERFORMING ANIMALS (REGISTRATION) RULES 2001

Q. 1. What are "Performing Animals"?

Performing Animals means any animal which is used for the purpose of any entertainment to which the public is admitted through the sale of tickets. (Section 2(*b*), of the Performing Animals Rules, 1973). Section 2(h) of the Performing Animals (Registration) Rules, 2001 specifies that this includes animals used in films and for equine events.

Q. 2. Is the exhibition and training of performing animals restricted?

The PCA Act 1960 (Section 22) restricts the exhibition and training of performing animals, unless the person interested in exhibiting and training the animal is registered in ccordance with provisions of the Act. No animal can be exhibited or trained, where the Central Government, by notification in the Official Gazette, has restricted the exhibition and training of such animal. These following animals can't be exhibited or trained:

1. Bears
2. Monkeys
3. Tigers
4. Panthers
5. Lions

Q. 3. What are the conditions for the exhibiting and training of performing animals?

The first condition is the registration of the person seeking permission to train and exhibit. Section 3 of The Performing Animals (Registration) Rules, 2001, provides for Application of registration and without registration exhibit or train any animal as a performing animal is not allowed.

Under section 8 of The Performing Animals (Registration) Rules, 2001 are general conditions for registration, mentioned in the rule.

Q. 4. Are animal fairs where animals are traded, legal?

- When the sale takes place this fair is normally meant for farmers. However, in recent years they have become exclusively devoted for providing animals to butchers. This is illegal.
- In order to prevent this from happening local administration should make sure that no trucks are allowed near the fair and that no cattle is put inside trucks and no buyer can buy more than two animals.
- The Municipality has a special role to play in animal protection.

- The Local authority of the place where the 'Haat' or fair is held should check that there is the proper maintenance of animals by their owners.
- The municipality must allocate sufficient funds for the proper cleaning, feeding, housing and treatment of these animals.
- The money earned from their auction and release, must be spent on the care of these animals. Wherever possible, it should involve local NGOs/AWO in the running of these Pounds.
- When cattle are auctioned, the buyer must specify for what purpose he is buying the animal and that should be verified to avert cow slaughter, which is a criminal offence.
- The Municipality can also designate local shelters as Infirmaries for the care and treatment of impounded animals.
- But no wild animals or birds and other wild species any endangered species could be sold or brought in the fairs.

Q. 5. What are the acts that amount to offences with regard to performing animals?

(*a*) Not being registered exhibits or trains any performing animal; Or Being registered under this Act, exhibits or trains any performing animal with respect to which, or in a manner with respect to which, he is not registered

(*b*) Exhibits or trains as a performing animal, any animal which is not to be used for the purpose of exhibition

(*c*) Obstructs or wilfully delays any person or police officer from entry and inspecting the premises where the performing animals are kept

(*d*) Conceals any animals with a view to avoiding such inspection.

Any person found guilty of such offences will be punishable on conviction with fine which may extend to five hundred rupees, or with imprisonment which may extend to three months or with both. The animal will be confiscated and the person will not be allowed to keep an animal again

Q. 6. Is it an offence to train or exhibit an animal for police purpose?

It is not an offence as Section 27 of PCA Act, 1960 acts as an exemption clause and it permits the training of animals for bonafide military or police purposes. However, Section 11 of PCA Acts, 1960 no animals can be treated cruelly or in a way that harms or injures them.

Q. 7. Does Police have the power to inspect the premises in which any performing animals are being trained or exhibited?

- If it comes to the knowledge of the Police officer that the training or exhibition of any performing animal has been accompanied by unnecessary pain or suffering, As per Section 25 of The PCA Act, 1960, any police officer not below the rank of sub-inspector may enter at all reasonable times and inspect any premises in which any

performing animals are being trained or exhibited or kept for training or exhibition and ask for the certificate of registration from the trainer or exhibitor. Section 26 states that anyone who -

- Obstructs or willfully delays any person or police officer from entry and inspecting the premises where the Performing Animals are kept
- Conceals any animals with a view to avoiding such inspection will be punishable on conviction with a fine, which may extend to five hundred rupees, or with imprisonment, which may extend to three months or with both.

Q. 8. Does the PCA Act, 1960, provides the powers of search and seizure to the police?

Yes. Section 32 of the Act, states that if a police officer not below the rank of sub inspector, has reason to believe that an offence of cruelty has been committed or that any person has in his possession the skin of any such animal with any part of the head attached thereto, he may enter and search place or any place in which he has reason to believe any such skin to be, and may seize such skin or any article or thing used or intended to be used in the commission of such offence.

Also, if a police officer, not below the rank of sub-inspector, has reason to believe that phooka or any other operation of the nature referred to in Section12, has been performed or will be performed on any animal within the limits of his jurisdiction, he may enter any place in which he has reason to believe such animal to be, and may seize the animal and produce it for the examination by the Veterinary Officer in charge of the area in which the animal is seized.

THE PREVENTION OF CRUELTY TO DRAUGHT AND PACK ANIMALS RULES, 1965

Q. 1. What is the maximum load for draught animals and pack animals?

Please see the tables in Draught and Pack animal rules, 1965.

Q. 2. What are the powers provided to police officers under The Prevention of Cruelty to Draught and Pack Animals Rules, 1965?

Section 11 of the Act, provides that if a police officer above the rank of a constable feels that the animal is overloading, he may ask the owner or any other person in charge of such animal to take the animal or the vehicle or both to the weighbridge for the purpose of determining the weight of the load which animal has been or is drawing or carrying. And if the owner in charge of the aforesaid animal refuses to comply with the demand of the police officer, the policeman has every right to take the animal or the vehicle or both to the weighbridge and get it weighted. And as soon as any weight is determined under this rule, the owner or other person in charge of the said animal shall be given a statement in writing signed by the police officer as to the weight so determined and any other information relevant for the purpose.

Q. 3. What are the general conditions for the use of draught and pack animals?

Section 6 of The Prevention of Cruelty to Draught and Pack Animals Rules, 1965, lays down the general conditions for the use of draught and pack animals. No person is allowed to use any animal for drawing any vehicle or carrying any load: -

(*i*) For an average of more than nine hours in a day;
(*ii*) for more than five hours continuously without a break or rest for the animal;
(*iii*) in any area where the temperature exceeds 37 degree C (99 degree F) during the period between 12 noon and 3 p.m.

- Only four passengers excluding the driver are allowed on a tonga or a total of 325 kgs.

Q. 4. What are the other relevant provisions with regard to The Prevention of Cruelty to Draught And Pack Animals Rules, 1965?

These are:

Section 7: Animals to be disengaged after work: No person shall continue to keep in harness any animal used for the purpose of drawing vehicles, after it is no longer needed for such purpose.

Section 8: Use of spiked bits prohibited: No person shall, for the purpose of driving or riding an animal or causing it to draw any vehicle or for otherwise controlling it, use any spiked stick or any other sharp tackle or equipment which causes bruises, swellings, abrasions or sever pain to the animal.

Section 9: Saddling of horses: No person shall cause a horse to be saddled in such a way that the harness rests directly on the animal's withers without there being sufficient clearance between the arch or the saddle and the withers.

THE TRANSPORT OF ANIMALS RULES, 1978

Q. 1. What are the general conditions for transport of animals?

Section 98 of The Transport of Animals Rules, 1978 provides the general conditions for transport of animals.

1. Animals to be transported shall be healthy and in good condition. They should be examined by a veterinary doctor for freedom from infectious diseases and their fitness to undertake the journey, provided that the nature and duration of the proposed journey shall be taken into account while deciding upon the degree of fitness.
2. An animal which is unfit for transport shall not be transported and the animals that are newborn, diseased, blind, emaciated, lame, and fatigued or having given birth during the preceding seventy-two hours or likely to give birth during transport shall not be transported.
3. Pregnant and very young animals shall not be mixed with other animals during transport.
4. Different classes of animals shall be kept separately during the transport
5. Diseased animals, whenever transported for treatment, shall not be mixed with other animals.

Q. 2. What should be noted and observed when animals are being transported?

As mentioned above, the general conditions laid down in Section 98 of The Transport of Animals Rules, 1978 should be strictly adhered to. And apart from that, there are different rules for transporting different categories of animal, provided under The Transport of Animals Rules, 1978. Overloading of animals amounts to treating of animals cruelly under Section 11 of The PCA Act, 1960. If the above general conditions with regard to the transportation of animals are not met, the animals should be immediately unloaded and sent to the nearest animal shelter. Some further conditions that must be observed are:

In the case of trucks whose wheelbase is over 142 inches shall not carry more than six cattle without calves or five with calves.

- The Vehicle transporting them should be large enough to carry animals comfortably and the animals should not be packed and jammed inside. The animals should also be protected from the weather.
- Animals are not allowed to be transported by tempo.
- Within the vehicle, partitions, must be provided at every two or three metres across the width to prevent the crowding and trapping of animals.
- Sufficient food and water shall be carried to last during the journey and watering facility should be provided at regular intervals.
- First aid equipment should be available in the vehicle.
- Suitable ramps should be provided for loading and unloading the animals.
- Materials for padding such as straw, shall be placed on the floor to avoid injury and this shall be not less than 5 cm this

Apart from this, there are specific rules for transporting different categories of animals provided under The Transport of Animals Rules, 1978 which specifies the maximum number of animals that can be carried by different types of vehicles. Overloading of animals amounts to treating of animals cruelly under Section 11 of The PCAAct, 1960.

The offender (in the case of a first offence) will have to pay a fine which shall extend to fifty rupees and if it is the case of second offence or subsequent offence committed within three years of the previous offence, he will be fined with not less than twenty-five rupees but which may extend to one hundred rupees or with imprisonment for a term which may extend to three months or with both. Also, in the case of second offence, the offender's vehicle is confiscated, and he will never be allowed to keep an animal again.

Q. 3. What is the distance between different types of gauges of railway tracks?

Gauge is the distance between two parallel railway tracks where;

(*a*) In Broad Gauge the distance between two tracks is 5 feet 6 inches

(*b*) In Metre Gauge the distance between two tracks is 3 feet 3 inches

(*c*) In Narrow Gauge the distance between two tracks is 2 feet 6 inches)]

Q. 4. What are the Rules of transportation for cattle provided under The Transport of Animals Rules, 1978?

When cattle are to be transported by rail an ordinary goods wagon shall carry not more than ten adult cattle or fifteen calves on broad gauge, not more than six adult cattle or ten calves on meter gauge, and not more than four adult cattle or six calves on narrow gauge. While transporting cattle by goods vehicle, only six cattle can be loaded per truck. The permissible loading in a truck is only 4 buffaloes, and truck having wheelbase below 142 inches, shall not carry more than five cattle without calves or four with calves.

Q. 5. What are the Rules for transportation of equines provided under The Transportation of Animals Rules, 1978?

For the transport of equines by rail, an ordinary goods wagon shall not carry more than eight to ten horses or ten mules or ten donkeys on broad gauge and not more than six horses or eight donkeys on meter- gauge. If equines are to be transported by a goods vehicle, each vehicle may not carry more than four to six equines.

With regard to the transport of equines by sea, horses may normally be accommodated in single stalls and mules in pens, each pen holding a maximum of four to five mules.

Q. 6. What are the Rules provided for the transportation of pigs, monkeys, sheep and goat, poultry by rail or road?

Please see in the text of chapter in Transport of animal rules 1978.

Q. 7. What are the regulations regarding transporting animals by foot?

The PCA (Transport of Animals on Foot) Rules 2001 applies wherever the distance involved is 5 Km or more. Please see the text for details.

THE PREVENTION OF CRUELTY TO ANIMALS (SLAUGHTER HOUSE) RULES, 2001

Q. 1. What Laws governs slaughterhouses?

There are rules provided under The PCA Act,1960 namely Slaughter House Rules, 2001.

Section 2(*c*) of the above mentioned Act defines 'slaughterhouse' as a place wherein 10 or more than 10 animals are slaughtered per day and is duly licensed or recognized under a Central, State or Provincial Act or any rules or regulations made thereunder.

Section 3(1) of the above mentioned Act provides that animals cannot be slaughtered except in a recognized and licensed slaughter house.

Section 3(2), prohibits slaughtering of any animal

- which is pregnant or
- has an offspring less than three months old, or
- the animal which is under the age of three months or
- which has not been certified by a Veterinary Doctor that it is in a fit condition to be slaughtered.

Q. 2. Is slaughtering of an animal apart from in the slaughter house, legal ?

Wherever there is a Government slaughterhouse, slaughter cannot be done anywhere else. If there is no government slaughterhouse in that area then killing can only take place in licensed slaughterhouse, which should be situated, where they are not a public nuisance or an environmental hazard. These slaughterhouses have to follow all Municipal Corporation laws and the ISI regulations. No animals can be slaughtered in slums, in roadside meat shops or in dhabas or in private houses. Slaughtering of any animal at any place other than a licensed slaughterhouse is prohibited. The details of the rules pertaining to the slaughter house can be checked at Slaughter house rules 2001.

Q. 3. What are the Laws, rules governs meat shops or stalls?

Meat shop refers to the shop that does not kill the animal but sells the meat. There are rules that regulates such outlets. The Bureau of Indian Standard rules deals with the basic requirements for a stall for sale of meat of small and large animals. It is the norm to be followed for licensing and regulating the sale of meat and maintenance of hygienic conditions of the meat stall. It states that-

- All meat stalls can only be set up in designated places, as a unit of a meat market and shall be located at a place away from vegetable or other food markets
- The meat shall be free from undesirable odour, smoke, dust or other contaminants
- The main services, such as potable water supply, electricity and proper hygienic sewage disposal facilities are essential prerequisites

- A block shall consists of a number of meat stalls and shall be enclosed in compound walls which barricades entry of dogs, cats, birds and other undesirable elements into the block
- Each block shall be provided with potable water storage supply tank with taps to facilitate withdrawal of water by meat stalls
- A meat stall shall consist of a meat preparation room, sales counter or ante-room and covered passage in front or a verandah for customers
- The meat preparation room may be of minimum 3.75 x 3m x3m for small animals and 4.5 x 4.5 x 4.5 m for large animals depending on the stock
- Screened ventilators shall be provided near the ceiling for facilitating cross ventilations
- Care should be taken that no direct sunlight falls on the dressed carcasses.
- The room shall suitably be made fly-proof and provided with fly-traps
- The floors of all the rooms shall be of such construction that easy washing and cleaning with water is possible.
- A covered passage protected from the rain and sun shall be provided in the meat stall for the customers
- Each stall shall be provided with a water tap
- The knives, tools, and hooks used shall be of stainless steel.

Q. 4. Is it crime to kill or sell camel's meat?

Camel's meat is not notified item of food, as per the provisions of the PCA 1960. Presently, provision is available only for slaughtering cattle, goats, sheep and pigs, within the Corporation limits. There is no qualified Veterinary Surgeon, who can certify the fitness of a camel or the suitability of its meat for consumption by human beings, or a licensed person to slaughter a camel. There are no licensed persons within the Corporation limits for the sale of camel's meat. The license to sell beef will not enable the sale of camel's meat.

Q. 5. Is slaughtering of cows on Bakri-id considered illegal?

No animal can be slaughtered except goats. The Division Bench of Calcutta has ruled that the slaughter of cows by members of Muslim community on Bakri-eid day is not a requirement of the Muslim religion and should be banned. The Supreme Court has upheld this decision.

The PCA(Slaughter House) Rules, 2001 provides that no one can slaughter animals in slums, in roadside meat shops or in dhabas or in private houses. This rule applies in the slaughtering of goats on Bakri-Eid. Slaughter can only take place in government designated Idgahs, but not in mosques.

LAWS ON ANIMAL SACRIFICE

Q. 1. Is it illegal to sacrifice animals ?

Yes, animal sacrifice is illegal. The act of animal sacrifices is covered under

Local Municipal Corporation Acts, PCA Act, 1960,

Wildlife (Protection) Act, 1972,

Indian Penal Code (IPC).

It is also specifically forbidden in the following states under The Prohibition of Bird and Animal Sacrifice Act:

(*a*) Andhra Pradesh

(*b*) Gujarat

(*c*) Karnataka

(*d*) Kerala

(*e*) Pondicherry

(*f*) Rajasthan

(*g*) Tamil Nadu

Local Municipal Corporation Acts

Municipalities laws prohibit the slaughter of any animal within a Corporation area, other than in a licensed slaughterhouse. Since temples and streets, where animal sacrifices usually occur, are unlicensed, it becomes illegal to slaughter animals at these places.

THE EXPERIMENTS ON ANIMALS (CONTROL AND SUPERVISION) RULES, 1968

Q. 1. What does the law say regarding the conducting of experiments on animals?

Section 4 of the Experiments on Animals (Control and Supervision) Rules, 1968 section 4 lays down certain conditions regarding the conducting of experiments.

Q. 2. Is it illegal to sell animals for experiments?

It is illegal to sell animals for experiments under Section 4A of The Experiments on Animals (Control and Supervision) puts restriction on sale etc., of animals for experiments.

THE WILDLIFE PROTECTION ACT, 1972



Q. 1. What kind of birds is it legal to keep?

- As per WPA, 1972, no Indian birds can be legally+
- Only exotic species can be kept and that too if the seller/ owner establishes that they have come from outside the country. In order to prove that, the seller must have an import license and permission from the CITES Bureau.
- The keeping of a permissible bird must be in conformity with the provisions of Section 11 of the PCA Act, 1960. The failure to comply with these provisions of Section 11 of PCA (confines any animal in any cage which does not measure sufficiently to permit the bird a reasonable opportunity of movement or does not provide the bird with sufficient food, drink and shelter) is a punishable offence and the offender would be liable to be arrested and punished.

Q. 2. What does the law say about selling wild birds in the local market?

- The word ' wild bird' means a bird that has come under the purview of The WPA 1972 which extends its protection to about 122 species of birds. Section 9 of the WPA prohibits hunting of wild birds.
- "Hunting" in common parlance signifies the pursuit, trapping and then killing of an animal. 'Hunting' also includes capturing and trapping of any wild animal.
- Section 57 of W.P.A raises a legal presumption that if a person is in possession, custody or control of any captive animal (including wild birds), it shall be presumed that such a person is not in lawful possession of such a captive animal. Hence, a person selling a wild bird in the local market is guilty of the offence of 'hunting' and is liable to be punished with imprisonment for a term, which may extend to three years as stipulated under Section 51 of the WPA.

Q. 3. Does the Police have the power to arrest under the Wildlife Protection Act?

Section 50 of WPA authorizes any forest officer or any police officer not below the rank of sub-inspector to arrest any person without warrant and detain him, if the arresting officer has reasonable grounds for believing that such person has committed an offence against the WPA.

Section 51(1) of the WPA stipulates that any person guilty of an offences under this Act and shall, on conviction, be punishable with imprisonment for a term which may extend to three years or with fine which may extend to twenty-five thousands rupees or with both.

Q. 4. What are the duties and responsibilities of Honorary Wildlife Wardens?

Honorary Wildlife Wardens are appointed under sub-section (*c*) of section 4 of the WPA, 1972. The main duty and responsibility of an Honorary Wildlife Warden is to assist the State organization responsible for wildlife conservation work, especially with regard to the following matters:

- Control of poaching and clandestine trade in wild animals and products/articles.
- Detection and prosecution of offences under the Wildlife (Protection) Act and the Rules made there under
- Preventing damage to the habitat of wildlife

Identification and selection of areas suitable to be declared as sanctuaries, national parks, closed areas, etc., as well as measures for their proper protection

Measures for dealing with the problem of damage by wild animals to life and property, including the assessment and payment of compensation, etc.

Community based wild life conservation

Honorary Wildlife Wardens have specific powers delegated to them which are :

(*a*) Power to inspect records of the licenses under section 47 (*b*) of the Act

(*b*) Powers of entry, search, seizure, and detention under Section 50 for the prevention and detection of offences.

(*c*) They are also authorized to complaint in court in accordance with Section 55 of the Wildlife Protection Act, 1972.

Q. 5. What is the law that pertains to madaris/ kalandars?

- As per the rules in India, no private person is allowed to capture, own, buy, sell, train or show any wild animals for public exhibition.
- The animals generally used by madaris; i.e. monkeys, snakes, bears, mongooses, parakeets cannot be used for public exhibition and are protected by the WPA 1972.
- Section 22 of the Performing Animals Rules of the PCA Act 1960 is also applicable.

- It is a cognizable offence in both the conditions. In this situation madari can be arrested on the spot, and the animal confiscated and handed over to the Wildlife Dept, Zoo or a Local Animal Welfare Shelter.
- In the case of healthy snakes, mongooses or birds, the animals should be released in a wooden area.

Q. 6. Can anyone including the Government hire people with langurs to drive away monkey from their premises?

- Langurs are covered under the Wildlife Protection Act making it illegal to buy, sell, own or keep them.
- As mentioned above that madari is not allowed to own a protected species. In that situation how can he use that animal in his trade or profession and how can Government recognize the illegal use of an animal.
- The person recruiting the madari and langur is to be dealt with the same laws as the madari.



Supplemental reading

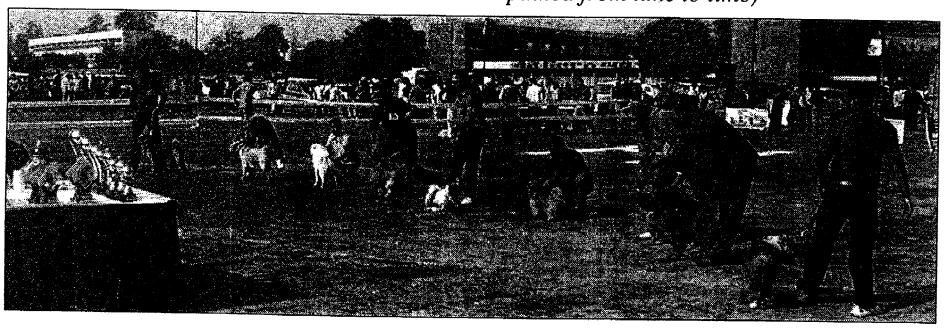
http://www.awbi.org/awbi-pdf/APL.pdf

DISCLAIMER

All the information in the section is compiled from the site of Animal Welfare board of India and is not the interpretation of the law by the author.

GUIDELINES FOR GETTING ANIMAL WELFARE BOARD OF INDIA (AWBI) PERMISSION FOR DOG SHOWS

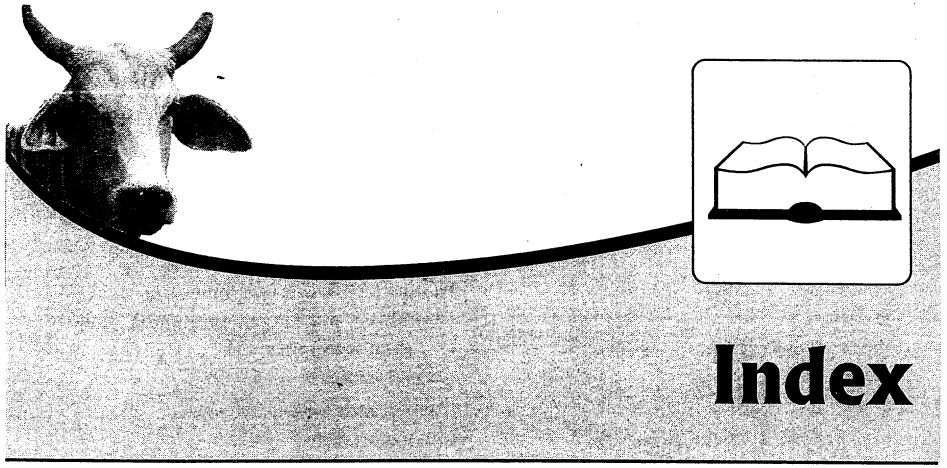
(These Guidelines will be updated from time to time)



1. Animal Birth Control (Dogs) Rules 2001 requires that all Dog Breeders are to be registered with AWBI. Only those dogs of breeders which have been registered with Animal Welfare Board of India (AWBI) will be allowed to participate in the Dog Shows as performing animals after paying the Performing Animals Registration fee of ₹ 500/- for each dog. The breeders will have to produce proof of registration with AWBI at the dog show to AWBI appointed inspector.
2. Non Dog breeders who are wanting to participate in Dog Show must produce the records of purchase of dogs from Breeders / Kennel Club and it needs to be registered with AWBI as performing animal for the Dog Show as per Performing Animals (Registration) Rules by paying registration fee of ₹ 500/- to AWBI.
3. The Board needs 4 weeks time to process the applications for getting permission / registration for Performing Animals for dog shows. The organizer shall send the application in respect of only those animals whose owners have provided the required details / documents.
4. A Veterinary Health and Vaccination Certificate of the dog from a VCI registered Veterinary Doctor must accompany the request for each dog for seeking permission for allowing the dog to participate in Dog Show as performing animals in the show as per Performing Animals Rules 2001.
5. A VCI registered Veterinary Doctor must be available at the venue of the Dog Show for attending to any emergency and checking the Veterinary health of all dogs participating in the show.
6. Necessary arrangements for administering the Veterinary First Aid must be made by the organizers at the venue of the Dog Show.
7. Full particulars of the organizer(s) and owner(s) of the animal(s) i.e. name, address, phone numbers, Email ID should be provided to the Board.



8. The dogs participating in the Dog Show must be provided with proper food and water arrangements.
9. No tricks / acts involving any harassment / cruelty to the performing dogs will be allowed in the Dog Shows.
10. Permission from the Local Administration for organizing the Dog Show is mandatory.
11. Sale of Puppies at the Dog Show will not be allowed. The venue of the Dog Show should be suitable for dogs considering the climatic conditions, Dog shows should not be allowed in extreme weather conditions.
12. A representative of AWBI with State Animal Welfare Board / District SPCA / State Veterinary Dept. will be allowed to check the records and AWBI Performing Animals Registration Certificates of all participating dogs.



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