4.1 ANIMAL DISEASE:-

We always try the best to ensure the good health of themselves as well as our animals. It is well aware that the animals cannot express his internal feeling to anyone. The health of an animal can be ascertained by his behavior. The eyes are bright wide open without any discharge at the corners. The nostril, muzzle and mouth cavity are moist and shining. The skin coat is glossy. The ears are responsive to the sounds. The respiration, dung and urine are normal and without unusual odor. Animal feed and ruminates regularly. Animal feeds and ruminates regularly and responds to call the call of owner.

4.2 DEFINITION OF DISEASE:-

An unhealthy and ailing condition of body and mind is known as disease. An animal is subjected to disease if he is feeling abnormal and not responding properly to the activity of owner.

Adverse climate and weather condition i.e. heavy rain, severe cold or severe heat, reduce the natural resistance of the animal body to the disease. Age of the animal, pollution of water and air, poor feed such as mouldy hay and excessive green crop, excessive work, hereditary condition etc. are also predisposing causes to the occurrence of disease. Disease, in general sense is deviation from the normal condition of the animal. The animal in health and disease can be spotted out easily from the signs and behavior of animal.

The sick animal looks dull with rough coat, dry external mucous membrane and change in respiration,pulse and temperature. Animal does not feed. It does not respond to the owner and sometimes bites or licks the manger.urine and drug may alter in smell and consistency. Often animal may lie down and is unable to get up. On the basis of mode and occurrence of diseases these are classified as follows:

4.3 Nature of diseases
4.3.1 **Acute and chronic diseases:**

Acute disease starts quickly and runs a short course whereas chronic disease runs for a longer or sometimes indefinite time. Anthrax, haemorrhagic and septicemia are acute disease while tuberculosis and johne’s diseases are chronic ones.

4.3.2 **Epizootic diseases:**

Disease of animals which spread rapidly over a large area (eg rinderpest) are known as epizootic and correspond to the word epidemic which is used to describe the disease the diseases which spread rapidly amongst human being.

4.3.3 **Enzootic diseases:**

This describes a disease which is continuously present in a population of animals, but does not spread rapidly like epizootic.

4.3.4 **Sporadic diseases:**

This term denotes diseases which appear suddenly from time to time and they are, otherwise, not normally present in an animal population.

4.3.5 **Zoonotic diseases:**

This denotes diseases, which are communicable from animals to human being, some examples are:– Brucellosis, Tuberculosis etc.

4.3.6 **Non- infectious and non- contagious diseases:**

Diseases caused by factors other than living organisms as described above are included in the group of non infectious diseases. Such diseases may result from a low level of nutrition, lack of vitamins or minerals, hereditary conditions, excessive production of hormones, formation of tumors, mechanical injuries and lesions (cut, abscesses, ulcers and fractures) , poisoning and such other conditions. These diseases are not transmissible from one animal to another. Non-infectious diseases can be classified into following categories:–

a) Common non-inspections diseases
b) Production diseases

c) Deficiency diseases

d) Common diseases

4.3.7 **Infectious and contagious diseases:**

Diseases caused by living organism are called infectious diseases. They can spread from one animal to another. Diseases which are transmitted by direct or indirect contact are called contagious. The infectious/contagious diseases are caused by the bacteria, virus, protozoa, parasites and fungi etc.

1.3.6 **Non-infectious and non-contagious diseases**

1.3.6.1 **Common non infectious diseases**

In developed countries livestock holders are more particular for prevention of diseases then treatment. They prefer to take measures to keep the animal healthy and resist the diseases. They now prefer to use home remedies for animal treatment and call the veterinarian only when it is absolutely necessary. There is also an increasing trend to use harmless, cheap and effective herbal medicines for animal treatment. When the treatment of the sick animal is attempted, the following points may be taken into consideration. In a particular village/area, if many animals are sick at a time with similar symptoms, it may not be a simple disease. It may rather be an infectious disease. Under these circumstances, immediately notify the nearest veterinarian. Before the aid arrives, isolate the sick animals and keep them away from the healthy animals. Do not drag the dead animal on the road. Do not give it to butcher for skinning until the opinion of the veterinarian is obtained. Animal dying of infections diseases should be burnt. Animals should be vaccinated periodically as scheduled and directed by veterinarian. The precautionary measures and the checks for infectious diseases should be followed correctly in appropriate schedule. The treatment for non infectious diseases with routine remedies should be attempted. Cheap, effective herbal drugs for simple and common conditions can be successfully used by the livestock holders and farmers and diseases can be prevented. The animal health care at such a preliminary stage would contribute to increase animal production.
1.3.6.2 Inflammation:

This term is used to denote the reaction of the body to overcome injuries, irritants, fractures and some other disease conditions. In this process, the affected part becomes red, feels hot, swollen and painful and does not function properly. In acute inflammation, if the cause is removed and the part is given rest with hot packs applied over the affected area, the recovery takes place quickly. In chronic inflammation, heat and redness are not very much marked. There is slight swelling on the affected part with slight hardness.

4.3.6.3 Fever:

This term indicates a rise in body temperature which is usually accompanied by loss of appetite, increase respiration and pulse, sweating and shivering and decreased urination. Fever can be due to sudden change in weather, viral, bacterial or protozoal diseases due to sun stroke. A simple method to feel fever is holding the base of the ear.

4.3.6.4 Fracture:

Any kind of crack or break usually due to accidents or severe injury to the bony tissue is referred as fracture. Painful swelling of the affected part is the earliest sign exhibited by the animal. Fracture of the limb is manifested by severe lameness and presence of crackling sound on palpation.

4.3.6.5 Skin diseases:

Skin is the mirror of animal health. It performs specific functions for keeping animal health. Skin helps to maintain the normal body temperature, control the body fluids and electrolytes balance, synthesizes vitamin D with the help of sunlight, protect the body.

From bacterial invasions, etc. moreover animal skin is valuable for its hide. Hide from the healthy skin fetches more value. Production of wool and mohair from healthy skin of sheep and goat is more valuable. Thus the care of the skin plays an important role in animal industry. Heat, cold moisture, physical and chemical
substances, bacteria, virus, fungus, parasites, mineral deficiencies, skin injuries, accidents, allergic conditions, etc. play a considerable role in skin diseases.

4.3.6.6 Wounds:

Bleeding occurs from wound. The cut skin separates and the part is painful. If the wound is not treated, flies attack the wound and maggots are formed. On farms, the wounds are caused by sharp agricultural implements with signs of bleeding, rendering animal unable to walk.

4.3.6.7 Bruised wounds:

Superficial wounds develop if the animal rubs the skin on rough surfaces. They are very painful.

4.3.6.7 Lacerated wounds:

When the animal is bruised with barbed wire and sharp objects accidentally, it develops such wound causing irregular skin cuts.

4.3.6.8 Punctured wounds:

Penetration of sharp instruments causes deep punctured wounds. In such wounds, deep bacterial infections lead to tetanus or sepsis.

4.3.6.9 Incised wounds:

While performing surgery, the wound is created by cutting knife. These wounds are with regular skin contour.

4.3.6.10 Crushed wounds:

Injury on the skin with non sharp objects causes crushed wounds (Contusion). Such wounds may show internal bleeding. If unattended they end in gangrene.

Abscess:

It is a rounded hot painful swelling full of pus. It occurs due to injury from irritant on the skin or infected wound or as a result of internal disease. It may be
caused due to infected/contaminated instruments, syringe and needles. It can be prevented by keeping animals clean and well fed, using sterilized instrument, syringe and needles and proper dressing of the open wounds.

4.3.6.11 Burns:

There are some disease conditions which involve only topical applications and can be attended by the farmers. The animals exposed to lightening with involvement of large body area can be treated with potato mash if nothing is available.

Hoof wounds, warts, and tumors: Hoof wounds, warts and tumors on the hoof and in between the hooves are removed with knife and treated with dry powder of alum, ferrous sulphate and copper sulphate in equal proportion for two days followed by wound healing powder.

4.3.6.12 Antifungal:

Ringworm, eczema etc. are fungal diseases commonly seen in animals.

External parasitic diseases: External parasites such as lice, ticks, fleas, mosquitoes etc. are inimical to animal production.

4.4 Diseases of digestive system

Diseases of the digestive system can be divided into three groups for approach from the farmer's point of view (i) Routine general complaints which are the symptoms of some specific diseases. (ii) Infectious diseases. (iii) Worms.

4.4.1 Ulcers in mouth cavity

Ulcers may develop in the oral mucus membrane, tongue, gums, cheeks and lips. Ulcers are also symptom of infectious diseases like foot and mouth diseases, rinderpest, etc. It may develop due to injury, eating irritant substances and constipation etc. Due to ulcer mouth smell and salivation increases. Animal can not chew properly and food drops down from mouth.

4.4.2 Off feed/Anorexia:
Anorexia is a sign of the disease. Anorectic animal refuses to take food. This also happens after the animal over eats. The animal goes to dustbins and licks earth and gobbles waste and rotten food. Over and under worked animals also become off feed.

4.4.3 Impaction of rumen

Intake of non succulent dry feeds, restricted watering, accidental over eating of grains, especially in harvesting season, is main causes of impaction. Impaction is also a sign of some more serious infectious or non-infectious diseases. Animal is indisposed after about 12 hours of over eating. Kicks the belly with hind legs. Gets up and sits down. The left flank feels solid on pressure with hand. Rumination stops. Dung becomes thick and dry or stops or sometimes ends in smelling diarrhea. Respiration and pulse rate increase, sometimes temperature also increases. Animal lies down and may die in 48 to 72 hours.

4.4.4 Constipation

Constipation occurs in diseases of stomach and intestine. Animal habituated to eat clay, plastic waste and non-digestible food gets constipated. Decreased water intake also leads to constipation. Animal exhibits signs of dullness, rough coat, poor rumination and off feed. Dung is dry and scanty or even stops passing.

4.4.5 Flatulence:

Gas is normally formed in the rumen from the fermentation of feed and is belched out through the gullet. Bloat or tympany occurs when gas accumulates in rumen and animal cannot get rid of it without helps. When gas is mixed with food it forms froth and cause frothy bloat.

Occurrence of bloat is based on type of feed and the amount of water given to the animal. Sudden change to certain type of feed ration also causes bloat. When animal consumes excessive quantity of tender succulent leguminous, excessive nitrogenous fodder or less fibrous feeds, bloat occurs. Cabbage leaves, feeds sprinkled with urea are also associated with bloat. Sprouted or unwanted tender
plants of sorghum, water soaked bean (Dolichos lablab) and plants containing hydrocyanic acid and glycosides cause severe bloat. Other causes of bloat are, blockage of food pipe, constipation causing plants or foreign matter, paralysis of nerve and infections.

Acute (Severe) bloat suddenly occurs, after grazing lush green fodder or after over feeding with fermentative feeds. Left flank region gets distended. Animal is in pain and distress and stops drooling, breathing is rapid. Animal stops eating or chewing and kicks with hind legs. Muzzle become cold Chronic blat occurs very often and comparatively less distention of left flank is noticed in it.

4.4.6 Colic

Conditions like impaction, bloat and indigestion lead to colic. The animal is restless. Sits down and gets up frequently. It looks and kicks at the abdomen.

4.6.7 Internal injury to stomach

Animals some time swallow nails, pieces of wire, needle etc. through the second stomach (Reticulum), they pierce the diaphragm and reach the chest cavity and injure the heart. Many a times these pieces lodged in the pericardium of the heart which is characterized by swelling on the left side near the heart, and may form a big abscess. Animal becomes off feed and goes on wasting. Production is decreased. Skin coat appears dry and rough. Body temperature may increase. There is straining at defecation and urination. In such conditions, take the advice of veterinary surgeon at the earliest. Surgery is required to be performed for removing such objects.

4.4.8 Diarrhoea

Calves get diarrhoea often. It may be due to bacteria or indigestion. Adult animals get diarrhoea after grazing on pastures or due to irritants. Defecation is more frequent than normal. Diarrhoea may be watery, green, yellow, mixed with mucus and smelling, mucus and some times pus is noticed in diarrhea. Hind quarters are soiled. Animal becomes dull with sunken eyes, weak and dehydrated.

4.5 Diseases of Respiratory and Circulatory system
4.5.1 Cold and cough

This is a sign of some systemic or upper respiratory tract diseases. Sudden changes in the weather, over-crowding of animals, moist condition in animal houses, exposure to cold, wetting in rain, infection due to bacteria, virus, fungus, parasites and allergy are some of the causes of cold and cough. Animal is dull and off feed. There is coughing, sneezing and eye and nasal discharge. Body temperature may rise, animal tries to rub the nose with tree or wall with difficulty in breathing.

4.5.2 Pneumonia

Cold, coryza, sudden change in weather and fever are some of the predisposing causes of pneumonia. Bacteria, virus and parasites attack the lung and the wind pipe to set up the disease. Drenching pneumonia commonly occurs when there is accidental entry of the drenching liquid into the windpipe. Animal becomes dull and off feed. There is difficulty in breathing. Body temperature increase, Nasal discharge and cough may be seen. Animal may keep the head hanging down.

4.5.3 Diseases of Urinary System:

Inflammation of kidney (nephritis), urinary bladder and ureters and stoppage of urine due to calculi in the kidneys or urethra are some of the common manifestations of diseases of urinary system. In all these diseases there may be bacterial infection or injury to the affected part because of crystal formation. In urinary calculi especially in bullock, there is concentration of mineral salts and colloids in urinary tract causing inflammation of kidney, bladder or urethra.

In urinary disease the most common symptom in urinary colic; here the urine becomes scanty and stops when calculi obstructs the passage. Animal kicks, strains, and becomes restless. It tries to strain often for urination. If the animal is tied on dry place, wetting of soil untruly, runs amok, salivates, feeding and rumination stops. After two or three days, the urinary blader ruptures and these symptoms subside. Animal sits down. There is smell from the mouth, skin coat becomes rough and temperature may rise.

4.6 Diseases of reproductive system
Reproductive system plays a vital role in animal production and effective animal husbandry development programme. Some commonly occurring disease conditions requiring first aid treatment by framers/livestock owners are as follows:

4.6.1 Swelling (inflammation) of Penis

Penis gets swollen, due to some infection or by crushing due to weight on sitting on hard surfaces or by injury. Wounds, injury or faulty matting, etc. can also cause swelling of penis. Penis does not protrude properly and urination becomes painful. Blood may be seen in urine. Animal licks the affected part, becomes restless and wound an ulcer may develop subsequently.

4.6.2 Inflammation of uterus (Metritis):

It may be acute or chronic, normally occurs after parturition. Infection during parturition, retention of placenta, abortion and removal of calf by hand under unhygienic conditions may lead to metritis. Temperature may increase in acute metritis. Foul smelling vaginal discharge associated with pus and blood is common. Milk production decrease and the animal is off feed with cessation of rumination.

4.6.3 Prolapsed of uterus

In this condition uterus of vagina protrudes out through the vulva. This condition may occur due to excessive straining before or after parturition. It may also be associated with some diseases of the uterus or due to accumulation of urine in the bladder. Animals having gone through many malnutrition are more prone to this condition. The uterus protrudes and hangs out side the vulva. In partial prolapse, the untreated, the exposed part gets injured and infected, causing development of wounds and ulcers. Birds prick on the exposed part and cause injury. Animal continue to strain with a rise in body temperature. Milk production drops or stops.

4.6.4 Retained placenta

In normal parturition the placenta is expelled in 3-6 hours. If this does not happen then it requires manual removal. Difficult parturition, atony of uterine
muscles, improper feeding, infections and inflammation of uterus are some of the reasons for retained placenta.

4.6.5 Abortion:

Sometimes the animal throws out the developing foetus from the uterus. This is called abortion. This may normally happen after five or six months of pregnancy or in advance pregnancy. Abortion may occur due to many reasons like, imbalanced feed, deficiency of vitamins, following drenching of strong purgatives or abortifacient drugs, accidental falls, feeding of fungus infected grains and unripe sorghum or infectious diseases. Aborted animals should be treated as if they normally been parturated.

4.6.6 Sore teats and teat wounds

A common condition in milking cattle is a sore teat with cracking of the skin usually caused by “wet milking.” It may also result from cow pox and foot mouth disease. The condition starts as small swelling in the skin of the teats or udder which becomes blisters and then turns into small abscesses containing pus. Wounds of teats are often caused by cuts and injuries from barbed wire and thorny bushes. Wounds of this kind can lead to mastitis or inflammation of the udder.

4.7 Production and deficiency Diseases

Amongst farm animals, mostly dairy cows and pregnant ewes suffer from production diseases. The incidence of production diseases is highest in high milk producing animals and occurs immediately after parturition and in early lactation. During this period there is high turnover of fluids, solids and soluble organic materials. Any sudden variation in intake, secretion and excretion leads to alterations in the internal environment of the animal. This makes animal prone to suffer from characteristic metabolic diseases. The major factors leading to metabolic diseases are nutritional deficiency, production stress, management practices, and environmental variations. There are large numbers of deficiency diseases, prominent being avianosis-A, copper, cobalt and zinc deficiencies. Calcium and
phosphorous deficiency also lead to various disorders. Proper feeding regimen and supplement feeding of mineral mixture will avert major deficiency diseases. Because of their high incidence and production importance, important metabolic diseases are briefed here.

4.7.1 Milk fever

This disease is also known as parturient paresis. Heavy milker suffers from this disease most commonly. The disease may occur in late pregnancy or 2-10 days after parturition and is characterized by hypocalcaemia, general muscular weakness, circulatory collapse and loss of consciousness. Mostly occurs with in 48 hours after parturition.

Heavy milkers pass more calcium in colostrums and milk. Serum calcium deficiency eventually occurs which leads to milk fever. Deficiency of magnesium is also a contributory factor. Insufficiency of parathyroid gland which controls calcium secretion and its mobilization is also responsible for milk fever.

This disease is rare in second lactation and occurs more frequently in animals in 3rd to 5th location. Initially there is excitement and tetany with hypersensitiveness and muscles tremor. There may be shaking of head, protrusion of tongue and animal does not move or reluctant to move. Animal becomes recumbent, looks drowsy, unable to rise muzzle becomes dry, skin and extremities feel cool, body temperature goes subnormal, eyes are dry, pupil dilated, weak pulse with increased rate and ruminal stasis with constipation are observed. In advanced stage there is lateral recumbency with flaccidity, increased heart rate and inpalpable pulse, bloat, coma and death.

4.7.2 Ketosis

This disease is also known as acetonaemia, ketonaemia, ketonuria, hypoglycaemia. Heavy milking animals can get this disease usually 15-20 days after parturition. It also occurs in winter season in housed animals. A secondary ketosis
may also develop due to loss of appetite as a result of abomasal displacement, traumatic reticulitis, metritis and mastitis.

Ketone bodies increase due to defective metabolism of carbohydrate. Excessive or very less feeding of imbalanced feed having more nitrogen and less carbohydrate will cause carbohydrate deficiency. In such a condition, to maintain body function, animal draws energy from body fat, which results in increase of ketone bodies and acetone in blood, causing the disease. Feeding more concentrates and less dry roughages also contributes to the disease.

Ketosis can occur early after parturition or rarely may be seen up to 60 days. Milk production and feed intake decreases. Animal stands with drooling heads with closed eyes. Dung may be hard or soft like diarrhea. Tympany may occur ketonic odour comes in breath and often in milk. Sometimes the animal gets excited and moves in circles. Salivation, licking, chewing, tremors and tetany may be seen. Body temperature may also increase.

4.7.3 Lactation tetany (Hypomagesaemic tetany, grass tetany, grass stagger)

It is a fatal disease occurring in lactating cows, characterized by hypomagnesemia and hypocalcaemia and clinically by tonic and clinical muscular spasms and convulsions. It is most common in first two months after calving.

Grazing pasture deficient in magnesium and pasture top dressed with nitrogen and potash rich fertilizer and stress of lactation are predisposing factors for grass tetany. Unusually alert, hyperesthesia, in coordination, staggering gait condition, temperature rises after severe muscle exertion, the pulse and respiratory rates are high and the animal dies even before the treatment is given. In subacute cases inappetence, exaggerated movements, urination, defecation, decreased milk production and ruminal stasis are observed and animal may recovery spontaneously.

4.8 Common poisoning

Poisoning in animals occur due to consumption of some plants or due to accidental access to poisoning material. The common poisoning in animals is as follows:
(1) Sorghum (Jowar) poisoning or hydrocyanic acid poisoning. This poisoning occurs when animals graze on unripe sorghum. This poisoning is also seen when animals consume non-watered sorghum oat etc.

(2) Nitrate/Nitrite poisoning is due to feeding/grazing nitrogenous plants.

(3) Pesticide/insecticide poisoning due to consumption of plants contaminated with Pesticides/insecticides.

(4) Lead poisoning due to consumption of fodder contaminated with lead or due to drinking contaminated water.

(5) Fluoroisis: It occurs due to feed and water contamination with fluoride. For treatment of the poisoning cases, immediate assistance of veterinarian should be sought.

If source of poisoning is known, immediately discontinue the source. Feeding eggs, charcoal and milk and purging are the steps to be followed at first hand. However expert's intervention is necessary.

4.9 Infectious diseases

4.9.1 Bacterial diseases

4.9.1. Anthrax:

It is a fatal disease characterized by high temperature, bleeding from natural orifice, reduced lactation, abortion and times sudden death also occurs.

4.9.2 Black quarter:

It is characterized by sudden death, high temperature, lameness, reduced lactation, swelling on hind quarters, shoulder region. Crepitating sound on pressure.

4.9.3 Brucellosis:

It is a sexual disease characterized by abortions in late pregnancy in female, sterility in male, retention of placenta, metritis and swelling of testicles.

4.9.4 Calf dyptheria:
In caves this disease is characterized by fever, necrotic stomatitis (ulcers in the mouth cavity), salivation, acute toxemia and nasal discharge

4.9.5 Calf paratyphoid:

In canvas this disease is characterized by anorexia, dullness, high fever, dysentery with tenesmus, putrid smell of faeces, dehydration and emaciation.

4.9.6 White scoure (Enteric collibacillosis):

Young calves up to 2-3 weeks are affected by this disease, which is characterized by progressive diarrhea, emaciation, dehydration, sucken eyes, hind quarters, soiled with fluid faces and sometimes death occurs.

4.9.7 Calf dysentery:

This disease is characterized by watery diarrhea progressive dehydrations and weakness.

4.9.8 Foot Rot:

Foot rot or foul in foot is a common problem of cattle, sheep and goats. It is usually caused by bacteria or fungus. Moist ground predisposes the condition. The disease is most commonly seen during autumn and winter. Animals with foot go to lame with swelling of the hoof and is unable to bear weight on infected foot. In severe cases, there may be rise to temp., pulse and respiration. The animal may go off feed and rumination gets sluggish. Examination of hoof reveals presence of pus, foul smelling odour and dead tissue in the interdigital space. Foot lesion with vesicles are seen in F.M.D but can be differentiated by absence of mouth lesions in foot rot.

Hemorrhagic septicaemia:

4.9.9 Hemorrhagic:

In this disease cattle suffer from sudden on set of fever, profuse salivation hot painful swelling under neck region, dewlap and brisket.

4.9.10 Jhon’s disease:
This disease is common in 2-6 yrs. Age group cattle, characterized by long course for several months of emaciation, sub mandibular oedema, diarrhea, dehydration and thirst.

4.9.11 Tetanus:

This disease is characterized by Muscle stiffness, profuse sweating, restriction of jaw movements, prolapsed of 3rd eye lid unsteady straddling gait drooling of saliva dilatation of nostrils and fever in late stage.

4.9.12 Tuberculosis:

This disease is characterized by emaciation, enlarged lymph nodes, loss of weight, diarrhea, coughing, bloat, mastitis, metritis and some times death occurs after prolonged illness.

4.9.13 Vibriosis (Campylobactor):

In this disease cattle suffers from fever, mucoid diarrhea and sporadic dysentery. This disease also causes infertility among cattle.

4.9.14 Wooden tongue (Actinobacillosis):

Sudden onset of disease characterized by excessive salivation, swollen and hard tongue, nodules and ulcers on tongue, pus with yellowish granule and lymph node enlargement which makes the cattle unable to eat.

4.9.15 Lumpy Jaw (Actinomycosis):

This disease is characterized by painless bony swelling of jaws which makes them hard, immovable and cause difficulty in mastication. Dyspnoea, weakness and emaciation also occurs.

4.9.16 Mastitis:

It is generally caused by the in production of bacteria in to the udder, through the teat orifice and teat canal, bacteria, also gain entry through cuts, bruises, tears, etc. The usual predisposing cause of mastitis is bad milking practice such as wet
milking, lack of cleanliness, rough milking and incomplete striping of teats. Mastitis may spread throughout the herd if precautions are not taken.

In mastitis udder become swollen with diminished milk yield and teats hot and painful. In some cases cows go off feed, does not permit milking, have temperature, loose condition and even die. Early mastitis is generally found if a “stripcup” method of detection is in regular use and the first few drops of milk are smeared on to it. This will show the clots and flakes in positive cases. Chronic mastitis may show few signs of the condition. In such cases, however, the milk may be watery or bloody in appearance, has a bitter taste and lumps or clots may be seen in the first few drops of milk taken from an infected quarter.

4.10 Viral diseases

4.10.1 Foot and mouth Disease:

This disease is characterized by high fever, painful stomatitis, ropy saliva and large vesicles in mouth cavity.

4.10.2 Goat Plague (PPR):

Sheep and goat usually suffer from this disease which is characterized by fever, off feed, necrotic ulcer in mouth, discharge from eye and nose and respiration distress.

4.10.3 C.C.P.P (Contagious Caprine pleura pneumonia):

It is a fatal disease commonly occurs in goats characterized by high temperature, difficult breathing, nasal discharge and higher coughing.

4.10.4 Pneumonia:

This disease is characterized by high fever, labored breathing, blood tinged nasal discharge, weakness and animal appears dull and depressed.

4.10.5 Malignant catarrhal fever:
This disease is characterized by erosius stomatitis (ulcers in mouth cavity), high fever, severe dejection, conjunctivitis, haematuria, enlarged lymph nodes, diarrhea and lesions on skin.

4.10.6 Mucosal disease:

This disease is characterized by ulcers in the mouth cavity, stomatitis, moderate fever, profuse diarrhoea, dehydration, emaciation, intermittent bloat.

4.10.7 Sheep pox & Goat pox:

Sheep and goat usually suffer from this disease which is characterized by fever, ulcers in mouth, scabs on hairless parts, Nasal discharge, lacrimation and animal looks dull and depressed.

4.10.8 Blue Tongue:

Usually this disease occurs in buffaloes, sheep and goats, which is characterized by fever, dullness, panting, ulcers in mouth, dental pads, swollen face, cyanotic (blue) tongue and lameness.

4.10.9 Rinderpest:

This disease is characterized by ulcers in the mouth cavity, stomatitis blood stained saliva, high fever and severe diarrhoea.

4.10.10 Dengue Fever (Three days sickness):

This disease is characterized by anorexia, enlargement of peripheral lymph nodes, muscular shivering, sharply falling in milk and eye discharge.

4.10.11 Cowpox and buffalopox:

Disease characterized by pox lesions on teat and udder, vesicles formation followed by pustules and scab.

This disease is characterized by anorexia, fever, nasal discharge difficult breathing, ulcers in mouth, enteritis. Pustules on vulva-vagina, conjunctivitis and salivation. Sometimes abortion also occurs in pregnant animal.

4.10.13 B.V.D (Bovine Viral Diarrhoea):

This disease is characterized by anorexia, temperature, ulcers in mouth, lameness, watery diarrhea, dehydration, abortion, ataxia in claves.

4.10.14 Contagious ecthyma:

Disease commonly occur in goats and sheep, which is characterized by pustular lesions on muzzle and lips. In lambs and kids pneumonia and gastritis occur with fever and high mortality.

4.10.15 Rabies:

Due to this disease animals become violent and frenzy. Death occurs in infected animals within 10-15 days.

4.11 Protozoa

4.11.1 Tick brone (Anaplasmosis):

This is characterized by fluctuating fever, anorexia, anemia, emaciation, yellow coloured mucous membrane and jaundice.

4.11.2 Babesiosis:

This disease is characterized by sudden onset of high fever, anorexia, depression, cessation of rumination, anaemia and sometimes jaundice also occurs.

4.11.3 Theileriosis:

This disease is characterized by anorexia, depression and swelling around scrotal area.

4.11.4 Fly brone
Trypanosomiasis (Surra):

This is a sexual disease characterized by edema around penis, scrotum and prepuce in males and vulva swollen inguinal lymph nodes, mucopurulent, urethral discharge in females. Cutaneous patches, stiffness of limbs, emaciation, and sometimes fever also occurs.

4.12 Internal parasite

4.12.1 Coccidiosis:

This disease is characterized by sudden onset of severe diarrhoea, blood stained faeces with foul odour, rectal prolapsed, dehydration, anaemia, anorexia and reduced lactation.

4.12.2 Flukers:

This disease usually spread in summer and autumn. Due to this disease animal becomes dull, weak, facing poor appetite. In chronic condition animal becomes anaemic, and sometimes death also occurs.

4.13 Helminthes

4.13.1 Roundworms:

This disease is characterized by anorexia, depression, pot belly appearance of abdomen, emaciation; anaemia retarded growth, diarrhea and dermatitis.

4.13.2 Tape worms:-

This disease is characterized by anaemia untheiftness, poor condition of coat, digestive disturbances, constipation and diarrhea.

4.14 Trichomoniasis:

Sexual disease characterized by infertility, repeat breeding, and abortion. Round-worms, tape worms and flukes are the common parasites harbouring
the digestive tract of animals. When the worm burden increases, the animal gets thin, pale, anemic and dull. There is loss of appetite, diarrhoea, enlarged abdomen, decreased production and death in heavy infestation. Young and poorly nourished animals are more susceptible and problem of parasite is more common in rainy season. Most commonly, animals acquire parasitic infestation after ingestion of food or water contaminated with larvae or eggs.

4.15 External Parasites

Mange, Mite, Ticks and Fly:

This disease is characterized by nodules, pustules on the skin, reddening of the skin, scratching, biting, weakness, uneasiness and loss of hairs.
Plate 1
Aerva javanica
Aerva lanata
Ailanthus excelsa
Aloe Vera

Plate 2
Amaranthus spinosus  
Ampelocissus latifolia  
Annona squamosa  
Argemone mexicana

Plate 3
Acacia concinna

Adhatoda

Agave

Albizia lebbeck

Plate 5
Plate 6

Abras precatorius

Blepharis linariifolia

Boswellia serrata

Bombax-ceiba
Balanites aegyptiaca
Barleria prionitis
Bauhinia variegata
Biophytum sensiyivum

Plate 7
Butea monosperma
Caesalpinia bonducella
Calligonum polygonoides
Calotropis procera
Ceropegia bulbosa  
Chlorophytum tuberosum  
Cissampelos pareira  
Cleome gynandra

Plate 10
Cucumis callosus
Demostachya bipinnata
Echinops echinata
Clerodenrum phlomidis

Plate 12
Plate 15

Corallocarpus epigaeus

Costus speciosus

Curculigo orchioides

Cuscuta reflexa
Dendrophthoe falcata

cymbopogon martinii

Dioscorea bulbifera

Jatropha curcas

Plate 16
Kalanchoe pinnata
Martynia annua
Momordica dioica
Nyctanthes arbor-tristis

Plate 17
Plate 18

Ocimum tenuiflorum

Pandanus fascicularis

Tribulus terrestris

Peperomia pellucida
Plumbago zeylanica

Sarcostemma viminale

Clitoria ternatea

Cocculus hirsutus

Plate 19
Curcuma amada
Dioscorea bulbifera
Tinospora cordifolia
Typha angustata

Plate 20
Urginea indica

Vanda tessellata

Vitex negundo

Woodfordia fruticosa

Plate 21