



# Training Module No 8

## Theory

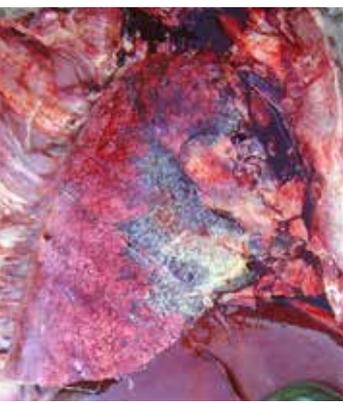
1. Pneumonia
2. Coccidiosis
3. Orf
4. Notifiable diseases



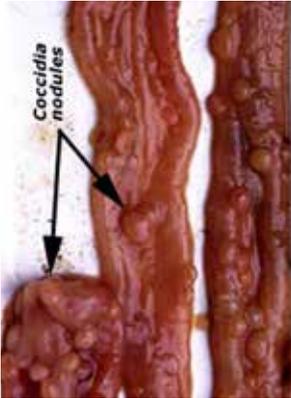
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# Pneumonia – treat with tetracycline

Symptoms	Prevention	Treatment
<p><b>Live animal:</b> The symptoms include fever, lack of appetite, rapid breathing, coughing, loss of condition and discharge from the nose.</p> <p>In post mortem, a piece of lung put into water will sink whereas healthy ones float.</p>    	<p>A multi-component vaccine such as Multivax P can be used to prevent certain types of lung infections in sheep and goats.</p> <p>Keep goats healthy, unstressed, well fed and under cover at night. Kids should be taken indoors during very cold nights.</p>	<p>Sick animals can be treated with an oxytetracycline antibiotic such as Terramycin or Hi-Tet.</p> <p><b>Hi-Tet 200 LA dosage:</b> Intramuscular injection. 1ml/10kg livemass. Repeat after 3 days if necessary.</p>

# Coccidiosis – treat with sulphamides, not tetracycline

Symptoms	Prevention	Treatment
<p><b>The live animal:</b> This disease normally affects young animals. It attacks and destroys the mucus of the intestine which leads to animals having diarrhoea and an inflamed intestinal lining. This is different from scours. An outbreak is characterised by a short period of diarrhoea and then animals quickly dying.</p> <p>Symptoms include:</p> <ul style="list-style-type: none"> <li>• Diarrhoea (may be bloody or contain mucus and be brown, yellow or greenish in colour)</li> <li>• Dehydration</li> <li>• Anaemia</li> <li>• Lack of appetite</li> <li>• Loss of condition</li> <li>• Rectal straining (this may lead to prolapse)</li> <li>• A rough hair coat.</li> </ul> <p><b>The dead animal:</b> Tiny, greyish-white spots are often visible in the mucous membrane of the small intestine. Guts filled with fluid and blood.</p>	<p>Sick animals should be separated from the rest of the flock or herd to prevent spread of the disease. Hygiene is important for preventing outbreaks of coccidiosis. Pens must be clean and dry. Kids should not mix with older goats and should not have access to contaminated feed and water. Coccidiostats such as Rumensin can be fed at times when disease outbreaks are common to prevent the disease.</p>	<p>Give Sulfazine 16% as a drink.  <b>Sulfazine 16% dosage:</b>            Initially give 14ml/10kg livemass            Then give 7ml/10kg daily for two days</p> <p>Where there are outbreaks, treat all females and kids with Sulfazine.</p> <p><b>Other treatments:</b>  <b>Immodium</b> for 3-5 days (0.5 tablets per day)  <b>Vecoxan:</b> 1 ml/2.5kg livemass body weight at about 4-6 weeks of age (treat all kids).</p> <p>The goat should also be given water with electrolytes to prevent dehydration. A good general treatment is a mixture of one spoon salt and 8 spoons sugar in one litre of clean, warm water. For young animals that have not been weaned, feed this mixture twice a day instead of milk (but not for more than three days).</p>
 		
 <p>Coccidiosis is a disease that mainly affects kids and lambs. It is caused by an organism known as coccidia and is most commonly found in communal drinking water areas and pools of stagnant water. Older animals do become infected; however, due to immunity that they develop over time, clinical signs do not show. Older animals are normally the source of infection for the younger animals as they are carriers of the disease.</p>		

## Orf – virus, management and vaccination only

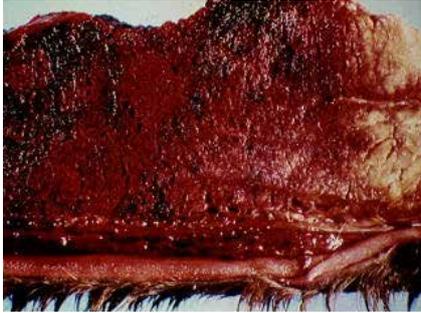
Symptoms	Prevention	Treatment
<p>Wart-like sores on the animal's lips and nose and around the mouth of especially young lambs and kids and on the teats of their mothers.</p> 	<p>Affected goats should be kept separate to prevent the spread of the disease</p> <p>Vaccination of all lambs and kids when the females have stopped lambing for the season.</p> <p><b>Method of vaccination:</b> take a thick (18g) needle insert it into a vaccine such as Scabivax. Then pierce the skin in the armpit of the animal.</p>	<p>Spray the affected areas with an iodine spray daily. Hard scabs can be softened with Vaseline or glycerine to make it easier for the animals to eat.</p>  <p><b>WARNING: USE GLOVES AS THE DISEASE CAN SPREAD TO THE HANDS OF HUMANS.</b></p>

## Notifiable diseases

### Tetanus

Symptoms	Prevention	Treatment
 <p>Tetanus is a disease that causes stiffness that leads to paralysis and then death. This fatal disease occurs as a result of a wound becoming infected by bacteria commonly found in soil and faeces. Therefore, animals are at high risk when using the elastic band method of castration as this makes a wound.</p> <p><i>Left: Stiff legs – symptoms of tetanus in a kid</i></p>	<p>The disease is preventable by using the Multivax P Plus vaccine recommended in this book.</p>	<p>No treatment possible.</p>

### Black quarter/quarter evil

Symptoms	Prevention	Treatment
 <p>Black quarter is an acute infectious disease caused by Clostridium bacteria. It causes inflammation of the muscles, toxæmia and high mortality.</p> <p><b>Live animal:</b> Fever, loss of appetite, depressed behaviour, stiff gait and reluctance to move due to lameness, gaseous bubbles in the muscles before death, sometimes nose bleeding and swelling of the head.</p> <p><b>Dead animal:</b> Accumulation of fluid under the skin and in the lungs and body cavities; affected muscle is dark brown, dry and sponge like or moist. A pungent odour is noted.</p> <p><i>Left: The spongy appearance of muscle in an animal with black quarter</i></p>	<p>It is spread by contaminated soil and organisms are either taken in when the animal is feeding or through wounds.</p> <p>Bury or burn the carcass to prevent the disease from spreading to other animals. The meat can also cause humans to get sick.</p> <p>It will be prevented if goats are vaccinated with Multivax P. They can also be vaccinated with Blanthrax, which also protects against anthrax.</p>	<p>Treatment is not often successful.</p> <p>The farmer can inject the animal with a penicillin injection, which must be obtained from a veterinarian.</p>

## Anthrax

Symptoms	Prevention	Treatment
<p>This disease is more common in cattle. It can affect goats, but very rarely. It can affect humans and that is why it is important to notify the state vet.</p> <p><b>The live animal:</b> The animal often dies suddenly, with no symptoms having been seen even a few hours before.</p> <p><b>The dead animal:</b> Thick, dark blood is seen coming from the animal's nostrils and anus.</p> <p>This disease can infect people so the carcass must be buried or burnt and not eaten.</p> 	<p>Animals should be vaccinated annually with Blanthrax which will protect them from both anthrax and black quarter.</p>	<p>There is not normally enough time to treat the animal so prevention is essential.</p> <p><b>DO NOT OPEN THE CARCASS</b> – The carcass must not be cut open or it will release germs that affect the surrounding area.</p> 

## Peste des petits ruminants (PPR)

Symptoms	Prevention	Treatment
<p>This disease is a potential threat to the goat sector although it is not yet encountered in South Africa.</p> <p>PPR is a viral disease of goats and sheep characterised by fever, sores in the mouth, diarrhoea, pneumonia, and sometimes death.</p>  	<p>The virus is secreted in tears, nasal discharge, secretions from coughing, and in the faeces of infected animals. Water and feed troughs can also be contaminated with secretions and become additional sources of infection.</p>	<p>There are no medications available to treat the disease, but supportive treatment may decrease mortality.</p> <p>There is a PPR vaccine available from countries where it is common.</p>

## Foot-and-mouth disease

Symptoms	Prevention	Treatment
  <p>Lesions (sores) in the mouth and on the feet, salivation and lameness.</p>	Vaccination is only permitted by government under certain circumstances.	No treatment – cases must be reported immediately and affected herds/flocks slaughtered to prevent the spread of the disease.

## Rift Valley fever and Wesselsbron disease

Symptoms	Prevention	Treatment
<p>These are both viral diseases transmitted by mosquitos. OUTBREAKS ARE EXTREMELY RARE!</p> <p>These diseases only occur in situations where there is standing water.</p> <p><b>Rift Valley fever symptoms:</b> young kids unlikely to show symptoms, while adults may develop a fever, vomit and show a nasal discharge, leg weakness, may abort, bloody diarrhoea. 20-30% of infected animals die.</p> <p><b>Wesselsbron disease symptoms:</b> resembles Rift Valley Fever, but mortalities are low amongst adults. Abortions and high kid mortalities are however to be expected.</p>	Vaccination is possible but should only be considered in very wet years.	Not possible.

## Contagious abortion (Malta Fever)

Symptoms	Prevention	Treatment
<div data-bbox="316 1346 831 1995" data-label="Image"> </div> <p>Abortion is the loss of a foetus at some stage in the pregnancy. Abortion can be due to a range of factors including:</p> <ul style="list-style-type: none"> <li>● Diseases that specifically cause abortion – such as enzootic abortion, brucellosis (<i>Brucella melitensis</i>)</li> <li>● Any disease that causes a high fever (e.g. heartwater)</li> <li>● Poor nutrition, especially during late stages of gestation</li> <li>● Mineral deficiencies</li> <li>● Stress</li> <li>● Certain poisonous plants.</li> </ul>	<p>The best prevention is to keep mothers unstressed. Don't transport them unnecessarily. Make sure the mother has adequate nutrition.</p> <p>Dispose of aborted foetuses and placentas in such a way that they do not contaminate the environment and result in other goats also becoming sick (burn them or bury them – at least knee-deep).</p> <p>Some diseases can be vaccinated against (e.g. enzootic abortion), but it is important to find out whether this is the cause of the abortion. Blood can be drawn from goats or samples from aborted foetuses can be analysed to identify the organism responsible.</p> <p>The first step is to keep records of how many goats are aborting (as a percentage of the herd) and when they are aborting in order to try and identify the real cause of the problem (whether food or disease).</p>	<p>Generally no treatment required unless there are complications.</p> <div data-bbox="405 398 576 584" data-label="Image"> </div> <p><b>NOTE:</b> Some diseases also affect people, although they do not always cause abortions in people. Use gloves when you handle aborted foetuses and placentas to avoid contact and contamination with the disease-causing organisms. For example, infection with <i>Brucella melitensis</i> causes abortion, reduced milk yield and testicular infection in goats, and Malta fever in humans. Infection has been found in goats in Northern KwaZulu-Natal. Ask your local Animal Health Technician to bleed your goats to make sure your goats do not have this serious condition. If any do, contact your local state vet and make sure that you cull these animals immediately!</p>