

LIVESTOCK HANDLER TRAINING MANUALS

MODULE 1: EARLY DISEASE IDENTIFICATION

Disease identification in small stock



The most important job of the livestock handler is to observe every animal, every day and take action when a sign of disease is identified.

AFRIVET TRAINING SERVICES

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Introduction to daily observation

Primary animal health care (PAHC) is good management practices, undertaken on an ongoing daily basis by the livestock handler, that are required to maintain health and production.

Good management practices include, the:

- **provision of water, grazing and supplementation of nutritional shortages according to the season and the needs of the animals,**
- **ongoing treatment of parasite infestations,**
- **prevention of priority diseases that cannot be treated effectively through vaccination,**
- **seasonal planning of management actions, and**
- **structured daily observation.**

Daily observation

Structured daily observation of animals is the single most important management action needed in the execution of PAHC.



Most losses or deaths due to disease occur because the first signs of disease are ignored or the urgency of specific signs are not understood and therefore no action is taken until it is too late.

The only resource available to the livestock handler, for the early identification of the first signs of disease, is their eyes.





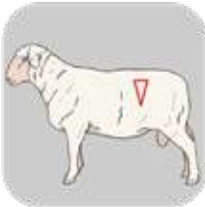



This manual provides a logical model of daily observation through which every animal owner can be trained to understand the **signs of health** and to identify the first **signs of disease** for the most important diseases in a specific area. This model must be used to record and report signs of disease in order to get veterinary support.



Signs of health

Daily observation of the whole herd

To get a quick overview of the health status of the whole herd the observer must check the three most vital signs of health:

- | | | | |
|---|--|------------------------------|---|
| 1 |  | Head up and normal behaviour | 
50% |
| 2 |  | Hunger groove is full | 
25% |
| 3 |  | Normal walking | 
25% |

When 100% (50% + 25% + 25%) of the observations are normal, the observer can be satisfied that there are no major disease problems in the herd for that day.

The result of this daily observation must be recorded as confirmation of the date on which all animals were healthy. This forms a very important part of the background information needed when signs of disease are interpreted.

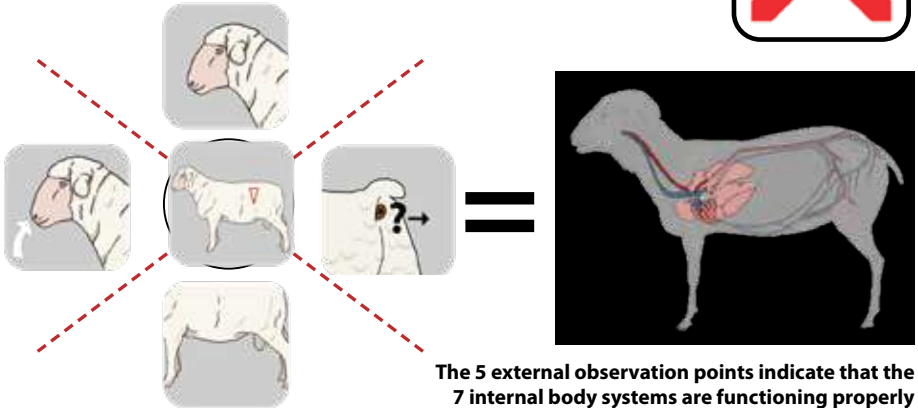
Monthly calendar						
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The livestock owner can only identify the first signs of disease if he/she knows and understands signs of health i.e. what is normal. The best way of learning this is by using the structured model for regular observation of healthy animals.

Signs of disease

Detailed observation of affected animal/s

If any sign of disease is observed at one of the three vital observation points, the full structured daily observation card (DOC) must be completed for the animal/s showing signs of disease.



The 5 external observation points indicate that the 7 internal body systems are functioning properly

DOC provides a structured and logical order of observation through which the **normal** or **abnormal** working of all body systems can be evaluated and recorded.

Purpose

Different diseases affect different body systems leading to general or specific signs of disease in those systems.

Observation (looking at the animals from a distance) is the first step in identifying the specific disease by determining which body systems are/are not first affected.

This crucial information is needed as the first step in the identification of the disease, as the further the disease progresses the more systems affected and the more difficult it is to confirm a specific disease.

The use of DOC is fully explained on the following pages.

1



Head up?

Looking at the head of an animal is the first step in daily observation. Even in a big group of animals, the head is the most visible part of the body. When observing small stock, it must be done early in the morning because when it becomes hot, small stock lower their heads making observation more difficult.

Behaviour

The head houses the brain, which controls behaviour and the body systems. Any disease that has a direct effect on the brain or on the whole body will affect behaviour in different ways.

Eyes

The eyes are a direct extension of the brain. It can be affected by damage to the eye itself or it can indicate diseases within the rest of the body.

Ears

The posture and activity of the external ear are very sensitive indicators of the well-being of animals. A change in posture and/or activity will often be the first non-specific sign indicating that the animal is not well.

Many different diseases can also cause swelling of the ears.

The inner ear can only be viewed when the animal is examined.

Nose

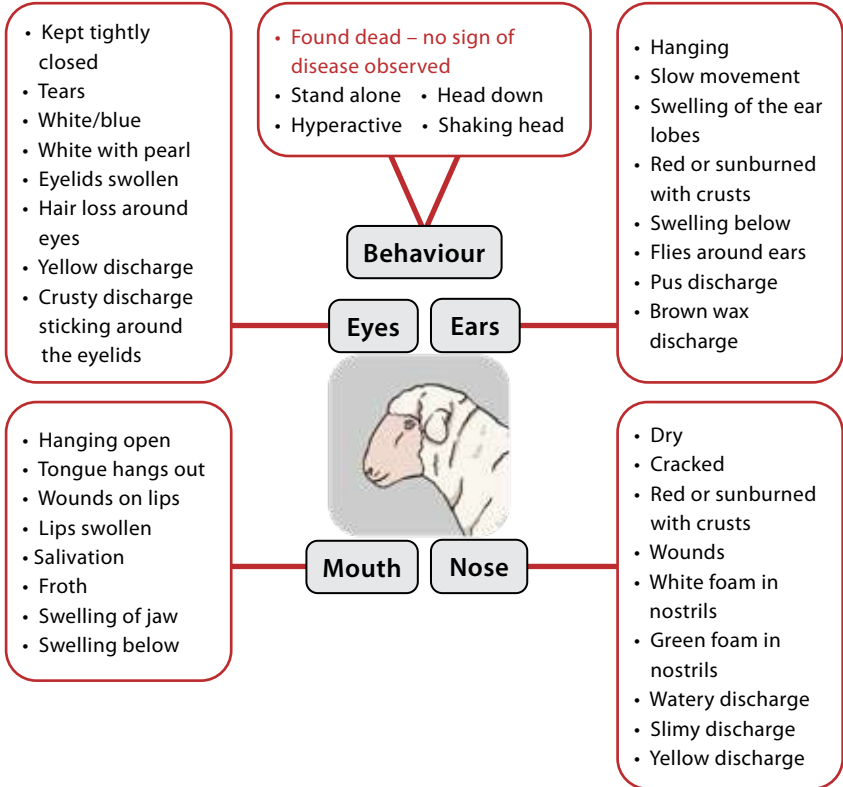
The nostrils represent the start of the respiratory system. Livestock normally breathe through their noses. The nose can show non-specific signs when the whole body is affected as in the case of fever.

Mouth

The mouth forms the first part of the digestive system. Signs of disease can be caused by lesions in the mouth or lower down in the digestive system up to the big stomach.

Most of the problems inside the mouth can only be viewed when the mouth is opened during examination of the animal.

Be very specific when describing the signs of disease observed.

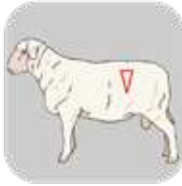


Evaluating the head and behaviour in sheep is not as easy as in cattle.

Sheep lower their heads and change their behaviour when they want to avoid insects such as nasal botflies that deposit their larvae in the nostrils. Sheep also start to pant with a lowered head as soon as it becomes hot in order to cool down.

The livestock handler must understand the normal behaviour of his/her specific small stock flock very well in order to identify any change in behaviour as soon as it happens.

2



Body condition?

The second immediate area of focus is the hunger groove and an overview of the whole body before dealing with specific observations that may be visible over time.

Rumen fill

Because of the unique digestive system of ruminant animals, the level of food intake during the previous six to 12 hours can be judged by observing the rumen fill in the area called **the hunger groove on the left flank.**



This is one of the most direct and visible indications of the level of wellness in a period of 12 hours. In goats the hunger groove can often bulge out after eating due to gas formation in the large stomach. This can also be observed more so in some individual animals and therefore the observer must know his/her animals to recognise when it is normal or abnormal.

Condition

The body condition of the animal is a direct reflection of the wellness of the animal over a longer time (more than 24 hours). Body condition does not change overnight. Therefore it is an observation that can identify longer-term changes.

Skin/wool/hair

The skin is the largest organ and provides protection for the whole body.

Changes to or infection of the skin and the wool/hair normally occur over a longer period of time making this observation point important to evaluate longer-term problems.

Very quick changes in the skin can also occur, as is the case at the start of sheep scab and blowfly infestations which can cause large lesions within days.

Sheep will aggravate these lesions by pulling on the wool/hair with their mouths or rubbing against a fence or other objects.

Be very specific when describing the signs of disease observed.

- Swelling/lumps
- Fresh wounds
- Infected wounds
- Wounds with maggots
- Maggots feeding on the skin
- Tick infestation
- Dull hair coat
- Itchiness
- Wool/hair loss
- Hair standing up
- Bleeding spots

Skin/wool/ hair

Any sign of itchiness in small stock is extremely important and must be investigated immediately by closer examination.



- Average condition
- Bad condition
- Loosing condition very fast

Condition

It is difficult to observe the condition score of sheep with long wool from a distance, therefore it should rather be evaluated during a closer examination.

Rumen fill

- Very sunken in
- Sunken in
- Bloating



Ticks are not found all over the body in small stock as is the case with cattle. On small stock, ticks have very specific attachment sites which are not visible during daily observation from a distance. Ticks must therefore be evaluated at the specific observation points where they normally attach such as under the tail, on the udder and behind the hooves.

The rumen fill in goats is easy to see but remember they look normally bloated if they were eating very succulent young leaves and shoots.

It is very difficult to observe the rumen fill in sheep that have long wool, therefore it is important to observe their eating behaviour more closely. If there is any suspicion that they are not eating well, sheep with long wool must be examined to evaluate their rumen fill.

3



Normal movement?

The animals can move around slowly and observed as they leave the pen. This observation can also be done while the animals are being herded.

Backline

A normal backline posture is an indication that the animal is not in pain. Bending the back while standing or walking is a very specific indication of pain in the body, limbs or feet.

Standing

Healthy animals stand comfortably with all four feet spaced under the four corners of the body and even pressure is placed on all four feet. They stand still without swaying from side to side.

Lying

When sheep are lying down they do so in an upright position, with their necks and heads forward or sideways and front legs bent underneath the chest. They will normally lie on their backsides. As with all ruminant animals, if sheep are lying flat on their sides they cannot get rid of the gas formed in their rumen and will bloat very quickly.

Front legs and feet, and back legs and feet

The front and back legs as well as the joints are smooth with no large swellings. There should be no marks on the skin, matting or loss of hair on the joints.

The hooves must be normal with no swelling or wounds above, in between or behind the hooves.

When animals are herded, their gait is steady with no jerky movement of the head. During walking the head is lowered in order for them to see where they are going.

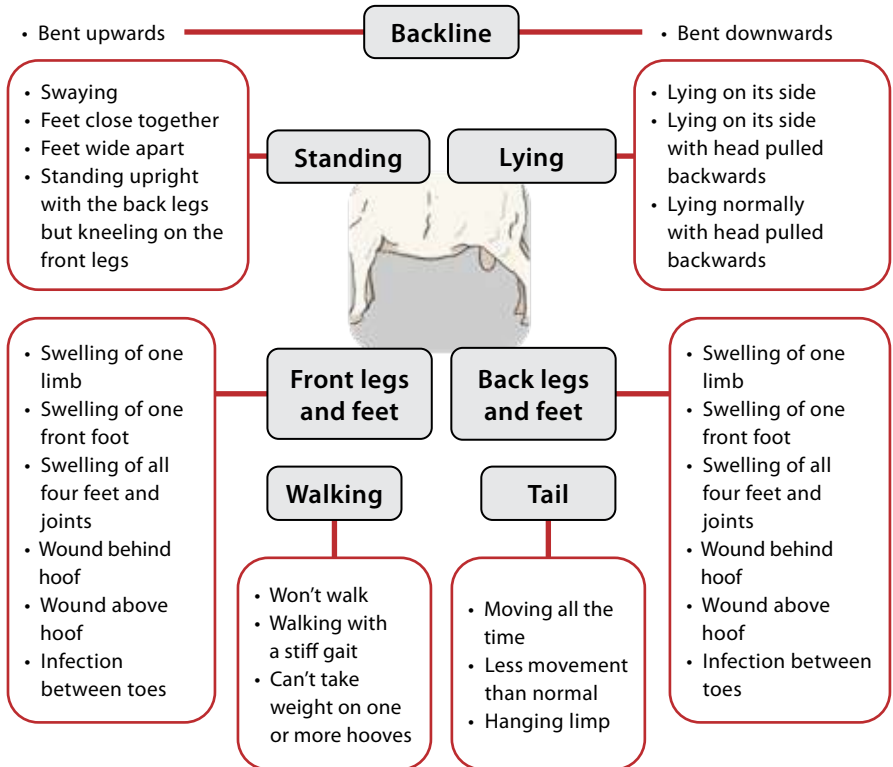
Lameness is a very common problem in small stock and the first sign of lameness is when an animal won't put its full weight on one or more feet while walking.

Tail

The tail of sheep is less active and sheep will only wiggle their tail if there are insects bothering them or other causes of irritation under the tail.

In goats the tail is a very good indicator of well-being and the tail is normally upright. A hanging tail is a clear sign of disease.

Be very specific when describing the signs of disease observed.



When working with small stock, you won't necessarily need a crush pen to examine the animal as when working with cattle. Small stock that show any signs of disease can and must be caught and examined as soon as the first sign of disease is observed.

Lameness

The progression of lameness in small stock is very fast, therefore the cause must be established in order to immediately start the treatment.



4



What goes in?

Observing animals' breathing, drinking and eating should take place during the day. Because these animals have large stomachs, they eat or graze and then rest while they ruminate the food accumulated in the big stomach.

Breathing

Observation of the ease, speed and depth of breathing should be done before animals are disturbed. In small stock it must be done early in the morning while it is still cool.

Very close observation of the chest and abdomen movement is needed to evaluate breathing. When breathing is difficult, increased chest and abdominal movement is obvious.

Drinking

Animals with large stomachs (ruminants) drink a large amount of water at a time. The drinking process involves the normal working of the muscles of the mouth, tongue and throat to suck the water and to swallow it effectively. Diseases that affect any of these will cause the animal to drink less or not at all.

Eating

A very specific sign of health is the eating (grazing) behaviour of animals. This can be evaluated throughout the day because these animals spend most of their time taking in food to the large stomach. Any change in eating behaviour is important to record. Most diseases that affect the whole body will decrease or stop food intake.

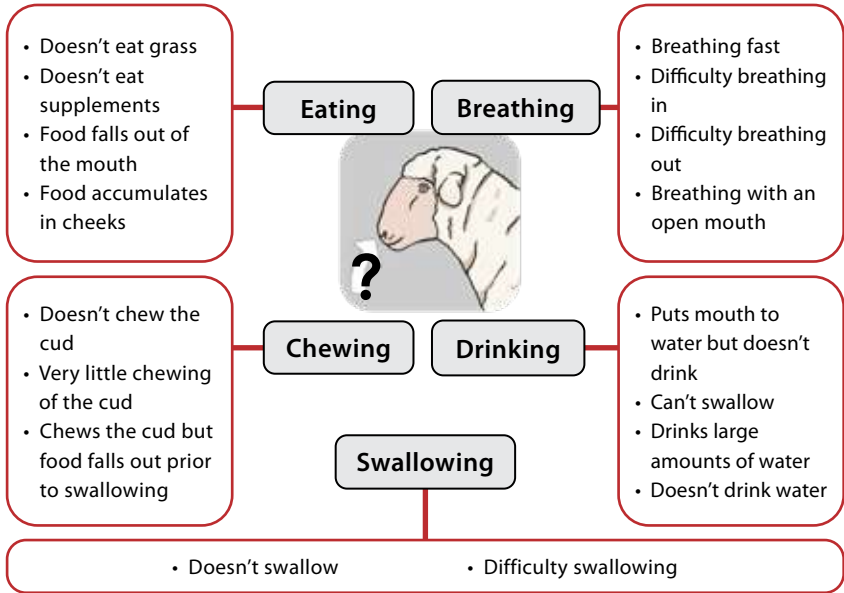
Chewing

When animals are resting, their well-being is best evaluated by the number of animals ruminating. Unhealthy animals stop ruminating.

Swallowing

Normal swallowing can be evaluated when the animal is drinking or swallowing the cud. The observer should then also focus on the neck and breastbone while evaluating the swallowing process.

Be very specific when describing the signs of disease observed.



The first step in reporting observations is just to make a cross over the affected areas on the daily observation card (DOC).



Identifying and remembering what is normal is as important as identifying what is abnormal in disease identification.



Normal
(Signs of health)



Abnormal
(Signs of disease)



5



What comes out?

Because the animals are eating and drinking large amounts of food and water, they produce a lot of dung and urine during the day, which can be observed.

Dung

The consistency and colour of the dung give a good indication of the health and functioning of the digestive system. Small stock dung is in the form of loose pellets. If pellets are sticking to each other or the dung is soft (same as cattle) or watery, it is not normal unless the pasture they feed on is very lush and soft. Soiling of the back side of small stock with dung is not normal.

Urine

The only evaluation of the functioning of the kidneys and urinary system can be done by observing the animal while it is urinating. The specific colour and clarity of the urine is also a very good indication of the general or specific health of the animal. Any change in the urine is an important observation to make.

Vulva

Observation of the external opening of the reproductive tract of female animals is important before breeding and after birth. This is a specialised observation and is used for breeding management and identification of problems just before, during and after the birthing process.

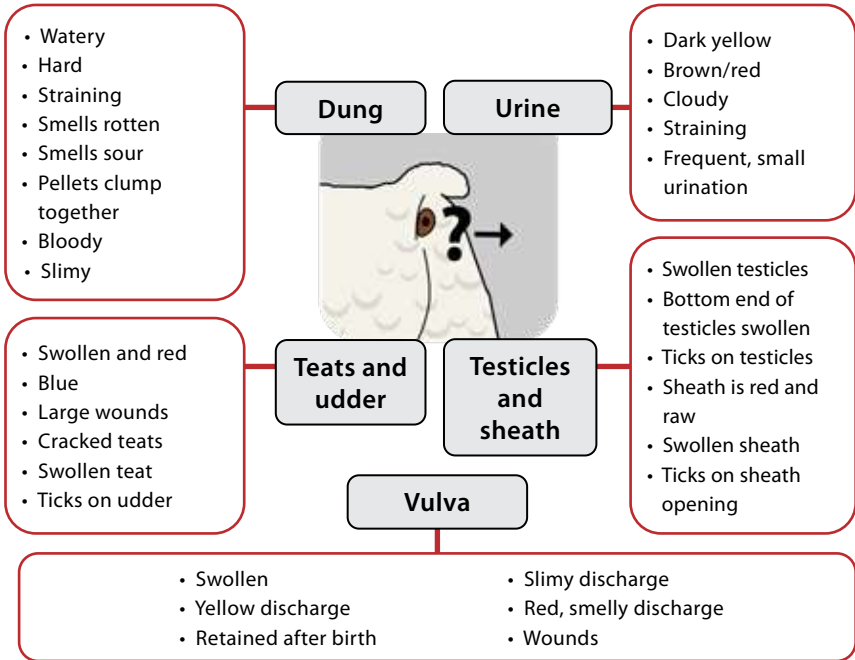
Teats and udder

The observer cannot see the milk but can evaluate the health of the teats and udder on a daily basis. This observation is not as easy as in cattle and if there is any suspicion that something is wrong, the animal must be examined more closely.

Testicles and sheath

In male animals the semen is not visible but the important male reproductive organs must be observed daily. Ticks, swelling or wounds call for immediate action.

Be very specific when describing the signs of disease observed.



Ongoing observation is a normal routine that must be followed every day by the person that takes care of the sheep flock. If all systems are normal, no further actions are necessary.

If daily observation is practised, the livestock handler will become better and better at observing and describing the first signs of disease or any other changes that occur.

If any sign of disease is observed, that animal or animals must be examined immediately to determine the urgency, progression and extent of the problem.

It is important to understand that examination is not a once-off action but must be **repeated** if no clear findings were made after the first examination and if the animal was treated and is recovering. Examination in this instance **must continue** until the animal is completely normal again.




DAILY OBSERVATION CARD

To practise the structured observation methodology, use the following form. The livestock handler simply ticks or crosses what is normal and abnormal respectively and then describes their observations to their veterinary support provider in detail.

Date: _____

Animal ID: _____

Reported by: _____



Behaviour

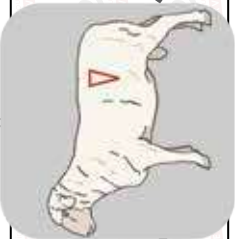
Eyes

Ears

Mouth

Nose

Condition



Skin/hair

Eating

Chewing

Breathing

Drinking

Swallowing

Dung

Udder and teats

Urine

Testicles and sheath

Vulva

Standing

Front Legs and feet

Lying

Rumen fill

Backline

Tail

Back legs and feet


Walking


Normal


Abnormal

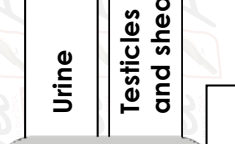
✓


✗







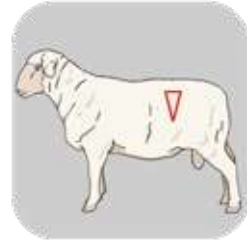




Introduction to closer examination

If any general or specific signs of disease are seen during observation, a closer examination must be done immediately or as soon as possible.

Examination is a hands-on action to confirm and expand on the observations made and inspect areas that cannot be seen from a distance during observation.



The main purpose is to determine the urgency of the treatment or prevention actions needed:

1



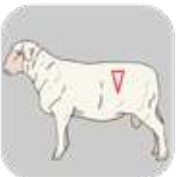
Fever

2



Blood loss

3



Enlarged lymph glands

EMERGENCY

Any one of these three specific findings confirms that urgent treatment is needed.

The last step in on-farm disease identification is to gather and record background information that provides context to the disease in question.



The need to examine a sick animal immediately

All diseases develop over a period of time. This can happen very quickly, as in the case of an injury, or it can be slower, as in the case of intestinal diseases, e.g. internal parasites that develop over the course of two to three weeks but can then cause sudden deaths.

The main problem experienced in the field is that most basic diseases are not treated in time because owners or livestock handlers do not complete an examination of the animal immediately after the first signs of disease are observed.

Below are two examples of disease conditions that led to severe losses just because no action was taken when the first signs of disease were observed.



Infestation of a small wound by blow fly maggots leads to a very large affected area and loss of condition because it was not treated immediately.

Handling facility needed to examine and treat small stock

Unlike cattle, sheep can be handled and examined with the most basic facilities because they are not dangerous and don't normally jump over structures.

Crush pen for sheep and goats

- The handler works from either the inside or outside of the crush.
- Height 700 mm x length 3 m (length of six sheep/goats).
- Width 400 mm (two sheep/goats next to each other) or 250 mm (one sheep behind the other).
- The distance between thin horizontal poles should be 10 cm to 15 cm.
- You can use thin metal pipes, steel wire and new, not rusted, chicken mesh to make the sides of the crush pen.

The minimum requirement is a small camp in which the animals can be backed into a corner for you to get close enough to catch the affected sheep without having to chase after the group. Correct catching and handling of sheep is a skill that needs to be developed through training and initial close supervision.



1



Examination from the back

Follow a specific procedure when examining an animal.

Taking the animal's rectal temperature is the first step in examining an animal showing signs of disease. At the same time, complete a structured examination of the rest of the backside of the animal.

Tail

Insert the thermometer under the tail into the anus. It is important to examine this area for the presence of ticks because this is one of the preferred sites where ticks attach themselves in sheep.

Temperature

Test the core body temperature with a thermometer inserted into the anus. The body temperature of small stock can increase very easily if there is an increase in the environmental temperature. A sick animal must be examined early in the morning as it is difficult to interpret the measured temperature correctly later in the day.

Condition

While waiting for the thermometer, the condition score of the animal can be evaluated by feeling the fat reserves under the skin in the lumbar area (the area just in front of the hip bones). Condition is scored on a scale from 1 to 4.



Skin

Evaluate the skin and coat while completing the condition score. When the skin is healthy and not infested by parasites, sheep do not show any signs of itchiness. A very thorough examination of the entire skin must be done if any sign of itchiness is observed.

Below the tail

The rest of the backside below the tail can now be examined, including the vulva/sheath, udder/testicles. Specifically look for any discharges, soiling, swelling, external parasites and wounds in this area.

Taking the temperature

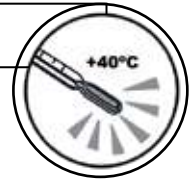
A thermometer must always be available when farming with livestock.



Use either a digital or mercury rectal thermometer.



The use and reading of a mercury thermometer is a specific skill that is acquired through training.



Average normal temperature early in the morning = **38.5°C**

Increased temperature = **≥40°C**
FEVER

A temperature of more than 40°C requires urgent attention.

Fever is the best indicator of infectious diseases, in contrast to other causes of disease.

Body temperature may increase before other clear signs of disease become apparent.

Other causes of raised temperature that may be confused with a fever are:

- It is very hot or the animal was lying in the sun.
- The animal was chased before being examined.
- The muscles of the animal are contracting because of a disease caused by a toxin such as a dipping compound.

Serious contagious diseases such as sheep scab cause sheep to start itching. They start nibbling the wool/hair and rubbing themselves against objects such as fences and fence posts. Common causes of itchiness are: sheep scab, lice, fleas and grass seeds. If the cause is not found during the examination, a veterinarian must be contacted to give a specific diagnosis.

Evaluate the status of the blood supply by checking the colour of the lining inside the vulva. When the blood supply is normal, the lining will be light pink.



2



Examination from the front

Follow a specific procedure when examining an animal.

Examining the inside eyelid is the second step in examining a sick animal as the blood supply is evaluated in this way. At the same time a structured examination is done of the eyes, nose and inside of the ears and mouth.

Inside eyelid

Blood loss is one of the major causes of death. The early stages of this condition are not visible during daily observation. The blood supply status can only be evaluated by examining the lining (mucous membrane) of the inside eyelid or mouth, and vulva in the case of ewes.

Eye

Examine the open eye for any lesions that were not very clear when observed from a distance. By using both hands to keep the eye wide open, the head can be tilted up and down so that the examiner can see the entire front part of the eyeball, which is normally not visible.

Ears

Examine deep inside each ear for ticks and abnormal excretions. This area is not visible during daily observation from a distance.

Nose

Closely examine the nose and excretions from the nose, as it is the external opening of the whole respiratory system. Use other senses, such as smelling the air breathed out, as part of the examination.

Inside the mouth

The inside of the mouth must be examined because a number of diseases affecting small stock cause very specific lesions on the lips, tongue, hard palate and gums. The age of the animal can also be established by looking at the front teeth. Every sheep handler needs to learn how to calculate the estimated age of sheep according to a basic formulation.



Examination of the inside eyelid

The colour of the inside eyelid is a visible indication of the status of the blood supply.

The correct method for opening and examining the inside eyelid:

1. Lift the top eye bank with the fingers.
2. Gently close the eyelid with the thumb.
3. Push the closed eyeball inwards with the thumb.
4. Pull the lower eyelid down with the thumb of the other hand until the inside eyelid bulges out.



The normal colour of the inside lining of the eye is pink.

Various disease conditions can cause the colour of the inside eyelid to change:

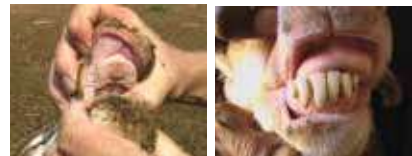
White	An indication of blood loss and anaemia.	Yellow	Liver problems or disease that cause a breakdown of red blood cells.
Red	If only one eye is affected, it is a sign of an eye infection.	Blue	Animal doesn't get fresh air – suffocating owing to lung problems or can't breathe.
Red X2	If both eyes are red, the whole body system is affected.	Brown	Some plant toxins containing nitrites can cause this.

Examining the inside of the mouth



One helper standing over the shoulders of the sheep can keep the head still for the examiner to stand or crouch in front of the sheep and get a clear view of the inside of the mouth. A headlamp is very helpful if one has to see the back teeth and throat.

Place the fingers of one hand over the bridge of the nose, insert the thumb into the mouth and press on the hard palate. The sheep/goat will automatically open its mouth a little and the mouth can then be opened and the lips and tongue manipulated and examined with the other hand.



If the sheep/goat's mouth is not clean and dry during the observation, the inside of the mouth must be examined. Look for sores on the lips, the lining of the mouth and the tongue. Also check whether the back teeth are broken or whether something is stuck between the teeth.



3



Examination of the rest of the body

Follow a specific procedure when examining an animal.

Examine the lymph glands and a structured examination of the rest of the body that couldn't be touched when the animal was observed from a distance.

Lymph glands

The lymph glands are not easily palpable (felt) by inexperienced examiners unless the glands are enlarged. The easiest lymph glands to examine are the ones at the point of the shoulder just in front of the shoulder blade, the inside edge of the lower jaw and behind the knee.

Chest

The movement of the chest is the result of the animal breathing in and out (respiration), on average about 25 to 35 times a minute. The chest of the sheep/goat will be seen to move more when there is an increased rate of respiration – this happens in sheep/goats as soon as it gets hot. Sheep can start panting as a way of cooling down. Sheep panting with an open mouth and with the saliva forming foam are severely heat stressed.

Abdomen

When examining the abdomen, look for large swellings and an abnormal shape. The hunger groove must be examined for any signs of being bloated. If it is very sunken in, it is a sign that the animal has not eaten over the past 24 hours. In sheep with long wool the hunger groove must be touched in order to evaluate its status.

Front legs and feet

Both the front and back legs must be examined. Feel (palpate) for large swellings or any abnormality in all the joints if the animal showed signs of lameness during observation.

Always compare the left limb to the right one in order to determine whether what you see and feel is normal or abnormal.

Back legs and feet

The hooves of sheep must be examined to see whether they have an abnormal shape and whether there is any swelling of the joint above the hoof or wounds/infection behind or between the claws. Sheep can be lifted and kept in a sitting position to make it easier to examine the legs and feet and manipulate the joints.

Lymph glands

Swelling of the lymph glands is a specific indication of various major diseases.

Although this is part of a specialised examination to be done by a veterinarian, the most accessible lymph nodes can also be examined and evaluated by the livestock worker. If they are very enlarged, the examiner will be able to feel them.

Examine the lymph gland under the skin at the point of the shoulder (just in front of the shoulder blade).



The other lymph glands that can be examined are behind the knee and at the inside corner of the jawbone – this is done when the head is examined.

Examining lame sheep

The hoof cannot be examined properly if it cannot be cleaned. It is in many cases essential to remove an overgrown hoof wall with a pair of hoof scissors in order to see the sole. However, this is a specialised skill that can only be acquired through training.

Most hoof problems can be treated effectively if this is done as soon as lameness is observed. If the correct treatment is not provided, the problems can progress to severe lameness that will involve the joint and that cannot, in most cases, be treated effectively.



Background information (history)

The third component of information needed and which can only be provided by the livestock owner for possible assistance in identification of the cause of disease, is the background information.

This is information about what happened **before** and in the **immediate period after** the first signs of disease were observed in a group of animals. It is extremely important because it sometimes gives the answer to unidentified disease problems.

Animal type

- Different diseases affect different types of animals. So it is important to firstly identify the type of animal: cattle, sheep and goats.

Sex

- There are diseases that only affect male or female animals and therefore the sex of the affected animals must be specified.

Age

- Many diseases are more common in younger or older animals and therefore the age of the affected animals must be specified.

Stage of production

- This is important to know for female breeding animals because some diseases only affect female animals at specific stages of the production cycle.

Number of animals affected

- Some diseases typically only affect individual animals and other diseases do affect a number of animals at the same time.

Number of animals in the group not affected

- The size of the group of animals is very important because some diseases can only be transmitted in large groups of animals. How close animals are confined to each other and levels of stress is also hereby determined.

Vaccination history

- Some deadly, viral and reproductive diseases cannot be effectively treated once the first signs of disease are observed and therefore the vaccination history is important to know.

Treatment history

- Some treatments given in the wrong dose or improper application method can cause sickness and this information then also becomes very important.

Any changes that happened before the first signs of disease were observed are very important and must be communicated.

- Changes in drinking water source.
- Changes in camps/grazing.
- Changes in supplementary feeding.
- Availability of feed and water.
- Changes in housing.
- Recent transport of animals.
- New animals brought in.
- Management actions (e.g. weaning) are also important.
- Extreme weather conditions can be a very important predisposing/contributing factor.
- Season of the year (rainfall, average temperature and humidity) is a very important factor in the occurrence of some diseases, especially vector (ticks or insects) borne diseases.

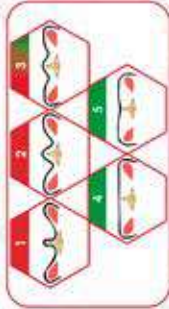
1. Examination from the back?



Temperature?

Background Information?

Condition Score?



2. Examination from the front?



Inside lining of the eyelid?

Background Information?

Inside the ears?

3. Examining the Rest of the Body?



Lymph nodes?

Background Information?

Inside the mouth?

Front legs & feet?

Back legs & feet?

4. Background Information:

Age?

Sex?

Number affected?

Number in group?

When was first sign of disease observed



Deciding on the urgency of treatment

The findings of the daily observation and examination are used in combination to determine the urgency of the treatment needed.

Examples of findings that require urgent treatment:

Fever

Fever (body temperature of 40°C and more) is an indication of infection. Some diseases like pneumonia must be treated immediately. But there are also viral diseases, like Rift Valley Fever and bluetongue, causing fever and that can only be prevented by vaccination.

White inside eyelid

In sheep blood loss is mainly caused by internal parasites. If the inside eyelid is white it means there is already severe blood loss and the animal must be treated immediately. Do not chase these animals as they will die as a result of too little blood to transport oxygen to the body.

Combination

In sheep a combination of normal temperature and a white inside eyelid is an indication of an internal parasite infestation, such as wireworm and/or liver fluke causing blood loss. Because internal parasites occur regularly in animals, the body normally does not react against these parasites and therefore no fever develops.

Bloating

Because sheep/goats continuously produce gas in the rumen it will expand quickly if the gas cannot escape through the mouth. This causes pressure on the lungs and the animal will soon die because it can no longer breathe. The obstruction must be cleared or the rumen must be deflated with the use of a trocar.

Poisoning

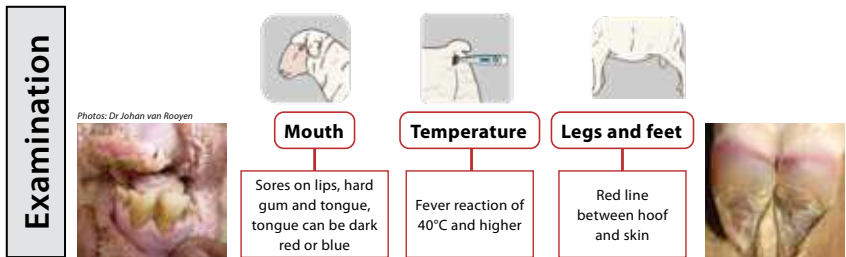
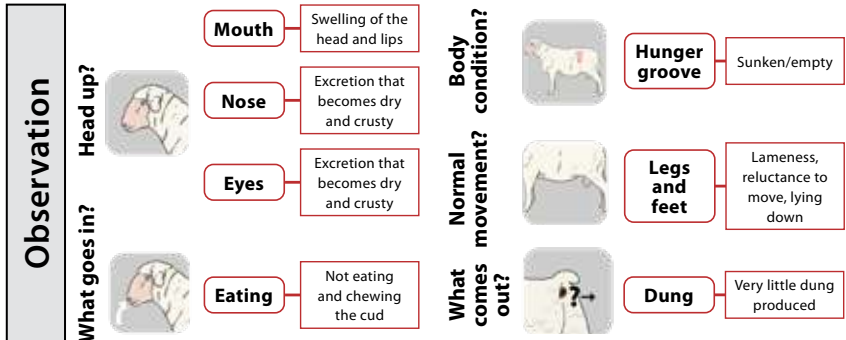
Many kinds of poisoning cause rapid death in sheep/goats and it is not easy to make a correct diagnosis. A number of animals are mostly affected at the same time. Contact a veterinarian in cases where poisoning is suspected.

Background information, as well as every finding during observation and examination, is very important to support the process of making a specific diagnosis.

Diseases will differ from area to area, depending on environmental and other factors. The 10 most important diseases and a description of the signs of these identified diseases must be available and used for on-farm interpretations of the recorded findings.

Example of how observation and then examination are used to identify a suspected case of a very important disease.

Bluetongue



Background information	Season – summer and autumn	Number – more than one affected
	Sex – both males and females	Age – young animals are more vulnerable

This combination of signs of disease is a specific indication that bluetongue must be suspected.

Rinderpest of small stock*

There is one other highly infectious and deadly disease that does not occur in South Africa at present, although it does occur north of our borders – *Peste de petits ruminants (PPR)*. This disease looks a lot like bluetongue but also causes additional signs of disease such as diarrhoea and pneumonia and affect sheep and goats.

As this disease is spreading southwards through Africa, it is important to know the specific signs of this disease in order to report it immediately should it ever occur in South Africa.

*Scientific name: *Pestis de Petite (PPR)*

The trigger for disease control

The limitation with some deadly or damaging diseases is that they cause death or severe damage within 12-24 hours of the first signs of disease being observable. At the same time the need for disease control **can only be initiated** once the livestock owner has identified the first signs of disease and contact a veterinarian.

Clinical emergency service

Veterinarians are professionally trained to provide a clinical diagnostic service **during farm visits to examine the sick animal**. Their professional training includes all causes of disease and the specific knowledge about the treatment and/or prevention of each disease.

Regular parasite control is part of daily good management by the livestock handler and parasite infestations must not lead to clinical disease emergencies.

Afrivet products registered for the control of external parasites

Afrivet product	Active ingredients	Sheep scab	Biting lice	Sucking lice	Blow fly	Ticks	Flies
Deltapor 5 G4252 (Act 36/1947)	Deltamethrin 0,5 % m/v Piperonyl butoxide 2,5 % m/v					√	√
Deltapor 10 Plus G4255 (Act 36/1947)	Deltamethrin 1 % m/v Piperonyl butoxide 3 % m/v					√	√
Eraditick Plus G4251 (Act 36/1947)	Amitraz 1,5 % m/v Deltamethrin 0,50 % m/v Piperonyl butoxide 3 % m/v		√	√		√	√
Eraditick 125 G3585 (Act 36/1947)	Amitraz 12,5% m/v	√	√	√		√	
Eraditick Grease G3667 (Act 36/1947)	Deltamethrin 0,1% m/m Piperonyl butoxide 0,05% m/m					√	

The limitation under African farming conditions

In most cases a 24-hour emergency clinical service by a veterinarian is not readily available in remote areas. Without veterinary assistance, the livestock owner would normally take un-assisted actions to treat the affected animal/s.

Remote telephonic veterinary support

Effective telephonic support can be achieved if the signs of disease are presented to a veterinarian in a structured format. The system explained in this module provides the livestock owner with the practical structure to be used in recording the signs of disease and presenting the case to a remote veterinary professional.

Weekly inspection of small stock for parasites is a specific adaptation of daily observation and examination. Full information about parasite control and parasite control products are available from Afrivet.

Afrivet products registered for the control of internal parasites

Product	Active ingredients	Wire-worm	Round-worms	Tape-worm	Nasal worm	Liver fluke	Conical fluke
Eradiworm 25 G4249 (Act 36/1947)	Levamisole HCl 2,5 % m/v	√	√				
Eradiworm plus G4265 (Act 36/1947)	Levamisole HCl 3% m/v Rafoxanide 3% m/v	√	√		√	√	
Ecofluke G3383 (Act 36/1947)	Triclabendazole 10% m/v					√	
Ecolint Super G3065 (Act 36/1947)	Resorantel 25% m/v			√			√
Eradiworm + Tape G4244 Act 36/1947	Levamisole HCl 37,5 mg/ml, Praziquantel 18,8 mg/ml	√	√	√ (Milk Tapeworm)			

It is important to differentiate between sheep and goats. One needs to understand these differences when observing, examining, and treating animals. Take care when vaccinating goats as they can react badly to certain vaccines and to ivermectin based products. Make sure the product is specifically registered for use on goats.



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5 µg/ml **Manufacturer:** Wormvax Australia Pty Ltd at the Albany Laboratory of the Dept of Agriculture and Food, Western Australia **Registration holder:** Afrivet Business Management (Pty) Ltd
Co/Mpy, Reg. No. 2000/011263/07, PO Box 2009, Faerie Glen, 0043.
RSA Web: www.afrivet.co.za

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