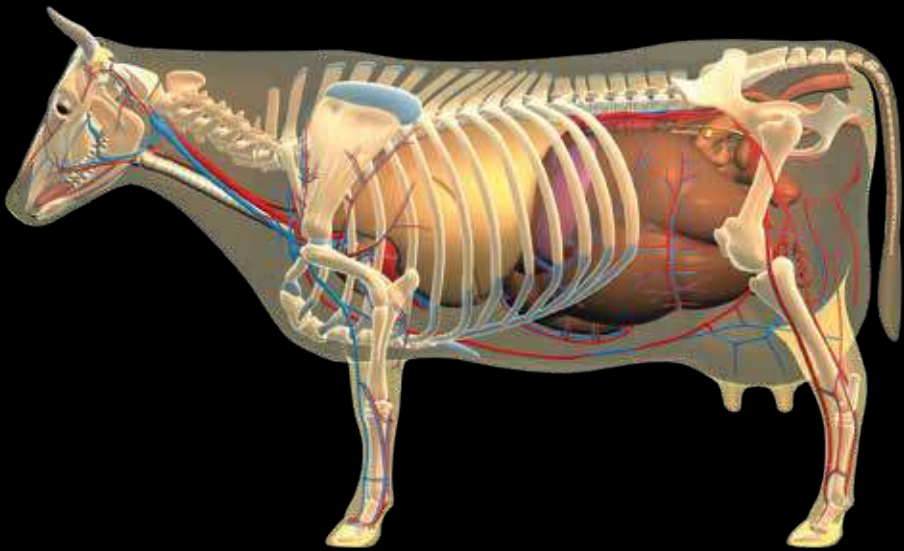




LIVESTOCK HANDLER TRAINING MANUALS

MODULE 1: EARLY DISEASE IDENTIFICATION

Early disease identification in cattle



The livestock handler must observe every animal daily and examine an animal at the first sign of disease.

**ANIMAL HEALTH IS
IN OUR DNA**

AFRIVET TRAINING SERVICES

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Early disease identification in cattle

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Introduction to daily observation

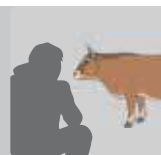
Primary animal health care (PAHC) is good management practices, undertaken on an ongoing daily basis by the livestock handler, that are required to maintain health and production.

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



2



Hunger groove is full



3



Normal walking



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.

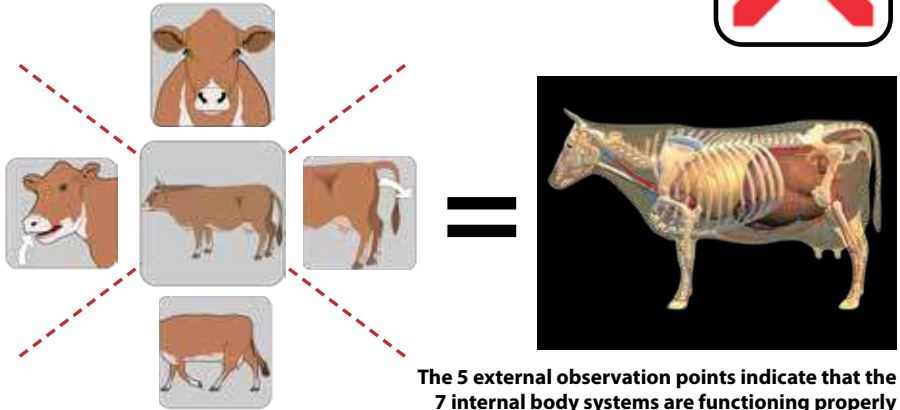
Monthly calendar						
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✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	

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 animals is the first step in daily observation. Even in a big group of animals, the head is the most visible part of the body. If the heads of all the animals are upright and look normal, it means there is no major problem in the herd.

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. They can be affected by damage to the eye itself or can indicate diseases within the rest of the body.

Ears

The posture and activity of the external ear lobes is a very good indicator of wellbeing. Changes in posture and activity are in many cases the first non-specific sign that the animal is unwell.

It is only possible to view the ear when examining the whole animal closely.

Hearing is also a sense directly linked to the brain.

Nose

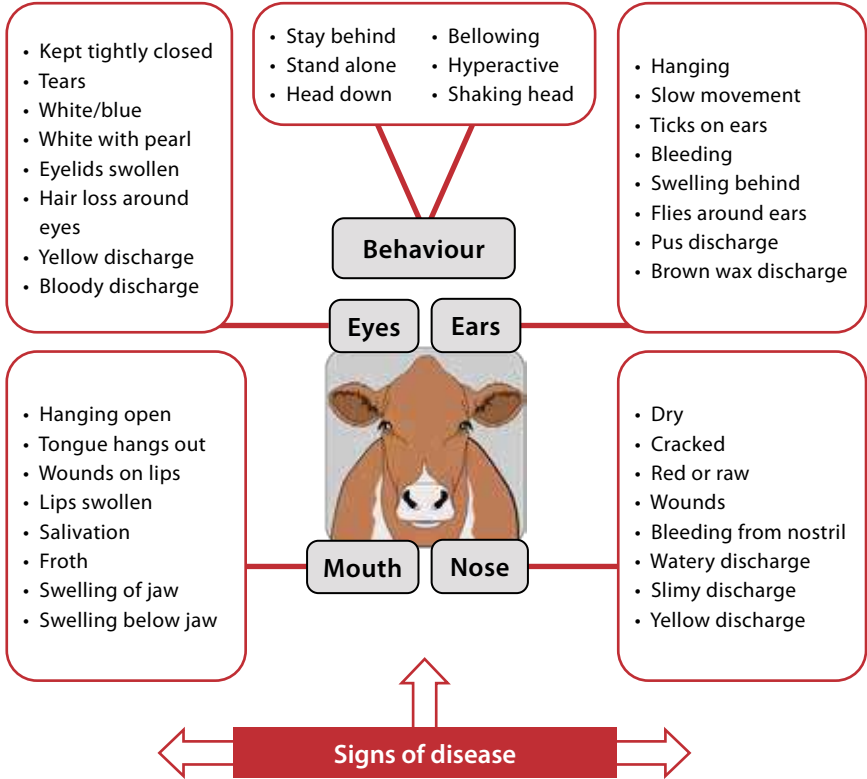
The nostrils represent the start of the respiratory system. Livestock normally breathe through their noses. The nose can show non-specific signs when the whole body is affected as in the case of fever for example a dry nose.

Mouth

The mouth is the start 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.

Follow a structure during daily observation and be very specific when describing the signs of disease observed.



2



Body condition?

The second immediate area of focus is to look at 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 over the past 12 hours.

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 doesn't change overnight. Therefore, it is an observation that can be used to identify longer-term changes.

Skin/hair

The skin is the largest organ and provides protection for the whole body. Changes to, and infection of, the skin and hair normally occur over a longer time, making this observation important to evaluate longer-term problems.

However, very fast changes in the skin can also occur with wounds caused by cuts and other injuries.

The skin should also be evaluated when observing specific areas of the body more closely.

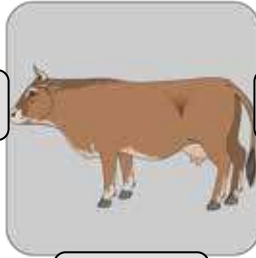
The livestock handler must act immediately when signs of disease are observed.

- Infection under the skin/abscess
- Fresh wound/bleeding

- Infected wound
- Dull hair coat
- Tick infestation

- Average condition
- Bad condition
- Loosing condition very fast

Skin/hair



Condition

Rumen fill

- Very sunken in

- Sunken in

- Bloated

Signs of disease

The skin is such a large organ that the observer can get an overall view of the skin and hair when looking at the whole body.

But the skin can also be further evaluated when looking at the individual observation points such as the breastbone, under the tail and on the udder where tick infestation, for example, can be effectively evaluated.



3



Normal movement?

The animals can now be moved around slowly or observed while they leave the pen. This observation can also be done while the animals are being herded.

Backline

A normal, straight backline 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 placed on all four feet. They stand still without swaying from side to side.

Lying

When cattle lie down, they do this in an upright position, neck and head forward, front legs bent next to the chest. They would be lying on one of their backsides with back legs to the opposite side. Whenever ruminants lie flat on their side, 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. No marks on the skin, matting or loss of hair over the joints.

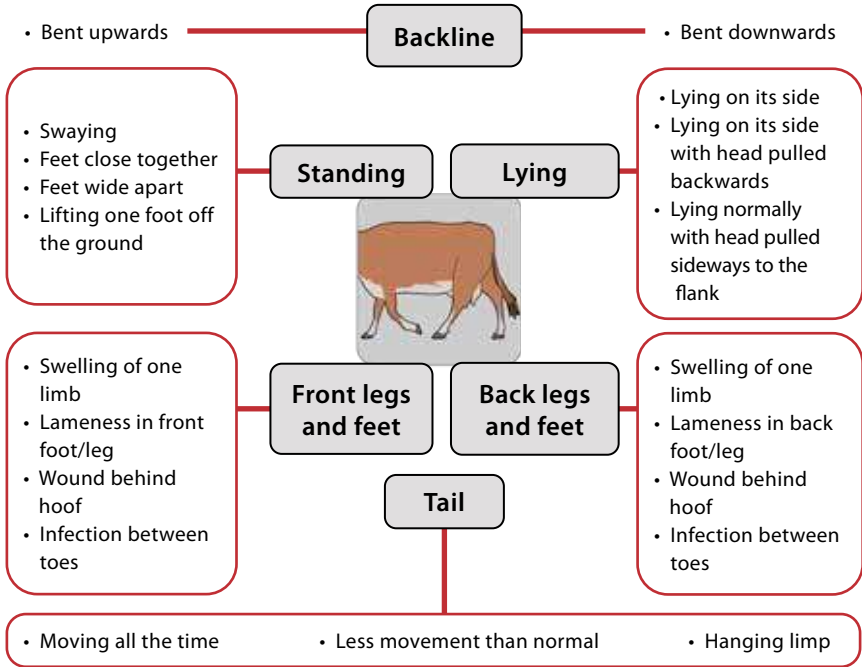
The hooves must be normal with no swelling or wounds above, in between or behind the hooves.

When animals are herded, their gait is steady with no jerky movement of the head. During walking, the cattle lower their heads to see better where they are walking.

Tail

The tail is normally used to swat away flies. Therefore, active movement of the tail can be observed continuously. If the animal becomes severely ill, the tail activity can decrease or in some conditions be paralysed and just hanging limp.

Most losses or deaths owing to disease occur because the first signs of disease are missed or ignored.



← **Signs of disease** →

Tail is moving all the time.

- This observation can indicate that there is something irritating the animal, such as excessive flies, maggots below the tail or a swelling below the tail.

Less movement than normal.

- Less movement than normal is a good general indicator that the whole body is affected by a disease (eg fever). It is a general, non-specific sign of disease such as slow/less movement of the ears.

Tail is hanging limp.

- When the tail is not moving at all, it is an indicator of a different problem – it is usually a specific early sign of damage to the nervous system like in an early case of botulism.

A small difference in the observed signs of disease is significant for the person that will examine the animal and that must make a treatment decision.

4



What goes in?

Observing animals' breathing, drinking, and eating occurs during the day. Because these animals have big stomachs, they eat or graze and then go to rest while they re-chew (ruminate) the food accumulated in the big stomach.

Breathing

Observation of the ease, speed and depth of breathing can be done before animals are disturbed and can continue while the animals are active such as during herding.

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 up the water and to swallow it down effectively. Diseases that affect any of these structures 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.

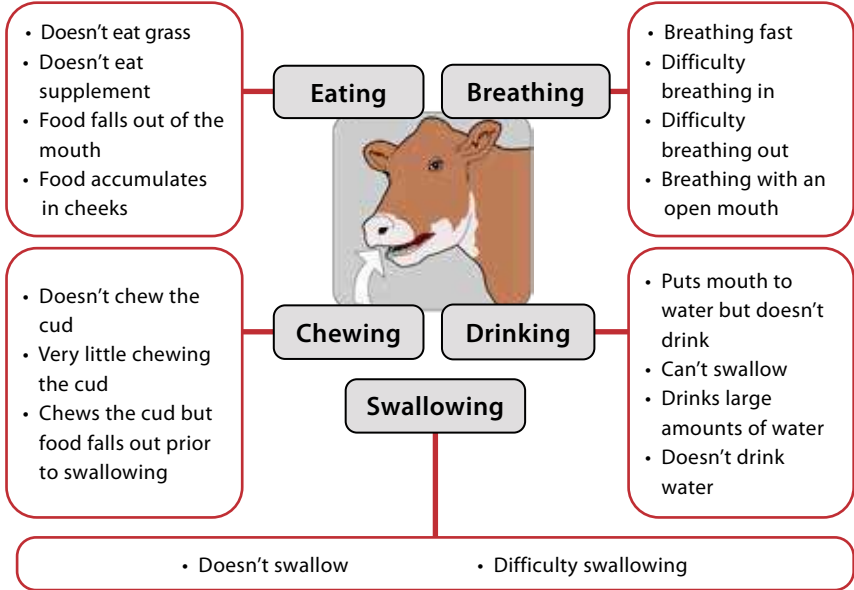
Chewing

When animals are at rest, their wellbeing is best evaluated by the number of animals ruminating. Unhealthy animals stop ruminating.

Swallowing

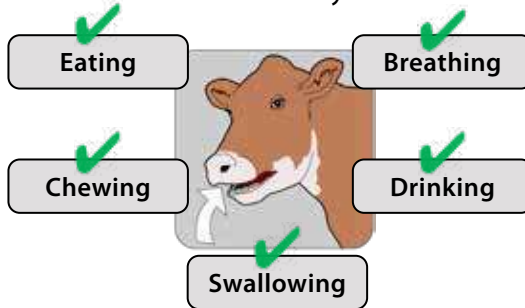
Normal swallowing can be evaluated when the animal is drinking or swallowing the cud. The observer then also focuses on the neck and breastbone while evaluating the swallowing process.

The observer must be sharp-eyed and take their time when recording signs of disease, as a detailed description of the specific sign of disease is required to identify the specific condition.



← **Signs of disease** →

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



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 large amounts 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. It depends on the type of food the animal eats. The dung can also be compared as a group and individual animals making it easier to identify a problem.

Urine

The only evaluation of the working 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.

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.

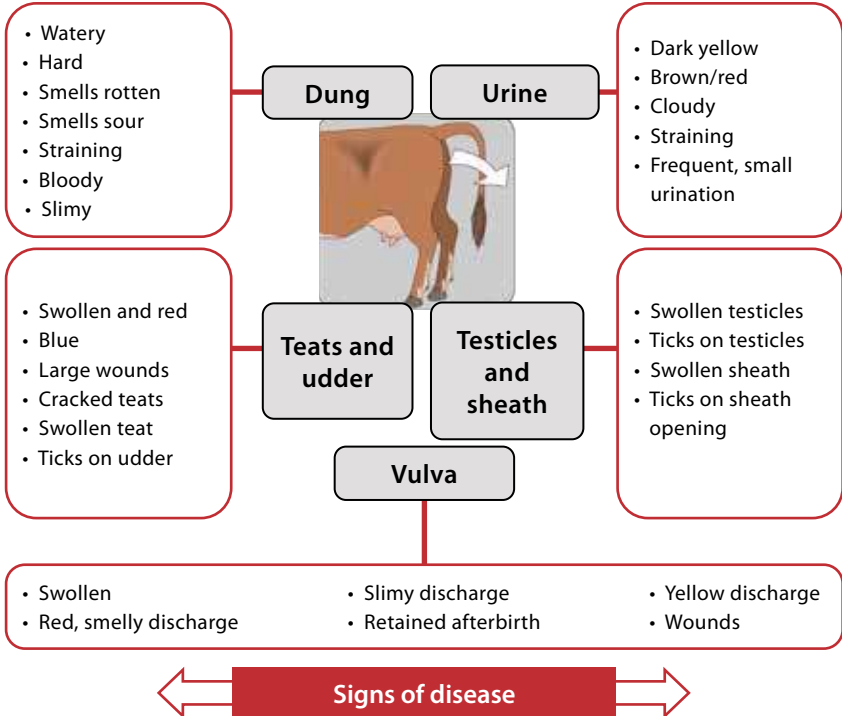
Teats and udder

The observer cannot see the milk but can evaluate the health of the teats and udder every day. Any abnormality is important and immediate action is required as soon as any abnormality is observed.

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.

Signs of disease can change over time. The livestock handler must be able to observe when a specific sign of disease becomes more severe over time.



The observer must distinguish between normal signs of health and abnormal signs of disease.



Normal discharge – clear bull string when a cow is on heat.



Normal
(Signs of health)



Abnormal discharge – can see dry discharge on the lips of the vulva and on tail.





Abnormal
(Signs of disease)



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.

ENGLISH

Behaviour		Condition		Udder and teats		Vulva	
Eyes	Ears	Skin/hair	Dung	Udder and teats	Urine	Testicles and sheath	Vulva
Mouth	Nose		Breathing				
Swallowing		Rumen fill	Backline		Tail		
Eating	Chewing	Standing	Front legs and feet	Back legs and feet	Walking		
Lying		<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  <p>Normal</p> </div> <div style="text-align: center;">  <p>Abnormal</p> </div> </div>					
Date:		Animal ID:		Reported by:			

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.

The one limitation when working with cattle is that a crush pen must be close by for handling of the animal, otherwise it needs to be caught with a rope which is not good when dealing with a sick animal. The fact is that examination and early treatment cannot be done if a handling facility is not available.

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.



Handling facility for the examination of cattle

Access to a basic and working crush pen is the minimum requirement to farm effectively with livestock, especially cattle.



A head clamp is an added advantage.

Basic kraal (holding facility) and crush pen

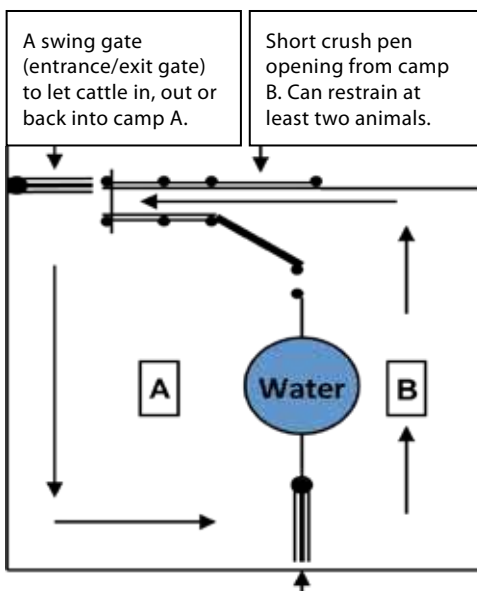
Access to a closed, basic and functional crush pen is critical for immediate examination of cattle showing signs of disease.

Ensure that there is a small holding facility and short crush pen at water points to prevent unnecessary herding of sick animals over a long distance before examining or treating them.

Divide the pen (into two camps) with a fence and a gate (A and B). This facilitates sorting animals into groups if needed.

There must be a water trough in the middle, providing water to both camps.

It is essential to have a crush pen that connects the two camps with each other at the opposite side of the internal gate.



A swing gate (entrance/exit gate) to let cattle in, out or back into camp A.

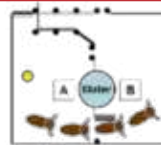
Short crush pen opening from camp B. Can restrain at least two animals.

A swing gate between camps around the watering point is used to sort groups of animals and/or to keep two groups apart.

This basic kraal allows a livestock handler to handle sick cattle easily even without a helper.

Using the basic kraal and crush pen for examination and treatment

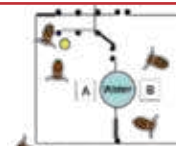
1. Herd a small group of cattle through the entrance gate into camp A. Then herd the cattle through the internal swing gate to camp B and close the gate.



2. Gently herd two animals at a time into the crush pen by using a low-stress handling technique and close the end of the crush pen. Never shout at or hit animals. When the animals are under control, proceed with the examination, inspection and/or treatment.



3. Open the front of the crush pen and let the animals out into camp A if you need to inspect them afterwards. This setup will prevent animals from escaping if they break through the front of the crush pen before you have finished with the examination.

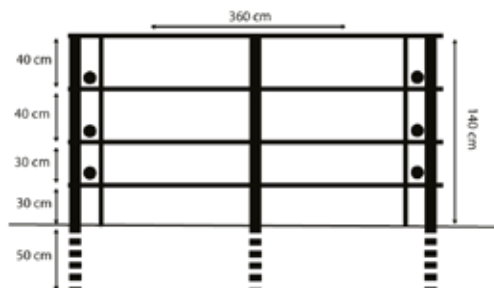


4. The other option is to open the exit swing gate and let the animals out of the kraal when you have finished working with them.

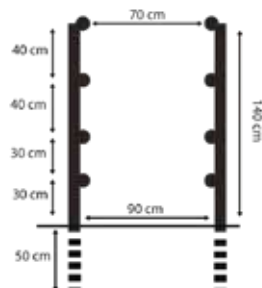


Dimensions for a very basic crush pen for at least two animals: handler works from the outside.

Height: 1.4 m, thickness of vertical poles: 12.5 to 15 cm.
Length: 3.6 m, thickness of horizontal poles: 7.5 to 10 cm.



Inside width between horizontal poles is 70 cm but it can be wider depending on the size of the adult animals in the herd.



1



Examination from the back

Follow a specific structure during examination of an animal.

Taking the animal's rectal temperature is the first step when examining an animal showing signs of disease. Do a structured examination of the rest of the animal's backside simultaneously.

Tail

Lift the tail to insert the thermometer. The strength of the tail will also indicate the normal functioning of the tail muscles, which is an indication of normal functioning of the nervous system ending at the tail.

Temperature

Test the core body temperature with a thermometer inserted into the rectum. This is the best way to determine if the animal has a fever – an indication of infectious disease and a sign that the animal requires urgent attention.

Condition

While waiting for the thermometer, evaluate the condition score by feeling the fat reserves under the skin at the point of the pin bone and in the lumbar area (the area just in front of the hipbones). Condition is scored on a scale from 1 to 4.



Skin

Evaluate the skin and coat and condition score simultaneously. A healthy skin and coat is a very reliable indication of the general wellbeing of the animal. A dry skin or dull coat is an indication of a problem that has developed over a long time.

Below the tail

After removing and reading the thermometer, examine the rest of the backside including the vulva/sheath, udder/testicles. Examine specifically for any discharges, soiling, swelling, external parasites and wounds.

Taking the temperature

A thermometer must always be available when farming with livestock.



Use a digital or mercury rectal thermometer.



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



1. Insert the clean thermometer into the rectum.
2. Hold the thermometer there for two minutes.
3. Take the thermometer out, clean it and read.
4. Store thermometer in a cool, safe place.

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

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

A temperature of 40°C and higher requires urgent attention

Fever is the best indicator to distinguish between infectious diseases and 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:

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

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 structure during examination of an animal.

Examining the inside eyelid is the second step in the examination of a sick animal. Do a structured examination of the eyes, nose and inside of the ears and mouth simultaneously.

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 vulva in the case of cows.

Eye

Examine the open eye for any lesions that were not very clear during observation from a distance. It is very important for an animal to have two normal eyes otherwise sight, grazing, herd pecking order and ultimately production will be severely affected.

Ears

Examine the deep inside of each ear for ticks and abnormal excretions. This is also 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. Depending on other senses, such as smelling the air breathed out, this also forms part of the examination.

Mouth

Examine the inside of the mouth. Several diseases cause very specific lesions on the lips, tongue, hard palate and gums. Also, look at the front and back teeth. Because cattle eat coarse grass, obstruction of the mouth and throat is common, which presents as salivation during observation.



Examining the inside of the eyelid

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

The correct method to open and examine 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 bulge out.

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

Different disease conditions can cause a change in the colour of the inside eyelid:

	White	An indication of blood loss and anaemia.		Yellow	Liver problems or disease that cause breakdown of red blood cells.
	Red	If only one eye is affected, it is a sign of 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 nitrates can cause this.

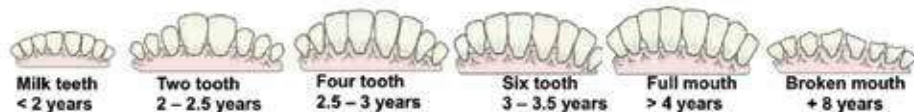
Examining the inside of the mouth

Nose tongs are an essential tool in handling cattle but the user must be trained in the safe and correct use to prevent injury.

Safely catching the head, constraining to limit movement and examining the mouth are advanced technical skills, acquired through training and experiential learning.



When dealing with cattle, the head movement must be constrained to open the mouth safely and pull the tongue out to examine the inside of the mouth.



3



Examination of the rest of the body

Follow a specific structure during examination of an animal.

Examine the lymph glands and follow a structured examination of the rest of the body that couldn't be touched during observation from a distance.

Lymph glands

The lymph glands are not easily palpable by the inexperienced examiner except if they are enlarged. The easiest lymph gland to examine is the one at the point of the shoulder, just in front of the shoulder blade.

Chest

The movement of the chest is the result of breathing. The movement of the chest increases when there is an increased rate of respiration. Examination of the chest by a veterinarian includes the use of a stethoscope to listen to the heart and lung sounds.

Abdomen

When examining the abdomen, look for large swellings and an abnormal shape. Examine the hunger groove for any signs of bloating or if it is very sunken, it is a sign that the animal has not eaten for the past 24 hours.

Front legs and feet

Examine the front and back legs. Feel (palpate) for large swellings or any abnormality of all the joints if the animal showed lameness during observation from a distance. Always compare the left limb to the right one to determine if what you see and feel is normal or abnormal. Cattle may kick forward and sideways with the back legs. therefore, the examiner must be very careful when examining the lower legs. Take precaution by using a rope to limit the movement of the hind leg.

Back legs and feet

Examine the hooves of cattle for any abnormal shape and swelling of the joint above the hoof or wounds/infection behind or between the claws. Use the correct ropes for lifting and examining the feet. This is an advanced technical skill, acquired through training and experiential learning.

Lymph glands

Swelling of the lymph glands is a specific indication of a number of important diseases.

Although this is part of a specialised examination by a veterinarian, the livestock worker can also examine the size of the most accessible lymph nodes.

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

Examine the other lymph glands at the inside corner of the jawbone during examination of the head.



Examining lame cattle

The hoof cannot be properly examined if the foot of the cattle can't be lifted and cleaned for examination.

Most hoof problems can be treated effectively if done as soon as lameness becomes apparent.

If not treated properly, it may progress to severe lameness, which will involve the joint, and cannot be treated effectively in most cases.



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.

If any signs of disease are observed, a closer examination must be done immediately or as soon as possible. This is to determine the urgency of the treatment or prevention actions needed. If signs of fever, anaemia (blood loss) or swollen lymph nodes are present, it needs to be treated as an emergency.

1. Examination from the back?



Temperature?

2. Examination from the front?



Inside lining of the eyelid?

3. Examining the Rest of the Body?



Lymph nodes?

4. Background Information:

Age?

Sex?

Number affected?

Number in group?

Condition Score?



Inside the ears?

Inside the mouth?

Front legs & feet?

Back legs & feet?

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 treatment needed.

Examples of findings that require urgent treatment:

Fever

An increased body temperature of 40°C and higher is a clear indication of infection and in most cases the animal must be treated within the next 12 hours to save the animal's life.

A combination of fever and white eyelid is likely an indication of a tick-transmitted disease such as redwater or anaplasmosis.

White inside eyelid

A number of diseases cause blood loss in cattle. If the inside eyelid is white, it means there is already severe blood loss and the cause should be identified and treated. These animals must not be chased or herded. They will die, as there is not enough blood to transport oxygen to the body.

Treat affected cattle immediately and observe the rest of the herd closely.

It is best to call on a veterinarian to make the correct diagnosis and recommend further actions.

Bloating

Because cattle continuously produce gas in the rumen, it will expand quickly if it can't escape through the mouth. This causes pressure on the lungs and the animal will soon die because it can't breathe anymore.

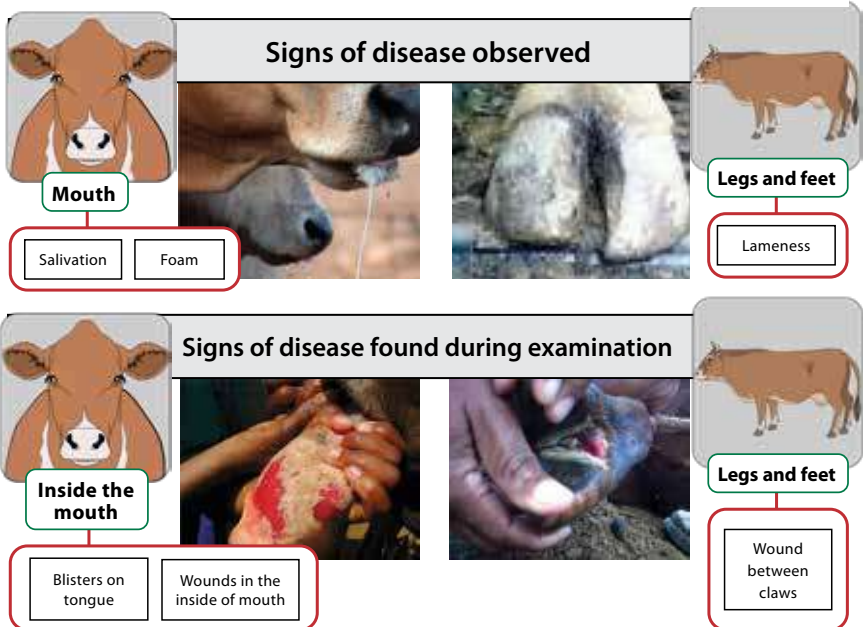
Poisoning

Many poisonings cause rapid death in cattle and it is very difficult to make the correct diagnosis. Usually, more than one animal is affected. When suspecting poisoning, contact a veterinarian. The background information, findings of the observation and examination is very important in this case to support the diagnosis of the problem. It is important to learn where and when poisonous plants occur on the farm and to manage the animals accordingly.

Diseases will differ from area to area depending on the 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 interpretation of the recorded findings.

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

Foot-and-mouth disease



Background information

When: one day ago, none of the animals were affected.

Age: all age groups affected.

Sex: male and females affected.

Number: more than one affected.

This combination of signs of disease found during observation and examination is a specific indication of foot-and-mouth disease.

Every livestock handler must know the signs for this specific controlled disease and an animal health technician or veterinarian must be contacted immediately if this combination of signs is found.



How to record the signs of disease

This is an example of how the signs of disease must be recorded in order to present them to a veterinarian who can provide remote veterinary support – **a potential case of redwater is used as an example.**



Observation findings:

Behaviour stands alone, stays behind, head down	Rumen fill sunken	Walking slow	Breathing fast	Dung
Eyes	Condition losing condition fast	Backline	Eating not eating	Urine brown/red
Ears slow movement, hanging	Skin/hair	Standing swaying	Drinking	Vulva abortion
Mouth		Lying	Chewing	Udder and teats
Nose dry		Legs and feet	Swallowing	Testicles and sheath
		Tail less movement	Re-chewing chews the cud	

Closer examination findings:

Inside eyelid white	Lymph glands	Temperature >40°C
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Background information:

Number of animals affected	One animal died today and four more cattle in total are sick.
Changes that happened. Anything that happened before the first signs of disease were observed are very important and must be listed.	No dip was available and dipping was skipped for two weeks. Animals were full of blue ticks.

If this information can be presented to a veterinarian, he/she will evaluate the combination of signs of disease with the prevailing environmental conditions and his/her knowledge of disease trends. He/she will be able to provide guidance on the telephone on how to treat or prevent further cases.

The combination of signs of disease in this example is very clear.

Urine brown/red	Inside eyelid white	Temperature >40°C	Breathing fast	Walking slow
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In some cases a specific diagnosis can't be made. The veterinarian will need to do a farm visit and further diagnostic tests in order to advise on treatment or preventive actions.

Common first signs of systemic (affecting the whole body) disease

- Stands alone
- Head down
- Ears hang
- Less movement in ears
- Dry muzzle/nose
- Does not eat
- Does not chew the cud
- Does not drink water
- Hunger groove empty
- Loses condition fast
- Rough hair coat
- Falls behind when herded
- Walking - slow
- Tail - less movement
- Abortions
- Fall in milk production



A number of first signs of disease are common for many systemic diseases but any of these indicate the need for closer examination to identify more **specific signs of disease** relating to a specific disease.

The trigger for disease control

The challenge with some of the most deadly or damaging diseases is that they can cause death or severe damage within 12 to 24 hours after the first signs of disease are observed. The need for disease control **can only be initiated** when the livestock owner has identified the first signs of disease and has contacted a veterinarian.

Clinical emergency services

Veterinarians are professionally trained to provide a diagnostic service **when visiting the farm to examine the sick animal presented to them**. This professional training includes all possible causes of disease and then the specific knowledge about the treatment and/or prevention of each individual disease.

Difficulties under African farming conditions

In most cases a 24-hour clinical service provided by a veterinarian is not available in remote areas as there are no veterinarians available to visit the farm. Without veterinary assistance the livestock owner has to take totally unassisted steps to treat the affected animal/s.

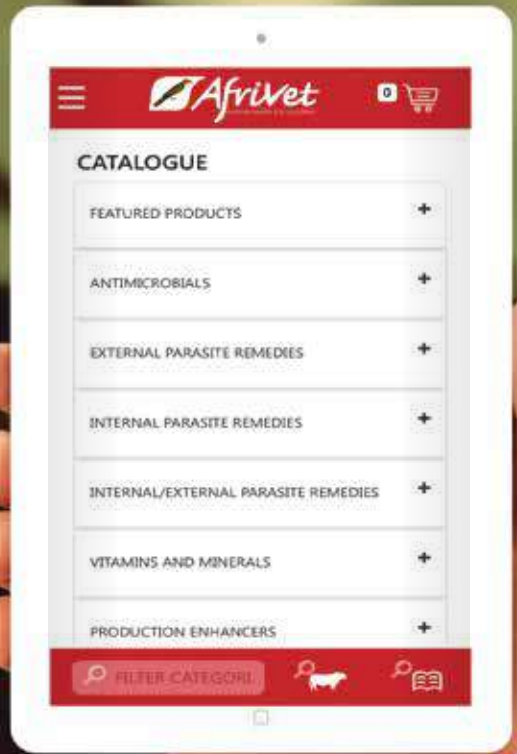
Remote veterinary support

Veterinary support can be sought by telephone if the signs of disease can be presented to a veterinarian in a structured format. The system explained in this module provide the livestock owner with the practical system that can be used to record signs of disease in order to get remote veterinary assistance.

AFRIVET ONLINE

Key Features:

- ✓ Full Afrivet product catalogue
- ✓ Provides product information
- ✓ Dosage calculator
- ✓ Offline accessibility



Daily observation card (DOC)

The most practical approach to early disease identification

Focused daily observation is the basis of good live-stock management practices.

The DOC provides a structured and logical model of daily observation in order to identify the first signs of disease.

Every livestock worker can be trained to use the DOC in order to report the first signs of disease.



FOR MORE INFORMATION:
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