# DAIRY MANAGEMENT


## COLOPHON:

Veepro Dairy Management is a supplement to the Veepro Magazine. It contains articles, tips and advice aimed at the management of dairy farms worldwide.

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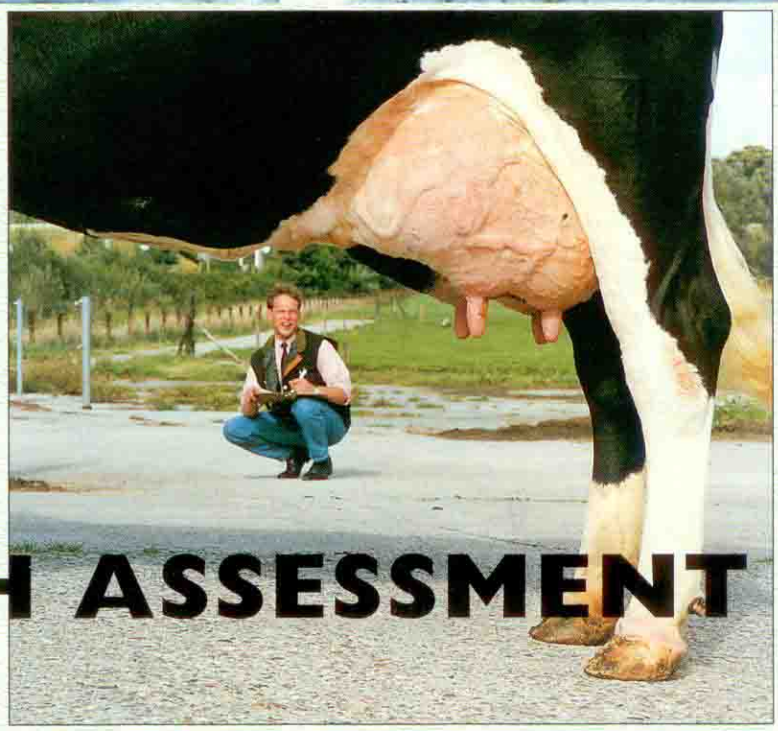
***A healthy herd is worth gold. Healthy animals deliver an optimal milk yield, and that's what it's all about. Cows that aren't fit immediately put a brake on the average milk production. Every liter less translates into a loss for the dairyman.***



# HEALTH ASSESSMENT

At the start of an illness there is often little to be noticed on the surface. Those who look closely, however, can detect sickness at an early stage. The earlier the better because the likelihood for a quick and full recovery is many times larger when illness or afflictions are treated promptly. This leads to lower bills, and a faster recovery to normal production levels.
Take a moment to work out how much a sick cow costs, when milk yield can lag for days and sometimes weeks. For example, foot and udder infections can lead to 20% lower milk yields. With every mastitis case costs of production loss and medication per cow can be as high as US$300.

## Frequent, close checks

Make it a habit to check the health status of your herd on a daily basis. Farms with staff should think about making one of the team members responsible for health checks. Regularly something is wrong with one or more cows in the herd, and those who look closely can see the signs. Not just by taking a quick look at the cows, but by taking a close and critical look. First of all, take some time each day to compare the cows in the herd. Check if herd members display different behavior, and give these animals an individual inspection. It's also important to watch closely during milking, as milk production is a primary health indicator. Those dairymen who watch closely will be right on the ball when something is the matter with a cow.

## The individual check

Take a cow out of the herd when she behaves differently. It's necessary to tie her up in order to determine the health status of the cow. Make sure to let the cow rest for a while before beginning the inspection so that heartbeat and breathing levels return to normal. Only then are you able to draw conclusions based on at-rest values.
Five steps can tell a dairyman if something is wrong. Start off by getting a general impression of the cow, and continue by checking the respiratory system, heartbeat, temperature, and finally keep an eye on the cow in the days that follow.

Watch closely during milking, as milk production is a primary health indicator. ▼

## 1. GENERAL IMPRESSION OF THE ANIMAL

Start off with a critical assessment. Observe the cow from a few meters distance while taking into account several attention areas. What activity does she display? What is the status of her body condition and rumen, her hair. Are any abnormalities visible?

### a. Activity

Is she paying attention to her surroundings, are her ears active, does she ruminate? Does she join the herd or does she stand by herself? Is she eating on a regular basis?
These signs can give a first impression as to whether the cow is healthy or not.

### b. Body condition and rumen filling

A cow with normal feed intake will have a full rumen. Stand behind the cow. The rumen should stick out slightly on the left side of the cow.

▼ a full rumen should stick out slightly

In this case it's not easy to place your hand behind the last rib. If instead this is easily done the cow could have eating problems or her feed intake is simply too low. In addition, the manure of a highly productive cow should not be too solid or too liquid.

▼ The consistence of the manure indicates the cow's feed situation. Cows normally defecate 12-18 times a day and produce around 20-40 kg of faeces.

A comparison with other cows in the same stage of lactation is advisable. The body condition of the cow should also not deviate too much from that of her herd mates.

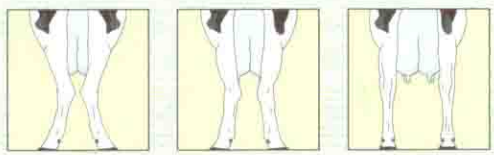
### c. Hair

A healthy cow looks fine and shiny whereas a sick cow has dull hair. Animals with lowered body condition often have long and rough hair.

### d. Abnormalities

It's possible to see or hear problems. Take a close look at several traits of the cow: the feet, udder, and mucous membranes. The rear leg set is an important visual check for the feet. If the legs point inwards then the likelihood of foot lameness due to increased pressure on the outside claw is very high. The cow will have to be trimmed as soon as possible.

▼ The cow is not standing correctly, trimming is necessary.



Don't forget to check the udder. An udder that is swollen or red and sensitive to the touch is likely to indicate an udder infection. The milk contains flakes.

Also inspect the mucous membranes in mouth, eyes, and vulva. With healthy cows the mucous membranes is pink and moist. When they become white it points to blood loss (e.g. abdominal bleeding). Grayish-brown discoloration indicates nitrate poisoning, yellow indicates an unbalanced liver function, and a red color of the mucous membranes points to a mucous infection.

▼ The mucous membranes of vulva and eyes of a healthy cow is pink.

## 2. RESPIRATORY SYSTEM

A healthy cow breathes easily. Stand somewhat to the right of the cow so you can observe breathing. Breathing should be easy and even, also after some exercise. A healthy cow exhales 10-30 times per minute, whereas a calf exhales more often (around 30).

A number of times per minute the breathing can be seen and heard. The rib cage will expand slightly when breathing in, and when exhaling the rib cage will subside slightly again. Breathing-in can clearly be heard, as large quantities of air are sucked into the lungs. Normally, exhaling can not or hardly

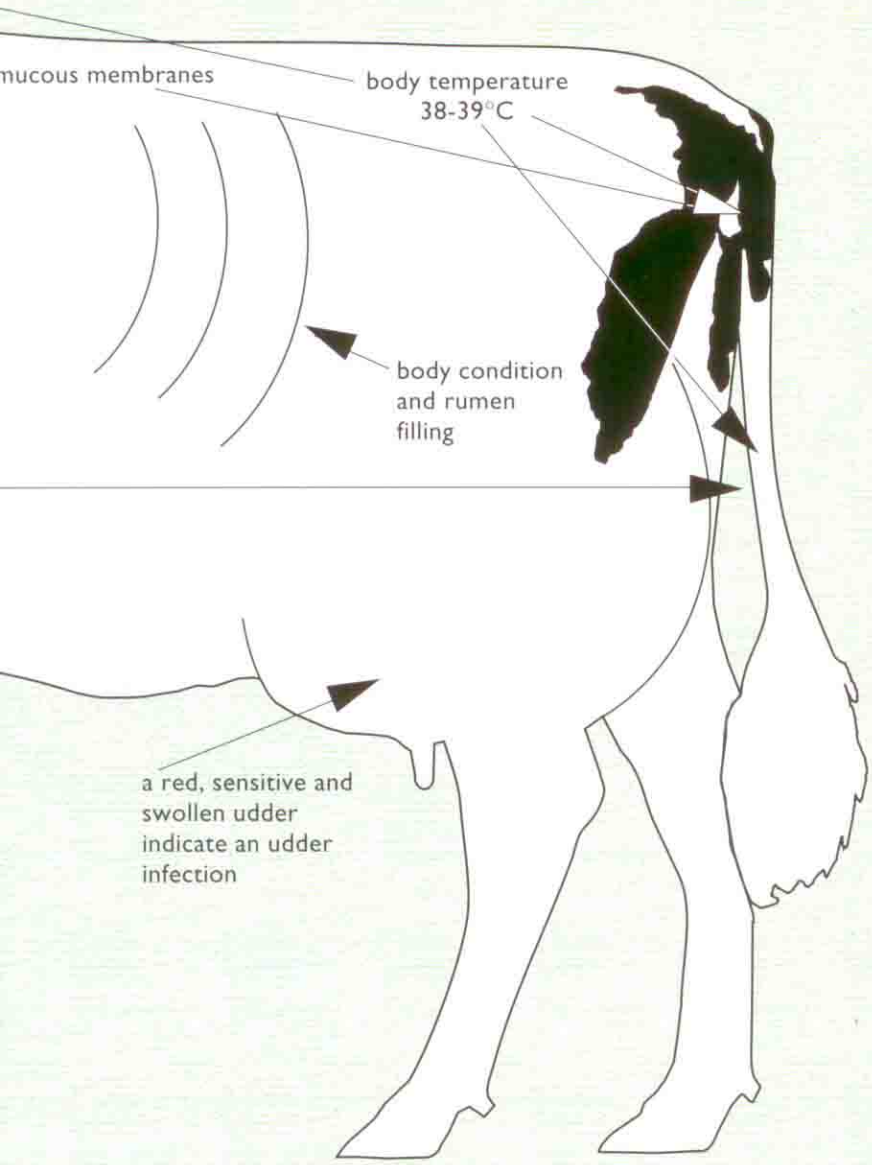



be heard. If a cracking sound can be heard, then the rumen is supporting the exhalation. Often this points to a respiratory disease or damaged lung tissue.
If breathing is forced and supported by the rumen, the lungs are experiencing problems. The cow can have a respiratory disease or a lung worm infection. Breath that smells strongly of acetone can indicate ketosis.
Breathing and exhalation takes place via the nose, and the nose of a healthy cow is moist and warm.

## 3. HEART FUNCTION AND HEARTBEAT

A cow's heart function is important: Every liter of milk a cow produces requires 400 liters of blood. The heart has to circulate this blood continuously. A healthy cow has a heart rate of 60 to 80 beats a minute. The heart can be found behind the left elbow: Place your left hand there and you should feel the heart beat. You can also hear the heart by placing your ear on that spot.

With the left hand on the heart the heartbeat can be felt. ▶




One can also feel and count the heartbeat by using the arteries. Arteries suitable for feeling and counting heartbeat are:

- The artery of the tail that runs from top to bottom, and can be felt at the bottom and the middle of the tail.
- The artery that runs close to the surface just below and somewhat to the inside of the jaw bone. By pressing slightly against the jaw one can count the heartbeat.

A heartbeat higher than 80 beats per minute can have several causes. First of all, the cow can have a naturally higher heartbeat. The cause can also be less innocent, for example due to blood loss, infections, nitrate poisoning, and heart valve afflictions.

When infections 'break through' into the bloodstream, bacteria can infect the heart valves. As a result the valves don't close completely anymore and the heart loses its capacity, leading to an increased heartbeat. More seriously afflicted valves are unable to process the bloodstream, and this blood will 'settle' causing edema. This edema can be felt in the area of the heart by pressing your finger against it. The small cavity created by your finger will not expand immediately. The best course of action for cows with heart edema is culling.

## 4. BODY TEMPERATURE

The body temperature for a healthy cow lies between 38 and 39 degrees Celsius. With an infection the body temperature exceeds 39 degrees Celsius. When a cow is in heat, the temperature is often also half a degree higher.

Measure temperature by placing a thermometer in the cow's anus. When using mercury thermometers first flick them to make the mercury descend to the bottom. Then moisten the tip of the thermometer with vaseline or saliva, and insert three-quarters of its length into the anus. Leave for at least one minute and read the temperature.

▼ Leave the thermometer for at least one minute before reading the temperature.

When a cow has fever, several body parts will feel cold to the touch, especially the ears, tail, and teats. If they feel cold, too little blood is flowing in those parts. With ketosis a cow will also feel cold to the touch, but this is not due to fever but to a general drop in body temperature.

## 5. FOLLOW-UP

If no problems are detected, keep an eye on the cow in the following days. If the cow continues to behave differently, milk yield continues to lag, and you don't trust the situation, then call your veterinarian for help.

# INJECTING ANTIBIOTICS IN TEAT

An udder infection is one of the most bothersome illnesses for cows. Antibiotics can treat mastitis, but treating mastitis is a precise job. Stick to these 10 steps:

## TIPS

- Test the milking equipment twice annually to lower the likelihood of mastitis and cell count.
- Always use white sawdust for a cow's bedding. Red sawdust made of hardwood absorbs less moisture and increases the likelihood of mastitis.
- To increase udder hygiene, remove the hair on the udder at least once a year.
- Cows with mastitis should be milked last in order to avoid spreading of the infection to other cows.
- By using a teat dip or spray, the risk of teat canal infections can be reduced significantly.

**1** st step:

Clean udder thoroughly with a clean dry towel.

**2** nd step:

Completely empty the quarter with the mastitis.

**3** rd step:

Put a sample of the milk in a sterile vial. Place this vial in the refrigerator, and take it to the veterinarian or laboratory for inspection, to determine which bacteria is present. With the outcome of this inspection you can verify if the applied antibiotics are suited to fight the bacteria.

**4** th step:

Disinfect the infected quarter, especially the teat, with a teat spray or disinfectant towel.

**5** th step:

Make sure the antibiotics injector is at body temperature. Take note that you should always store antibiotics at room temperature (approx. 25 degrees Celsius). Never store in the refrigerator.

**6** th step:

Insert injector in teat. Not too far (approx. 0.5 cm) and inject slowly.

**7** th step:

Hold teat at bottom and massage the udder in order to distribute the antibiotics throughout the quarter and the udder.

**8** th step:

For each treatment use a minimum of 4 injectors per quarter. The next time the cow is milked make sure to completely milk the quarter. Use the injector two more times after mastitis flakes are no longer visible.

**9** th step:

Separate the milk for at least 4 days following the last treatment, because of the antibiotics. Mark the cow as a reminder.

**10** th step:

Register all treatments on a card: the cow, the quarter, the antibiotics. This can help trace problems and causes so that a more effective treatment can take place in the future.