

Slim strategieë vir 'n droë voorseisoen

deur Gerrit Bezuidenhout

Wanneer die droogte knyp, raak 'n mens maklik paniekerig. Dit is nie 'n goeie tyd op die plaas nie en moedeloosheid stap sommer so saam met die bankbestuurder by die voordeur in. Gelukkig kan 'n mens voortydig begin beplan om seker te maak dat die situasie reg bestuur word.

Droogte kan nie weggewens word nie en dit sal altyd deel uitmaak van die Suid-Afrikaanse boerderylandskap. Wat egter waar is, is dat daar maniere bestaan om die uitwerking van droogte op jou boerdery te verminder en te bestuur. Na aanleiding van die droë voorseisoen wat deur veral die Suid-Kaapse provinsie beleef is, het *The Dairy Mail* by 'n kenner gaan kers opsteek oor die beste maniere om die droogte te troef.

Belangrikheid van droogtevoeding

Zeno Bester is 'n tegniese bestuurder en kenner in suiwelvoeding vir Voermol-voere. Wanneer dit kom by droogtevoeding en wanneer om dit toe te pas, sê sy is elke melkboer se situasie in hierdie geval uniek, maar droogtevoeding begin gewoonlik sodra die weiding of ruvoer nie meer as minstens 40% van die dier se droëmateriaalinname kan voorsien nie.

“Dit hang dan af van die soort en hoeveelheid ruvoerbronne beskikbaar,” sê sy. “Het die boer slegs groen weiding of ook ad-

disionele grashooi, lusernhooi of koringstrooi en kuilvoer beskikbaar? Met raaigrasweidings is die hoeveelheid beskikbare droëmateriaal gewoonlik beperk tydens die sogenaamde ‘doodmaakmaande’ van Augustus tot Oktober en dan moet die boer addisionele ruvoerbronne oorweeg. Tydens droogte is hierdie tydperk selfs langer.”

Om uit te skot of nie?

Hoewel dit mag lyk of uitskotting die enigste opsie is, is dit nie altyd die geval nie, sê Zeno. Sy sê dis belangrik dat boere alle produserende diere groepeer volgens stadium van laktasie en produksiepotensiaal, om te verseker dat diere so ekonomies moontlik gevoer word om vermorsing en verminderde produksie te voorkom.

“Droë koeie moet gegroepeer word in twee groepe: eerste 30 dae ná afdroging en laaste 30 tot 21 dae voor kalwing. Diere tydens die laaste 21 dae voor kalwing benodig 'n duurder, of hoëdigheidsrantsoen om vir die laktasierantsoen aan te pas, teenoor droë koeie net ná afdroging.”

Kyk na die hoeveelheid ruvoer of weiding wat nog oor is voordat 'n aanvullingstrategie beplan word



Dit gebeur dikwels dat die boer so besig is om sy produksiediere in stand te hou dat verse dikwels afgeskeep word tydens droogteperiodes. Zeno sê die boer moet egter in gedagte hou dat die verse die kudde van môre is. Indien hulle groei nou beperk word, sal die verse later kalf en hul eerste laktasie-opbrengs gaan ook nie na wense wees nie weens kompensatoriese groei.

"Verdeel dus jou verse in drie groepe: kalwers nul tot drie maande; verse drie tot ses maande; verse ses tot 12 maande en dragtige verse. Voer almal volgens behoeftes," is haar raad.

Ook produksiediere moet gegroeper word volgens hul produksiepotensiaal, stadium van laktasie en laktasiesyfer, terwyl hul produksie, groei en liggaamskondisie getrou gemonitor moet word om aanpassings in die voerprogram te maak waar nodig. Voer van die diere geskied dan baie meer ekonomies.

Voer om te oorleef

Een van die vele moeilike besluite in hierdie tyd is om slegs vir oorlewing te voer en te hoop dat die najaar beter sal wees. Zeno glo dit is 'n ekonomiese berekening wat elke melkboer moet doen, maar waarsku dat dit geen inkomste sal genereer nie. Haar raad is om liefs diere vroeër af te droog. "Maak egter seker dat hulle nie kondisie verloor tydens die droë tydperk nie."

Sy sê verder melkkoeie kan meer ekonomies en doeltreffend liggaamskondisie optel tydens laktasie as wanneer hulle droog is. "Maak dus seker diere word afgedroog teen 'n liggaamskondisie van minstens drie punte," beveel sy aan.

Kies jou aanvullingstrategie reg

Om jou diere in die beste moontlike kondisie te hou tydens 'n droogte is geen maklike taak nie. Soms is aanvullings nodig en om die

strategie te vind om te bepaal watter aanvullings om te gebruik, is 'n taai kalant. "Die aanvullingstrategie sal afhang van die hoeveelheid weiding of ruvoer beskikbaar en ook die produksiepotensiaal van die kudde.

Gewoonlik voer melkboere tussen 6 en 10 kg suiwelkonsentraat addisioneel tot die weiding. Onthou dat produserende melkkoeie sowat 40% van hul droëmateriaalinname afkomstig van ruvoerbronne, soos grashooi of weiding benodig. Hoër produseerders ontvang dikwels so min as 36% tot 38% as gevolg van 'n hoëkonsentraat-komponent.

“Melkkoeie kan meer ekonomies en doeltreffend liggaamskondisie optel tydens laktasie as wanneer hulle droog is”

"Dit is belangrik om die balans tussen ruvoer en konsentraat konstant te handhaaf tydens droogtetoestande en addisionele ruvoer- of veselbronne te oorweeg. Koringsstrooi is 'n gewilde bron van addisionele vesel of NDF, maar dit is ongelukkig net in die somermaande 'n opsie. Grashooi of gedroogde lusern kan ook gebruik word, maar die bronne is ook skaars en gewoonlik onbekostigbaar tydens droogtetoestande," sê Zeno.

Sy verduidelik dat 'n produk met 'n bagasse-molassebasis met groot sukses gebruik kan word om die veselkomponent in die melkrantsoen aan te vul.

"'n Produk soos Voermol se Maximelk kan teen 2 kg/per kilogram per dag gevoer word en terselfdertyd vesel, proteïene, genoeg verbyvloei-eiwit asook vitamien en minerale verskaf. Die boer kan dus met minder skaars ruvoer wegkom. Molovite kan ook teen 1 kg per koei gevoer word. Dit bevat ionofore en vervul dieselfde rol."

Weidingsgebaseerde boere skakel dikwels tydens droogtetoestande of weidingskaarste oor na 'n gedeeltelik gemengde rantsoen (GMR). Dit bestaan gewoonlik uit kuilvoer, konsentraat en ruvoer (oftewel weiding) in baie beperkte hoeveelhede. Hierdie mengsel word hoofsaaklik aan diere gevoer in hoeveelhede van tussen 0 en 100 DIM. Diere later in laktasie word op die weiding aangehou met beperkte aanvullings en selfs vroeër afgedroog indien dit ekonomies regverdigbaar is.

"Ek beveel aan dat indien erge droogte ondervind word, die boer op sy vroeë- tot middellaktasiekoeie konsentreer, aangesien hulle die hoogste produksiepotensiaal het en dikwels nog in negatiewe energiebalans is. Metabolies is hierdie koeie dan ook baie meer doeltreffend."

Zeno verduidelik lek word gebruik as deel van suiwelmeel (15% tot 20%) – afhangende van die gehalte van die ruvoer en weiding beskikbaar – as produksielekke, onderhoudslekke

vir droë diere, en ook as eenvoudige sout- of fosfaataanvullings. "Lek het die voordeel dat die boer sy eie mielies of kleingrane kan gebruik, indien beskikbaar en hy nie gedwing word om mielies as deel van die suiwelkonsentraat ten duurste aan te koop nie.

"Lek moet egter strategies aangevul word afhangende van die behoefte van die dier, die seisoen, en die stadium van produksie. Lek kan in proteïene, energie, vitamienes, minerale en ionofore voorsien. Afhangende van die beskikbaarheid van addisionele voerbronne op die plaas, kan die boer lek suksesvol in sy voerprogram insluit."

Summary

A drought is the one economical factor no farmer can control. However, good management in ensuring that enough feed is stored for those dry times is essential to survive.



Gelukkig is die boer nie alleen nie

Zeno beveel aan dat die boer sy veekundige raadpleeg om 'n behoorlike voervloei-beplanning saam te stel. "Neem faktore soos beskikbaarheid van grondstowwe, aantal diere, produksiepotensiaal, kommo-

diteitspryse en die melkprys in ag om die regte besluite te neem wat betref uitskoting en afdroging. Moenie verse en droë diere afskeep nie. Dit sal die invloed van die droogte vererger en raak die melkkudde selfs nog ná die droogte," is haar raad. **TDM**



Greening the dairy herds

by Fidelis Zvomuya, recently in Bonn, Germany

Chewing her cud on a recent sunny morning, Maureen, a 635 kg Holstein, paused to do her part for global warming at a dairy farm in Germany.

Maureen, age five, and the 144 other dairy cows at the Riswick dairy farm, a model experimental farm in the small town of Kleve, located 460 km southwest of Berlin and a few kilometres from the border with the Netherlands, are at the heart of an experiment to determine whether a change in diet will help them belch less methane.

The agricultural department of the University of Bonn is in charge of running it.

As of the last reading in mid-May, the methane output at Riswick's herd had dropped 18%. Meanwhile, milk production has held its own.

This year, Riswick will become the first German research centre to study methane emissions from cattle, which are a major contributor of greenhouse gases that cause global warming.

"They are healthier," says Wolfgang Buescher, professor of animal sciences at the University of Bonn and director of the Riswick project. "Their coats are shinier, and their breath is sweet."

According to climatologists, sweetening cow breath is a matter of some urgency.

Cows have digestive bacteria in their stomachs that cause them to belch methane, the second-

most significant heat-trapping emission associated with global warming after carbon dioxide. Although it is far less common in the atmosphere than carbon dioxide, it has 20 times the heat-trapping ability of carbon dioxide.

Farming for the future

However, at the recent Bonn climate talks, experts agreed that farming is going to have to change dramatically in the 21st century not only to meet the demands of feeding increasing numbers of people, but because current cultivation methods are not sustainable.

In reference to the general agricultural sector, Dennis Garrity, director of the International Council for Research in Agro-Forestry (ICRAF) in Nairobi says while many experts point fingers at automobiles as the major problem behind greenhouse gas emissions, they would be well advised to spread some of the blame on contemporary industrial farming methods.

“We estimate that by changing the diet we can reduce emissions by up to 40%”

“The agriculturists and their farming systems are emitting more carbon,” he says. “All the trucks, all the cars don’t measure up to what agriculture is contributing to carbon loss to the atmosphere. We have to turn that around.”

This was in reference to the use of unsustainable agricultural activities, the use of farm machinery, fertilisers, and pesticides.

Garrity and his colleagues focus on developing sustainable agricultural systems for small-scale farmers. The council’s plans involve farming systems that absorb carbon dioxide from the atmosphere and provide both income and nourishment to more people.

A flaw in the report

A 2006 report by the UN Food and Agriculture Organisation attributed 18% of the greenhouse gases produced each year to livestock.

A scientist at the University of California at Davis pointed out a flaw in the FAO 2006 report *Livestock’s Long Shadow*. Frank Mitloehner, who is also an air-quality specialist who places cows in airtight tent enclosures and measures what he calls their ‘eruptions’, says the average cow expels 90 to 180 kg of methane per year.

“Smarter animal farming, not less farming, equals less heat. Producing less meat and milk will only mean more hunger in poor countries,” Mitloehner explains. He objects to the UN’s statement that livestock account for more greenhouse gases than transportation, when there is no generally accepted global breakdown of gas production by the industrial sector:

Livestock’s Long Shadow produced its numbers for the livestock sector by adding up emissions from farm to table, including the gases produced by growing animal feed; animals’ digestive emissions; and processing meat and milk into foods he notes.

“But its transportation analysis similarly did not add up emissions from well to wheel; instead, it considered only emissions from fossil fuels burned while driving,” he says.

It’s all in the fodder

But at Riswick farm the focus on reducing the methane emissions since January, have seen their grain feed adjusted to include more plants such as alfalfa and flaxseed substances that mimic the spring grasses that the animals evolved long ago to feed on. Buescher says in Germany, the digestive processes of four million dairy cows in 2007 generated about 450 000 tons of methane, or 2,1% of the country’s total greenhouse gas emissions.

On the Riswick farm, 144 cows will live in strictly controlled conditions. “We are going to be exact in weighing and analysing the feed and in using photo-analysis to measure their emissions,” Buescher says.

The emissions will be channelled to three different chambers: one for methane, one for ammonia and one for carbon dioxide.

Buescher explains that in previous experiments the variations in cattle feed helped to reduce

greenhouse gas emissions significantly. "For example, cows that eat maize instead of grass emit less methane. Other ideas applied in laboratory conditions have included adding fish oil and garlic oil to cattle feed.

"We estimate that by changing the diet we can reduce emissions by up to 40%," Buescher says. "Apart from the plans we have here, our cows will be raised under otherwise normal conditions. We aren't going to use gas masks to filter the belches, nor are we going to attach a vacuum to the cow's behind," he says jokingly.

This research will be rolled out to other parts of the world.

Climate concern

Also, environmental researchers predict Southern Africa will be hit heavily by climate change over the next 70 years. Agricultural production is projected to be halved – a development that will threaten the livelihoods of farmers in a region where 70% of the population are smallholder farmers.

"We will be seriously affected by climate change in Southern Africa. Agriculture and biodiversity will experience a particularly negative impact," Dr Constansia Musvoto, researcher at South Africa's Council for Scientific and Industrial Research (CSIR) said.

Temperatures will increase by up to 6°C, while rainfall will drop by as much as 40% in some parts of the region, Musvoto said.

As a result, the region will experience more and longer droughts, increased crop failures and have less fields and pastures owing to water shortages. In addition, natural disasters will be more intense, while pest outbreaks for both crops and livestock will become more frequent.

Musvoto also predicts that there will be more diseases in Southern Africa. "Owing to rising temperatures, malaria will spread more widely, which will negatively affect the availability of farm labour," she explains.

Farmers have already felt the first effects of changing climatic conditions. In 2006, the production of maize, the main staple in the region, fell short by 2,18 million tonnes owing to droughts.

Climate change

According to one of the top agencies for animal health, climate change is widening viral disease among farm animals, expanding the spread of some microbes that are also a known risk to humans.

The World Animal Health Organisation (OIE) says a survey of 126 of its member states found that 71% were "extremely concerned" about the expected impact of climate change on animal disease.

Fifty-eight per cent say they had already identified at least one disease that was new to their territory or had returned to their territory, and that they associated with climate change.

The three most mentioned diseases were bluetongue, spread among sheep by biting gnats; Rift Valley fever, a livestock disease that can also be transmitted by people handling infected meat; and the West Nile virus, which is transmitted by mosquitoes from infected birds to both animals and humans.

"More and more countries are indicating that climate change has been responsible for at least one emerging or re-emerging disease occurring on their territory," OIE director general, Bernard Vallat, says.

"This is a reality we cannot ignore. We must help veterinary services throughout the world to equip themselves with systems that comply with international standards of good governance to deal with this problem."

Opsomming

Daar is tans groot omstrengheid oor die mate waartoe boerderypraktieke, en spesifiek melkboerdery bydra tot aardverwarming. 'n Proefplaas in Duitsland het egter besluit om te eksperimenteer om metaangasuitlate van koeie te verminder deur hul dieet aan te pas. Volgens prof Wolfgang Buescher van die Universiteit van Bonn en direkteur van die projek, kan hulle op dié wyse metaangemissies met tot 40% verminder: [TDM](#)



Happy female calves grow into happy heifers – keep calf pens clean and disease free

Rearing calves the right way

by Liza Burger

Excellent calf-rearing is one of the cornerstones of profitable dairying. Without a steady source of healthy calves, no dairy farm can sustainably continue to exist. Replacement heifers ready to enter the milking herd will only be as good as the months they spent preparing for their lives as dairy cows.

Developing the rumen of the young calf, keeping the calf healthy, feeding it the right food at the right time and taking care to introduce the calf to the group dynamics, are but some of the main aspects of efficient calf-rearing.

No farms are the same and what works on one might not succeed on another. No farmer raises his calves exactly like the next, and while some tried and tested methods cannot and should not be ignored, others are open for interpretation.

Happy birthday

Cows should preferably calve in a clean calving paddock or calving pen, separate from the rest of the herd. Maternity boxes should be disinfected after each calving. Remember, calves only receive their first shot of antibodies when taking in colostrum and need to be protected from any form of disease and infection, especially at birth.

Immediately after birth, check if the calf is breathing. Especially after a long and difficult calving it might be necessary to massage the calf's chest to stimulate breathing. You can also tickle the inside of the nostril with a piece of clean straw to induce a sneeze, forcing the calf to take a breath.

If the calf is allowed to stay with the cow directly after birth, she will lick the calf clean and dry. This is necessary to stimulate circulation and to allow the calf's coat to dry and insulate the young animal against cold conditions.

By removing the calf prior to the cow's licking, the stockman must fill this role by rubbing down the newborn calf. A dry and fed calf will be able to resist cold surprisingly well. Also, take care to clean the nose and mouth of any remaining foetal membrane.

Clean the calf's navel cord with an iodine solution prepared for this function. Cover the cord and the hair on the belly.

Record the calf's identity, birth date, dam and sire's identification. Make notes of relevant details such as a difficult calving, any diseases (both calf and cow) or problems with the calf.

First meal

Some farmers believe in leaving the newborn calf with the cow for three to five days. Others prefer to remove the calf immediately after birth and to bottle feed the calf its colostrum.

Whichever way you choose to rear your calves, one factor must not be compromised: feeding as much colostrum as possible within the first day after calving.

The colostrum intake of bottle-fed calves are easier to monitor. The huge udders and teat placement of the modern-day dairy cow are said to be less natural and suitable for a suckling calf and studies show that some calves cannot feed as well from their super-bred mothers.

However, some believe that the cow can see to the needs of her calf better than any human and that she can provide that very first day's meal *ad lib* instead of the set times and quantities of hand reared calves. However, not all cows are successful mothers, making this method less effective in some cases. More than 40% of calves left with the cow after birth have been found to show insufficient antibody protection owing to the poor intake of colostrum.

Some facts you should know about colostrum and the way the calf absorbs this antibody kick-start in life, include:

- Colostrum is the calf's only source of protection against bacterial diseases in early life.

- The rate of absorption of the protein antibodies, is greatest within six hours after birth.
- If bottle fed, the stockman should focus on feeding the calf as much colostrum as possible within the first eight hours after birth.
- For the best results in transferring maternal immunity to the calf through the colostrum, bottle feed an amount of about 5% of calf's bodyweight, 15 minutes after birth.
- Colostrum is high in energy and has a high oil content. Only later in life will high-protein feed become more important.
- To help the lymphatic system develop and encourage disease resistance, colostrum is rich in vitamins such as vitamin A.
- Colostrum is a natural laxative, clearing the digestive tract in the first few days after birth.
- Older cows have better quality colostrum than cows that calve for the first time. They also produce colostrum with a more diverse antibody population. Colostrum from these cows can be frozen and stored for later use.
- About 24 hours after birth the calf loses the ability to absorb antibodies from the colostrum. You can, however, continue to feed colostrum for another day or two, as it is nutritious and still has disease-controlling effects by neutralising pathogens in the stomach lining.

Bottle-feeding – and force-feeding with a stomach tube, when necessary – means greater control over colostrum intake. You have to take the weight and size of the calf into account, but a general rule of thumb is to feed calves weighing less than 30 kg, 1 to 1,5 l of colostrum. Ayrshire, Guernsey and dual-purpose breeds with calves weighing 30 to 40 kg can be fed 1,5 to 2 l. Larger calves of 40 kg and more can be fed 2,25 to 2,5 l of colostrum for their first meal. Feed the calf again within eight hours. Colostrum is best served at body temperature (37°C) and should be given three or four times in the first 18 to 24 hours of life.

After this first day, the general amount of milk typically fed to a calf is 8 to 10% of its birth mass, three times a day for the first three days.

Overfeeding can cause the milk to overflow into the undeveloped rumen which may lead to scours. However, some farmers successfully feed their calves up to 8 l of colostrum in the first day. The problem is more often that calves are not fed enough colostrum as opposed to being overfed.

Remember to remove other feed and water at least half an hour before and after feeding milk or milk replacer. Always feed milk at the same temperature. Body temperature is preferred by many farmers, but the most important factor is a stable temperature serving of milk throughout the time that the calf is fed.

Teats or buckets are both used successfully in calf-rearing. Remember to teach your calves how to drink from buckets or suckle from group feeders, especially if the equipment is different to the method used for feeding colostrum.

All equipment used in feeding calves should be disinfected after every use. Use effective cleaning chemicals and reliable staff to oversee this process. Keep each calf's bucket and feeding equipment numbered and serve its food from the same clean buckets daily.

Consult a professional ruminant specialist to improve rumen development in your calves.

Housing for calves

There are many shapes, forms and methods of effective calf-housing and more than enough information to fill a whole book. Some basics are not negotiable; therefore, you might want to see how many 'yes' boxes you can tick off the following list:

- Calf-housing should be easily accessible.
- Removed from older cows.
- Face away from too much direct sunlight to avoid excessive heat.
- Have an ambient temperature of 15°C.
- In warmer climates, have effective ventilation to help cool down the housing.

- In cooler climates, have ways to insulate housing from freezing temperatures and wind.
- Humidity should be above 50% and optimally at 70%.
- Fit a thermometer to monitor temperature and a hydrometer to measure the level of humidity.
- Ventilation must provide fresh air, but not a draft. This will provide the build-up of ammonia, carbon dioxide and humidity. Poor ventilation can lead to calf pneumonia.
- Calves must have a clean, dry pen.
- Achieve good drainage with a slightly sloped floor or with raised calf pens with grid flooring.
- Provide enough space for some movement. Individual pens are typically 1,8 x 1 m.

Avoiding the S word

Scours is a common disease among calves. It is typically the result of metabolic upsets of an imbalance in the digestive tract, causing diarrhoea.

This leads to dehydration and a loss of electrolytes and can cause the calf to die. Scours can be caused by toxins from infectious organisms, poor-quality protein, fat or carbohydrates in milk replacers. A change in the diet and irregular feeding can also cause scours.

Other factors that may lead to scours, include milk fed at different temperatures, unhygienic feeding methods and utensils, poor-quality feed and mouldy hay, calves suckling each other and spreading the disease.

Opsomming

Om gesonde kalwers groot te maak is nie altyd 'n maklike taak nie. Daar is egter 'n paar basiese riglyne wat 'n mens moet volg om nie net die kalf veilig en gesond te hou nie, maar ook om 'n goeie groei koers te handhaaf en rumenontwikkeling te bevorder. [TDM](#)

Vaccination for healthy kids

Milk goats are specialised animals with a special function and future ahead of them.

Taking care of new kids, ensuring their health and preparing them for adulthood from day one will benefit your goat herd's health and your bottom line.

The first step in ensuring healthy kids is the adequate intake of good-quality colostrum. After this first 'dose' of antibodies, however, an inoculation programme should be followed to address parasites and other diseases common in milk goats.

Always consult your local veterinarian to establish a vaccination programme suitable

for your area and specific herd. Vaccination programmes are guidelines to the most basic inoculation needs, but some regions and herds are exposed to specific health risks, which should be dealt with accordingly. There are, however, essential and optional vaccines, so be aware of epidemics or diseases, which are endemic to your region.



Inoculation programme for kids

January: Kids four and a half months old

- Epididymitis (essential)
- First inoculation for black quarter (optional)
- First inoculation for botulism (optional)

January: Weaning

- Enterotoxaemia (essential)

February: Five to six months old

- Enterotoxaemia (essential)
- Rift Valley fever (optional)
- Wesselsbron disease (optional)
- Second inoculation for black quarter (optional)
- Second inoculation for botulism (optional)

- Anthrax (only if disease occurred in the area during the last five years)

April/May: All animals

- Botulism (optional)
- *Pasteurella* (optional)
- Black quarter (optional)

June: All animals

- Deworm (essential)

August: Two weeks old

- *Pasteurella* (optional)
- Vitamins A, D and E (optional)
- Heartwater (in heartwater areas): Note that vaccination after two weeks of age may cause a severe disease reaction. You can block the reaction on day eight or nine with a long-acting tetracycline at a lower dosage. Consult your veterinarian.

September: Six weeks old

- *Pasteurella* (optional)

October: All animals

- Deworm

Rift Valley fever

Southern Africa has seen a number of serious cases of Rift Valley fever (RVF) in the past few years. The symptoms of RVF and Wesselsbron disease are similar and both are rainfall related, distributed by mosquitoes and can lead to heavy losses.

Pasteurella

This is one of the diseases the goat farmer should be aware of, especially in kids. The disease is stress related and can be caused by a number of factors, including adverse weather conditions, weaning and a change in diet. Kids are vaccinated twice with an interval of four to six weeks (oil vaccine), while adults are vaccinated annually (alum vaccine). The rule of thumb is to vaccinate animals preferably two months ahead of known stressful periods.

Milk goat farmer, Donald Mouton of Fairview, says he first vaccinates his kids at two to three weeks after birth against *Pasteurella* with Multi-vax P and administers a booster shot about four weeks later. Vaccinations that follows this should be done according to a schedule determined in conjunction with your veterinarian.

As the main cause of *Pasteurella* is stress, take care to prevent stress in kids. Donald says overcrowding, change in the diet, weaning, idleness, heat and cold, handling and transport are sources of stress. Kids are easily bored and need 'play pens' with boulders or large rocks, trees and even tyres to climb on. Also take care around weaning time to make this transition as stress-free as possible.

Contact the Agricultural Research Centre in Irene on (012) 672 9305 for more information on kid-rearing.

Opsomming

Melkbokke het spesifieke behoeftes wat die voorkoming en beheer van siektes betref. Jong boklammers se eerste beskerming kom van biesmelk. 'n Inentingsprogram moet saam met jou veearts opgestel word wat ooreenstem met jou kudde se behoeftes en siektes wat in daardie gebied voorkom. **TDM**

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Udder health test (part 2)

by Dr Inge-Marié Petzer

In the first part of our two-part series in udder health, we focused on the importance of early detection of mastitis in cows and how to perform the CMCT procedure. In the second part, we take a look at CMCT readings, monitoring udder health and measuring success with CMCT during lactation.

Reading the CMCT results

Meaning of symbol	What do you see?
Negative	During swirling, the mixture remains liquid. On tilting the paddle, the mixture flows over the bottom of the cup in a completely homogenous layer.
(+) Weak positive	During swirling, the mixture remains liquid – looking the same as with a negative score. On tilting the paddle, the mixture flows over the bottom of the cup in a slimy, streaky layer that is clearly visible. It may disappear after a while.
(++) Distinct positive	With the first 1-2 swirls of the mixture, there is already distinct gel formation. Some portions of the positive mixture usually tend to collect at the centre of the cup, whereas others may continue to move around its periphery. On stopping the swirling motion, the gel-like mixture will level out and cover the bottom. On tilting the paddle, the mixture flows over the bottom of the cup in a distinctly slimy mass possibly of streaky appearance, leaving a drawn out tail end.
(+++) Strong positive	With the first 1-2 swirls the mixture already forms a jelly that tends to adhere to the centre of the cup, where it forms a peak and leaves the periphery of the bottom of the cup exposed. After stopping the swirling motion, the mixture may level out somewhat on the bottom of the cup, but its surface remains uneven and usually continues to show a distinct peak in its central region.
Acid milk	The mixture will become distinctly yellow at pH 5,2. This is very rare and usually indicates fermentation of lactose by bacteria.
Alkaline milk	When the reaction is distinctly alkaline, (a deeper purple colour) it may be because of either udder inflammation or indicating that the udder is drying off.

Practical uses of the CMCT

On herd basis

Ideally 85% or more of all lactating cows should be CMCT negative. It can be used as a screening test of the herd, not as a diagnostic test.

It can also be used as a follow-up on all cows with high SCC on cow milk samples (E-report) looking at the inter udder relation (compare the four quarters of the udder with each other).

Monitoring of udder health

Individual cows

The purchasing of lactating cows should always be followed with aseptic quarter milk samples to obtain a bacterial profile. It may sound strange but you are buying the udder more than the cow – that is mainly where the money is going to come from. If no quarter milk samples are evaluated it would be the same as buying a bull without testing its fertility.

“ A CMCT can be done on fresh cows and heifers by their third or fourth milking. It is difficult to get accurate CMCT readings on colostrum ”

However, the CMCT can be done on cows preferably not later than six hours after the last milking. Any quarter that shows a distinct gel formation should be considered infected. Purchased lactating cows that are not cultured must be segregated at milking and milked last until a milk culture can be examined.

Examine and monitor fresh, post-calving cows to determine whether the udder is normal after the dry period.

A CMCT can be done on fresh cows and heifers by their third or fourth milking. It is difficult to get accurate CMCT readings on colostrum. When one of the quarters is significantly more positive than the other, samples should be taken from all quarters for culturing.

She should be separated from the group or milked just prior the mastitis group until results

are available. If this is not practical, the milking unit used to milk her, should be back-flushed with great care with a fast-acting disinfectant prior to milking the next cow.

Fresh cows do not have CMCT positive quarters unless an infection or serious injury has occurred. Use CMCT weekly on fresh cows that tested positive in one or more quarters – this will provide you with more detail on the progress of the infection – is it getting better, worse or does it remain the same?

CMCT positive

The procedure followed depends on which bacteria have been isolated from the cow. She does not need to be milked separately, as it is a non-contagious bacterium. When it is contagious *Staphylococcus aureus* (STA) and *Streptococcus agalactiae* (SAG) (see earlier in this series), she needs to be segregated at milking. *Streptococcus agalactiae* cows need to be treated. Approximately 50% of environmental infections in fresh cows will spontaneously cure and disappear within 15 to 30 days in milk. If the CMCT score increases at 14 to 21 days in milk compared to day 2, the cow (quarter) will require more intense attention at milking time. Antibiotic therapy will be necessary when the cow's quarter or life is being threatened.

All quarters show gel formation

When a fresh cow has all four quarters showing some gel formation, but the CMCT reading is the same for all quarters, the cultures are negative on the four quarters. The increased CMCT readings are because of udder conformation, age, injury or other trauma such as milking. As days in milk increase in this cow the CMT readings may decrease or stay the same with no infection present.

Should fresh cows be treated based on CMCT results? The answer is a definite no. The CMCT identifies quarters with high SCC, indicating a chance of being infected but colostrum and stress may play a big role early in lactation.

CMCT measures success

There are two uses for the CMCT post treatment namely to indicate when the SCC is low enough to add the milk to the tank (check when antibiotic withdrawal time is done) and to monitor if the cow was possibly cured from the mastitis.

After intramammary treatment, the SCC in the treated quarter will remain increased for a period owing to irritation caused by the remedy on top of the inflammation. This may affect the CMCT reading for up to three weeks after treatment. A positive CMCT on a quarter at three weeks post-treatment would indicate a failure of treatment.

One negative CMCT on a treated quarter at three weeks post-treatment (clinical cure) would not guarantee that the quarter is free of all organisms (bacteriological cure). However, if subsequent CMCT testing at two-week intervals remain negative, chances are better that she is cured.

When you use selective therapy, use the CMCT to help determine which cow to treat with dry cow therapy or which cows need special care or treatment during the dry period when blanket dry cow therapy is used. Lactating cows can be tested at the last milking prior to drying off.

When this data is compared to the CMCT readings at drying off to that of the animal at the fourth to sixth milking after calving, two results are possible:

- The quarter was CMCT positive at dry off and is negative at calving = cure, owing to dry treatment or spontaneous cure.
- The quarter was CMCT positive at dry off and is still positive at calving = there are two conclusions to this finding:
 - The quarter is still infected with the same infection that was present at dry off and the treatment failed. This is common with STA infected cows.

- The quarter was cured of the infection that was present at dry off but it became reinfected prior to calving with a different organism.

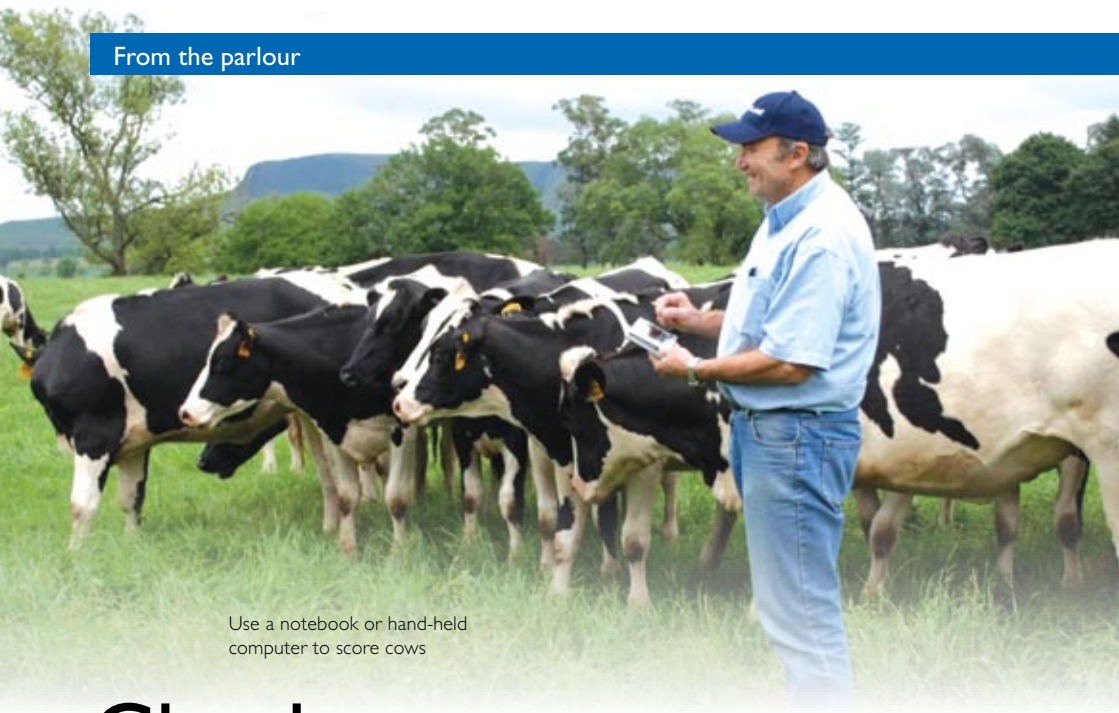
Culturing CMCT positive quarters at dry off and again at calving would be the only way to distinguish between these two findings. However, if the majority of CMCT positive quarters at dry off are also CMCT positive at calving, one should suspect that those quarters are chronically infected and did not respond to dry treatment.

Cows that maintain a chronic infection through the dry period should be separated at milking time. The causative organism is likely to be STA that did not respond to dry cow therapy and will not likely respond to any other therapy.

A high percentage of non-cures with dry cow therapy may warrant a change in dry cow antibiotic. Choose a new dry cow antibiotic and continue to follow CMCT results at dry off compared to calving. At least 50 infected cows will be needed to form a conclusion on the efficacy of the new dry cow antibiotics.

A quarter is CMCT negative at dry off and positive at calving and was infected during the dry period or at calving. A high percentage of new infections during the dry period would implicate environmental organisms. Improve the sanitation of the housing for dry cows, pre-fresh cows and maternity cows.

A quarter is negative at dry off and is still negative at calving – that is what we need. In the next issue, we will be looking at electrical conductivity as a cow side-test followed by the information we obtained by using the CMCT and conductivity test in parallel. [TDM](#)



Use a notebook or hand-held computer to score cows

Check up on your cows

by Rykie Visser, Africa Development and Sales Manager: Agrinet

Mastitis robs the dairy industry of millions of rand each year. According to Shannon Linderoth, recent data from the University of Minnesota indicate that more than 75% of all clinical and subclinical mastitis cases cultured are the result of environmental pathogens such as *E. coli*, *Strep. uberis*, *Strep. dysgalactiae* and various environmental *Staph.* species. Your choice of bedding type, manure removal and housing all shape the risks that affect the frequency of environmental mastitis on your farm. One can take steps to cut your herd's exposure, improve herd health and reclaim some of those losses. Be proactive rather than reactive in your approach. Conduct a risk assessment at least quarterly if not more often.

Step 1: Check cow cleanliness

A cow-cleanliness audit is a visual assessment of how clean – or dirty – each cow is. Focus on the udder; feet and legs of the cow. The dirtier the cow, the greater the risk for environmental mastitis and high somatic cell counts. Set aside a specific time to conduct this audit. Conduct future audits around the same time of day, so results are comparable.

Don't combine it with other management activities, such as herd checks. Focus on the audit. Ask your veterinarian, herd manager and other key consultants such as feed consultants, to help. Walk through each housing system or group pen and look intently at the cows and take notes. Focus on the cleanliness of cow feet, lower legs and udders. Hygiene scores udder and rear leg composite scores are significant for increased mastitis risk

but not for tail head, flank and belly. Use a udder-hygiene scoring card. If a pen contains less than 100 cows, score all the cows. For pens that contain more than 100 cows, score 25% of cows.

Cows with udder-hygiene scores equal to or greater than 3 are at increased risk for mastitis, where 5 is very dirty and 1 is totally clean. A cow's risk exposure for mastitis increases with the number of teats covered with manure, the frequency of contamination and duration of exposure. Once you've rated cow cleanliness, assess the results with the evaluation.

Step 2: Check housing facilities

In assessing free-stall housing, alleys are a good starting point. Observe how much manure slurry cows walk through. Slurry levels above a cow's coronary band on the foot are undesirable. If practical, increase alley-scraping or flushing frequency or relieve any overcrowding problems you have.

Use the udder-hygiene score to help assess the effects of overcrowding in each pen. A rule of thumb is to allow a minimum 50 m² per adult cow. If scores are consistently outside the desired parameters, consider shifting overcrowding to later-lactation cows. Fresh cows, early lactation cows and dry cows are most vulnerable to pathogens.

For dry lots, look at pen management. Ask the following:

- Are pens maintained daily?
- Are areas where cows concentrate, such as under shades, cleaned more frequently?
- Do pens have mud holes?
- Do cows have a clean, dry place to rest?
- Do pens have adequate slope for drainage? (Most experts recommend a 2 to 3% slope perpendicular to the feed troughs.)

Make a note of any problems and schedule repairs.

Walk through each holding area to determine the level of manure build up. Use the same gauge to judge manure levels as you did in the free-stall alleys.

Step 3: Evaluate the sleep cubicles

Some environmental hazards are obvious. However, find out if the problems stem from something upstream such as poor cubicle design. Ensure the cubicle dimensions are according to the breed of cow as well.

Next, assess cubicle management. How often are cubicles cleaned? Ideally, this should occur every time you milk the cows. How often are cubicles bedded? Organic materials, such as sawdust or straw, should be added daily. Inorganic materials, such as sand, may be added less frequently. Is the entire stall cleaned or just the rear? If possible, observe stall cleaning in action. Ensure that the sand is levelled on a daily base if sand is used as bedding. Use a stall-scoring system. According to research, herds with somatic cell counts greater than 250 000 cells per millilitre have more manure in stalls, do a worse job of cleaning and use less bedding than herds with lower scores.

Step 4: Check bedding

While bedding may look clean, there is no correlation between appearance and bacterial load. So, assess the following parameters and ask yourself:

- Is bedding material kept clean and dry?
- Have you taken all possible measures to decrease bedding-moisture content?
- Is bedding stockpiled away from barns or pens so that the contamination risk is minimised before material is added to stalls?

Run culture samples on the bedding. Test stored material. Fresh, clean bedding should have bacteria counts lower than 5 000 colony-forming units per millilitre according to standards available. Counts above 1 million colony-forming units per millilitre indicate that bedding management

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Good ryegrass needs close view

Dr Danny Donaghy, group research leader for dairy at the Tasmanian Institute of Agricultural Research, recommends the two-to-three-leaf principles for pasture management, as he believes that it is the easiest and most accurate technique.

He says that with day rotation systems, there is no flexibility or learning and that farmers get it wrong about half the time. The height measurement has the same weaknesses and is affected by many factors. Consequently, grazing management is again miscalculated about half the time.

“Overgrazing of pastures does not leave much energy for the roots and tillering and leads to further pasture degradation”

Measuring kilogram dry material per hectare is even harder to manage and affected by many factors. Farmers also get this measurement wrong about 30% of the time. He thinks farmers can get grazing management right about 90% of the time by grazing between the two and three leaves/tiller or earlier if canopy closure occurs.

Leaf growth reflects the ryegrass plant's energy status and also affects regrowth, survival and quality. A spreadsheet cannot accurately determine whether a pasture is ready for grazing – you need to be in the pasture and looking closely at the plants. Using leaf-stage and canopy-closure observation to determine when a pasture is ready to graze works in both tropic and temperate climates. Canopy closure works better than leaf stage and occurs when the ground or pasture base directly below the

canopy cannot be seen. If canopy closure occurs in more than 25% of the pasture, there would be mainly high stem-growth rates, which leads to deceptive measures from platemeters. Future growth is depressed with high stem-growth rates as tillering declines; pasture quality also declines as the fibre increases; and the cows will eat less unless they are starving.

Plants partition energy to maintenance first, then to the growth of roots, leaves and tillers and finally to energy storage. The metabolisable energy (ME) quality does not change significantly between the one and three leaf stages. Overgrazing of pasture does not leave much energy for the roots and tillering and leads to further pasture degradation. The plant's energy is stored in the 4 cm of the tiller and the base. Consequently, grazing and/or cutting reduces the amount of energy available to the plant. Overgrazing causes the plant to put all its energy needs on hold until it reaches the three-quarter-leaf stage. Short rotations without mineral supplementation on young pasture generally create plants with too much potassium and excessive protein. Although neutral detergent fibre (NDF) in a plant changes with stress levels and height, there is no clear relationship between NDF and leaf stage until the three leaf stage.

The ME decreases after two leaves, and even under good management, it drops more quickly after two leaves when combined with canopy closure. The ME drop is also steeper when the

pasture is stressed and therefore a longer rather than shorter rotation is required for recovery.

Faster rotations at less than two leaves leads to lower energy levels, decreased pasture production and imbalanced mineral levels (high N and K, low Ca and Mg). It also leads to decreased tillers, leading to a further drop in production and decreased persistence. The root system is decreased, weakened and becomes shallower, which decreases water and N efficiency and can cause N stress. This is because the water and N that is applied quickly moves below where the plant can reach it.

Finding the right balance

The pasture can be killed by grazing hard in a couple of quick, hard rotations. There is a narrow window of grazing opportunity. With slow grazing rotations and pastures with more than three leaves, there is high production and a good mineral balance but protein levels decrease, high fibre reduces the overall feed value and shading leads to fewer tillers and eventually fewer roots. Short residuals reduce the storage area for energy causing regrowth to slow. There is less total production, reduced persistence and the cows are forced to graze with greater intensity, which reduces intake.

By finding the right balance you can optimise your pasture usage and provide your cows with the best pasture.



Phone +27 (0)33 330 6698 or e-mail ignutrition@iafrica.com for more information. 

From the parlour

Continued from page 79

should be adjusted. Check with your lab to conduct this test. Also, monitor bulk-tank somatic cell counts, to gain an overall view of how well you're managing your risk. Once the entire assessment is completed, share the results with your management team. Empower employees to make positive changes.

Develop a cubicle scorecard


Is the cubicle dirty? Is it adding to your environmental-mastitis risk? The answer is somewhat subjective. To create a more objective measuring stick, try this cubicle scorecard. Think in terms of low, medium and high risk. A low risk is a cubicle that appears to be clean, with no visible manure present. A medium risk is a cubicle with dark bedding areas and some obvious manure in part of the cubicle. A high risk is a cubicle with manure present throughout the cubicle.

The majority of cubicles must fall into low risk, with less than 10% medium-risk stalls. You should not see any high-risk cubicles.




Ensure the space allowed is sufficient for the groups

Conclusion

It is important to do physical check-ups on the housing areas to establish potential hygiene problems. These check-ups should involve all levels of management on the farm to ensure proactive steps to combat these problems effectively. 



For any further information, please contact Rykie Visser at 082 596 8416 or at rykiev@agrinet.co.za. 

Langs die drukgang

Hoekom faal antibiotika

deur dr Chris van Dijk

Antibiotika word algemeen op plase gebruik. Indien korrek toegedien, is dit baie nuttig. Indien dit egter verkeerd aangewend word, kan dit swak resultate, vermorste tyd, kostes en onbruikbare melk en vleis veroorsaak. Op melkplase is residue van antibiotika ook 'n groot probleem en deur verkeerde gebruik, kan 'n mens antibiotikaweerstand aanhelp.

Hoe om die slaggate te vermy

Verskeie faktore beïnvloed die sukses van antibiotikabehandeling. Antibiotika werk nie altyd nie, maar die korrekte opleiding en kennis kan die suksessyfer verhoog.

Immuunstelsel en antibiotika

Die immuunstelsel moet ten slotte die bakterie vernietig. Antibiotika is óf bakteriedodend óf bakteriestaties. Laasgenoemde verlangsam die bakteriegroei en gee die immuunstelsel kans om sy werk te doen. Die immuunstelsel moet altyd optimaal funksioneer. Voeding moet ook optimaal voorsien word en spoorelemente soos seleen, mangaan en sink moet bevat. Interne parasiete en immuunonderdrukkende virusse moet tot 'n minimum beperk word. Die omgewing van die siek dier moet bevorderlik vir genesing wees – kalwers in hokke wat na urine ruik en met 'n koue trek sal sukkel om gesond te word.

Volume van middel

Nadat 'n middel ingespuut is, word dit geabsorbeer en na die res van die liggaam versprei. Met binnearse inspuiting begin die proses dadelik, maar met binnespiers en onderhuidse toediening is daar 'n tussenfase waar die produk nie dadelik, geabsorbeer word nie.

Volg aanwysings

Die farmakologiese beginsel is om soveel aktiewe middel, so gou moontlik by die infeksie te kry. Die aktiwiteit van die middel word beïnvloed deur die omstandighede waaronder dit gestoor word – as die produk tussen 2 tot 4° gehou moet word, dan hoort dit in die yskas. Moenie vervalde middels gebruik nie. As die etiket aandui dat die middel voor gebruik geskud moet word, doen dit. Maak seker die korrekte dosis vir die korrekte massa word toegedien. Te veel is net so skadelik as te min.



Dr Chris van Dijk

Verkeerde middel

Penisillien is doeltreffend teen G-positiewe organismes maar het min of geen effek teen G-negatiewe organismes nie. Dit is deels as gevolg van die verskil in die selwande van die bakterieë. Baie bakterieë het die genetiese potensiaal om weerstand teen 'n middel te ontwikkel. 'n Middel wat teen een bakterie werk, sal nie noodwendig teen 'n ander werk nie. Antibioگرامme en laboratoriumprosedures sal u veearts help met die voorskryf van die korrekte middel.

Moenie middels meng nie

Sekere kombinasies van middels by jou penisillien en tetrasiklien kan dodelik wees. Moenie middels self meng tensy u veearts dit so aanbeveel het nie.



Lesers is welkom om die outeur regstreeks te kontak by 082 789 4499 of per e-pos by chris.vandijk@pfizer.com. 

Metaboliese siektes (Deel 3) Vetkoeisindroom

By lewervervettingsindroom vind daar 'n opbou van afgebreekte vet tot so 'n mate in die lever plaas dat die lever nie meer behoorlik kan funksioneer nie. Die impak wat hierdie nageboortelike sindroom op 'n kudde se voortplantingsprestasie kan hê, is enorm.

Die periode rondom kalwing en die gepaardgaande sindrome is stresvol genoeg vir die koei, die kalf en die boer, sonder die bydraende faktore wat uit hierdie sindroom spruit. Hoeveel keer het u al u kuddeveearts hoor sê: "Jou koeie kom nie op hitte nie en raak nie dragtig nie omdat hulle te vet is"?

Op 'n nasionale skaal is hierdie opmerking nie so algemeen as wanneer die koeie te maer is nie, maar op daardie plase (veral TGR of zero weiding) waar die koei se kondisie effens te goed is, is dit nie altyd 'n maklik waarneembare toestand nie, maar tog uiters skadelik en duur. Voordat ons praat oor wat met die lever gebeur en die gevolge daarvan, kyk ons eers na die normale lewerfunksies:

- Vervaardiging van plasma-proteïene soos albumien en globulien (belangrik)
- Afbreking van sekere hormone (belangrik)
- Vervaardiging van vitamien A
- Stoor van vitamien A, D en K
- Stoor van glikoëen (dierstysel – 'n bron van energie)
- Stoor van minerale en spoorelemente
- Ontgifting.

'n Paar weke voor kalwing, begin die koei se liggaam meganismes in werking stel om die komende dramatiese veranderings te hanteer. Soos

by die meeste metaboliese siektes behels hierdie veranderinge hoofsaaklik die wanbalans tussen inname en verbruik. Een van hierdie meganismes is die afbreek van vet (lipolise) tot 'n addisionele bron van energie. Hierdie meganisme kan baie sterk wees, veral in

'n hoëproduiserende melkkoei. Die maontlike negatiewe gevolge van lipolise kan vererger word as die koei te vet is. In die konteks van hierdie bespreking beteken dit dat kalwingskondisietelling (KT) meer as 3,75 – 4,00 is. Die lewer is inderdaad ontwerp om vet af te breek, maar teen 'n stadige tempo. Die ooglopende faktor wat bepaal hoeveel vet beskikbaar is om af te breek, is oorvetheid. Daar is egter ook 'n paar ander faktore wat lipolise gedurende laat dragtigheid en vroeë laktasie stimuleer:

- Sirkulerende hormone soos groeihormone om die vinnig groeiende fetus te ondersteun en prolaktien en laktogeen om die uier vir laktasie voor te berei en melkproduksie te stimuleer.
- Stres voor en ná kalwing. Voedinginname verminder gewoonlik beduidend.



Dr Barry Coates

- Dieet. Skielike verandering in dieet, asook 'n minderwaardige dieet oor die algemeen sal negatiewe energie en lae bloedglukosevlakke tot gevolg hê, wat lipolise kan aanmoedig.
- Siektes rondom kalwing soos mastitis, baarmoederontsteking, melkkoors, ketose, blylê-koei-sindroom, agtergeblewe nageboorte (plasenta). Dit is nie altyd maklik om te bepaal of die siektetoestand die gevolg is van vetkoei-sindroom nie.

Hou in gedagte dat hierdie aggressiewe lipolise in elke koei plaasvind, maar omdat sy oorvet en 'n hoë produseerder is, vermeerder die kanse dat sy vetkoei-sindroom kan ontwikkel. Bogenoemde faktore beïnvloed die graad waartoe sy die sindroom kry. Die vinnige tempo en die groot hoeveelhede vet wat afgebreek word, oorweldig die lewerselle met vetterige druppeltjies en maak dit vir die lewer onmoontlik om sy normale funksie te verrig. Die lewer kan byvoorbeeld nie globuliere vervaardig vir die vervaardiging van teenliggame nie. Indien die immuunstelsel nie optimaal werk nie, loop die koei gevaar om baarmoederontsteking (wat die interkalfperiode aansienlik sal verleng) en mastitis te ontwikkel. Verder bly sekere dragtigheidshormone sirkuleer (omdat die lewer hulle nie afgebreek het nie) wat die baarmoeder meer kwesbaar maak vir infeksie (baarmoederontsteking en piometra) en ook die eierstokke se vermoë om weer aktief te raak.

Soos reeds genoem, is vetkoei-sindroom nie altyd voor die hand liggend nie. Wanneer word daar vermoed dat 'n koei hieraan ly?

- Daar is 'n algemene swak voortplantingsprestasie en 'n afname in die vrugbaarheid van die kudde.
- Daar is 'n toename in die voorkoms van aandoenings wat met kalwing gepaard gaan: agtergeblewe plasenta, mastitis, ketose, baarmoederontsteking, verplaasde abomasums, nie-optimale melkproduksie, melkkoors en asidose.

- Reageer swak op behandeling vir bogenoemde toestande.
- Daar is 'n korrelasie tussen bogenoemde tekens van vetkoei-sindroom en koeie met kondisietellings van meer as 3,5.

Ten slotte, is dit moeilik om vetkoei-sindroom te diagnoseer sonder 'n lewerbiopsie en die diagnose is dikwels net gegrond op afleidings. Dit is dus nodig om die kuddeveearts te raadpleeg om te onderskei tussen die verskeie aandoenings wat rondom kalwing kan ontstaan en te vra dat hy/sy die gaeffekteerde koeie ook behandel.

“Die vinnige tempo en die groot hoeveelhede vet wat afgebreek word, oorweldig die lewerselle met vetterige druppeltjies en maak dit vir die lewer onmoontlik om sy normale funksie te verrig”

Die enigste manier om vetkoei-sindroom te verhoed, is om die kondisietelling gedurende die droë en lakterende periodes deur deeglike voedingsbestuur te beheer. Koeie behoort die droë periode binne te gaan met 'n gemiddelde kondisietelling van 3,0 tot 3,5 (nie minder as 2,5 en nie meer as 4,0 nie) en afhangend van die telling waarmee hulle die droë periode begin het, kan die kondisietelling so gemanipuleer word dat hulle kalf met 'n telling van ongeveer 3,5.

Indien u meer inligting verlang, skakel u kuddeveearts of vir my persoonlik.

Verwysing: Rautenbach, GH, 2002, "Production Diseases", Fakulteit Veeartsenykunde.



U kan ook vir dr Barry Coates skakel by 011 929 2035 of stuur e-pos aan barry.coates@novartis.com 



Cheese science conference

The World Dairy Summit in Auckland, New Zealand, will feature a two-day conference on cheese science co-organised by the International Dairy Federation and the Dairy Industry Association of Australia (DIAA). The presentations will offer scientific investigations with practical application, and will appeal to cheese manufacturers and researchers.

New, innovative cheese-manufacturing processes on both a small and large scale, designed to make cheese more efficiently, will be presented. An overview of traditional European cheese-making practices will also be presented.

Manufacturing cheese is just the start – ripening characteristics and novel methods of spoilage control are also important and will be addressed at the conference. Current research focuses on the interface between health, structure and flavour of dairy products. The latest research will be featured on how structure and cheese microbiology impact upon flavour. Presentations will also be given on cheese as a means for probiotic bacteria, and on bioactive peptides produced during cheese ripening. In the context of increasing consumer attention to low-salt products, the conference will hold a forum to discuss the technology of low salt cheese. For more details and the full conference programme, visit the events website at www.wds2010.com

Sustainable dairy farming

Agriculture plays a crucial role to provide clean fuel within a managed global but changing climate according to a recent IDF bulletin entitled *Environmental issues at dairy farm level*. Main and complex environmental challenges at dairy-farm level and possible solutions are being presented in this new IDF survey. The

global dairy sector and the IDF has placed environmental considerations at the top of their priorities. The IDF is taking a proactive approach to support sustainable agriculture by identifying best practices and sharing international experiences. The objective is to ensure the production of safe and high-quality nutritious dairy food for human consumption, in harmony with the environment.

There are a number of examples from around the world that show how dairy-farming is working to improve its environmental footprint.

One tool facilitating access to best initiatives is the IDF website www.dairysustainabilityinitiative.org, which is open and available to all. In parallel, the IDF will soon release a carbon footprint map to calculate a dairy product's carbon footprint.

Global review on animal health

The delegates at the recent general session of the World Organisation for Animal Health (OIE) approved the new list of countries and zones that had applied for official OIE recognition of their status with respect to one or more of four priority diseases: bovine spongiform encephalopathy (BSE), foot and mouth disease, contagious bovine pleuropneumonia (CBPP) and rinderpest.

The organisation reiterated the aim that it shares with FAO, namely to be able to declare that rinderpest has been eradicated worldwide in 2011.

For any enquiries on any of these items or any other IDF-related items, contact Edu Roux at the SANCIDF office at 012 843 5701 or 082 338 7820 or e-mail edu.roux@agriconnect.co.za. 