



May 2015

13th Edition

Dear Business Partner

In the field of animal health, there are new developments and improvements in methods of production daily. At Lionel's Veterinary Supplies we are privileged to provide many of these innovations to you, our business partner.

We continuously strive to be at the forefront of new innovations. This newsletter serves as a means to keep you updated with what is available, and how these products can be used.

Enjoy the reading, and please inform us if there is a specific topic you need covered.

Regards

Duncan Stephenson

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Vra vir Faffa



Effek van hantering op stresvlakke in diere

Vraag

Watter effek het stres op bokke?

Antwoord

In 'n onlangse studie wat gedoen is deur die Landbou Navorsings Raad (LNR), is die effek van normale roetinehantering op stresvlakke in bokke gemeet deur te kyk na die serum kortisolvlakke in die dier. Kortisol word alom geken as die streshormoon.

Bokke is blootgestel aan verskeie "stressors" wat algemeen sal voorkom wanneer diere geprosesseer word vir roetine prosedures soos ontworming en immunisering. Saam met sulke take is daar gewoonlik ook weerhouding van kos en water en blootstelling aan sonlig vir verlengde periodes. Die spesifieke stresprosedures was;

- dosering met water
- immunisering met bloednierentstof
- blootstelling aan drie ure se direkte sonlig met omgewingstemperatuur hoër as 30° Celcius
- 48 uur kos weerhouding
- 48 uur water weerhouding
- 48 uur kos en water weerhouding en daarna 3 ure se blootstelling aan direkte sonlig met omgewingstemperatuur hoër as 30° Celcius.

Die resultate was baie interessant en insiggewend. Met die prosedures waar hantering betrokke was, dosering en immunisering, het die bokke insiggewende kortisolvlakke gehad, tot so hoog as drie keer die normale waarde. Waar die diere aan kos- en waterweerhouding blootgestel was, het die kortisolvlakke onder die normale (basale) vlakke gebly.

Dit moet genoem word dat die hantering glad nie robuust was of met geraas gepaard gegaan het nie.

Die gevolgtrekking kan aldus gemaak word dat normale roetinehantering tot erge stres in plaasdiere kan lei en dit is dus baie belangrik om behoorlike en korrekte hantering te implementeer wanneer roetine take soos dip, doseer en immunisering gedoen word. Dit is juis belangrik aangesien kortisol verantwoordelik is vir die onderdrukking van die immuunsisteem van die dier en hoë kortisolvlakke kan tot gevolg hê dat die dier tydens sulke onderdrukking hoogs vatbaar is vir siektes soos koksidiöse en pasteurellose.

Voorkom stres deur dieregedrag te verstaan en tot jou voordeel te gebruik. Werk kalm met die diere in die druggang sodat hulle nie die hanteerder vrees nie. Belê in goeie hanteringsfasiliteite, veral die druggang sodat die dier nie onnodiglik rondgejaag word vir prosedures nie.

Kontak die skrywer vir verdere inligting.

Geskryf deur: Leon Kruger, Landbou Navorsingsraad, Irene (Lkruger@arc.agric.za)

18 April 2015

Low Fat Milk From May Grass Down to Fatty Acids Not pH

11 May 2015

IRELAND – Low milk fat caused by spring grazing is often down to fatty acids and not falling rumen pH, Irish farmers have been advised.

Fatty acids, specifically conjugated linoleic acid, are derived from the rumen metabolising grass which lower milk fat content, advise nutritionists at Ireland's Agriculture and Food Development Authority (TEAGASC).

Cows indoors commonly have low milk fat content due to high starch and insufficient fibre intake causing rumen acidosis and lower milk fat levels.

According to Teagasc, low milk fat is cause for concern indoors, but in grazing cattle is a problem that can resolve itself. This is if dry matter and neutral detergent fibres intake targets are met.

They say the change to fat content is made in the udder and not the rumen.

“It is a false assumption that rumen pH must be lower if milk fat is low,” says Teagasc's dairy team.

“Indeed, studies have shown rumen pH to be similar for herds at 3.90 per cent fat and 3.45 per cent milk fat – differences were due to lipid content, not fibre in the diet.

“The change to milk fat production occurs within the udder itself, not in the rumen,” says Teagasc in its May newsletter.

“High quality second rotation grass increases the effect, and with cows also at peak yield the drop in milk fat can be quite noticeable.”

Meanwhile, cows can often continue to milk well, eat well, but there are ways to address the fat components.

How to Address Low Fat in Milk

- High intakes (17+kg DM) of quality grass, preferably on 24-hour allocations
- Post-grazing residuals of 4.0-4.5cm;
- Maintaining pre-grazing covers >1,200kg DM;
- Ensuring minimum NDF requirement (33-35 per cent of DM) is met where grass is in deficit
- Feeding slower degradability concentrate ingredients (maize preferred to wheat, hulls/beet pulp instead of citrus).

Applying the above points has been shown to address low fat content in a fortnight to three weeks, adds Teagasc. Rumen conditions can adapt or grass composition can alter with the cow typically remaining healthy throughout.

<http://www.thedairysite.com/news/47930/low-fat-milk-from-may-grass-down-to-fatty-acids-not-ph/>





Urban GmbH & Co KG is a German producer of automatic calf feeders and mobile calf milk mixers. The company, including its production site, is located in the North of Germany, between Oldenburg and Bremen.

The company started in 1984 when the farmer Helmut Urban started to produce and distribute the first calf milk mixers and feeders on its own dairyfarm with 200 dairy cows. In the 1990's the company moved to a new the production site because of the high demand for the products, in 1997 products like the automatic feeder U40 started to be distributed to foreign markets.

The aim of the company is to provide the best technic to feed the calves in the most healthiest and animal friendliest way. Calves kept in an outdoor environment and supplied by automatic calf feeders are healthy and vital; calf death losses are low. With our automatic feeders the calves are able to retrieve the milk according to their individual biological rhythm. The calf receives always perfectly tempered milk, distributed in small portions, numerous times a day which helps the calf to develop its abomasum in the best way. This early phase of the calf's life already includes the metabolic programming for high milk and life performance as dairy cow from which you profit later on.

Intensive rearing, however, means a heavy workload for the farmer. The company Urban offers solutions for this with the MilkShuttle or the automatic calf feeders, which is not only covering the farmers relieve from its heavy work of calf feeding, but also offers the best care of the calves already from the first weeks of the calves. Part of the product range are nowadays also calf hutches.

Today the automatic calf feeders and milk mixers are sold in more than 50 countries of the world. About 100 people are working in the production, research and development, sales, service and administration departments.

Urban is preparing itself for the future:

- **Last year we developed the new automatic calf feeder Calfmom Lifestart, which is already awarded with 3 prices.**
- **New features for the Milkshuttle: i.e. puncture free tires or the new pasteurizing function**
- **Enlargement of the production site this year**
- **Opening of a training center for the sales and service partners all over the world.**

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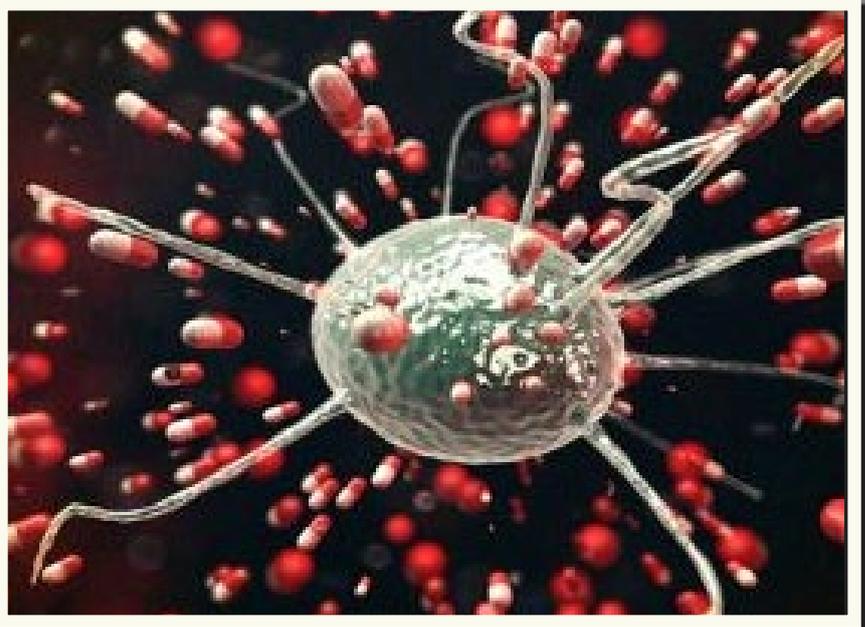
Combatting Global Rise in Antibiotic Resistance

19 May 2015

GERMANY - The German Federal Cabinet has approved the new German Antimicrobial Resistance Strategy (DART 2020).

Work on the strategy to combat antibiotic resistance started in 2008, and over the years efforts to combat resistance have been continued and strengthened.

Federal Health Minister Hermann Gröhe said: "The global spread of antibiotic resistance needs to be stopped.



"When antibiotics are not effective, we are threatened with falling back to the treatment options of a pre-penicillin era, with dramatic consequences.

"Diseases that can be easily cured today, such as a bladder infection or an inflamed wound from an operation could then result in serious illness.

"We have already made important progress, now it comes down to strengthening not only national efforts but also international efforts.

"It is necessary to have clear rules on the use of antibiotics in medicine and in animal husbandry, and also research and development into new antibiotics, alternative therapy methods and tests for rapid diagnosis.

"No state can stop the worldwide rise of antibiotic resistance alone, so we must also bring the international community together.

"Next week at the WHO we will put forward a common roadmap.

"And at the G7 meeting in June, we have put the subject on the agenda.

"Through the new German Antimicrobial Resistance Strategy, we are driving ahead with the fight against antibiotic resistance at all levels."

Federal Agriculture Minister Christian Schmidt stressed the vital importance of containment of antimicrobial resistance to the health of both humans and animals.

"In the veterinary field, we have recognised early on the signs of the times and adopted important regulations.

"But we must not stop here. Our goal must be to continue to limit the use of antibiotic agents. In this way, the amendment to the Medicines Act and also the newly established minimisation system has become a milestone.

"We have created the conditions for a continuous reduction of drug use."

He said that the reduction in the use of antibiotics was in veterinary usage was a benefit for both the animals and also humans.

Federal Research Minister Johanna Wanka said: “The research provides important approaches to combat antibiotic resistance.

“It is important to understand how resistance develops and can spread among bacteria as this is the only way we can effectively develop strategies to counteract the growing development of resistance.

“The fight against antibiotic resistance is of great importance.

“The DART 2020 is designed to prevent the emergence and spread of antibiotic resistance. It provides for various measures that take effect in parallel in human and veterinary medicine.

“In addition, the strategy should help to strengthen the research and development of new antibiotics, alternative therapy methods and faster testing.

“Animals and humans are often infected by the same pathogen and treated with the same antibiotics. Only through a cross-sectoral approach, therefore, will the emergence and spread of antibiotic resistance be successfully contained.”

DART in 2020, therefore, is consistent with the implementation of the One-Health approach.

The DART is a common strategy of the Federal Ministry of Health (BMG), the Federal Ministry of Food and Agriculture (BmEL) and the Federal Ministry of Education and Research (BMBF).

Objectives of DART 2020

1. One-Health approach to strengthen at a national and international level, the relevant ministries to cooperate in an inter-ministerial working group on the reduction of antibiotic resistance in human and veterinary medicine and to renew the research agreement on zoonoses. The federal ministries will support the technical relevant international organisations to combat antimicrobial resistance worldwide.
2. Recognise trends resistance early by strengthening surveillance systems in order to detect new pathogens and drug resistance at an early stage and to obtain representative data for all of Germany, which are also available for research. This allows a timely development of treatment and hygiene recommendations and targeted prevention strategies.
3. Maintain and improve treatment options by extending the monitoring of antibiotic consumption. These data form the basis for national intervention measures. In addition, concepts for the creation and application of guidelines will be developed.
4. Interrupt chains of infection early and prevent infection by improving diagnosis both in human and in veterinary medicine and promoting the implementation of hygiene measures. The methods of livestock production must be optimised.
5. Promote awareness and strengthen expertise through knowledge and capacity-building both in the public as well as in doctors, veterinarians and health professionals
6. Support all relevant areas of research in human and veterinary medicine to strengthen and interdisciplinary research projects promoted by the basic research on resistance emergence and dissemination to the development of new diagnostic tools and medicines.

TheCattleSite News Desk

- See more at: <http://www.thedairysite.com/news/47977/combating-global-rise-in-antibiotic-resistance/#sthash.1h0fJPiv.dpuf>

Help Needed to Solve Teat Removing Condition



Intensely irritant - Severe cases cause cows to lick their teats until they are removed. All photos courtesy of Roger Blowey

UK - An English veterinarian is calling for help to unravel a mystery condition in dairy cattle that can result in cattle physically removing their own teats - in extreme cases all four teats.

Ischaemic teat necrosis (ITN), first described in 2004, is a growing problem in cattle with no known treatment or cause.

In the early stages of the disease, intense irritation within the teat follows an early lesion, easily missed as an area of dry skin at the teat/udder junction. The problem, however, can quickly develop into something much worse, according to Gloucestershire-based cattle specialist, Roger Blowey.

Starting at the base of the teat, the currently unknown causal agent kills the teat tissue, which then becomes infected.

In some animals the whole teat becomes ‘intensely irritated’, causing profuse bleeding and leading to cows licking their teats to the point of removal in many cases.

Mr Blowey, who is keen to secure funding to advance understanding, has welcomed farmer input, whether in the form of anecdotal reports, farm surveys, or conversations at farmer meetings.

“I commonly bring up the subject at events and I often get questions and interest,” said Mr Blowey. “I have a form that people fill out to gain a basic epidemiology of the condition.”

Working with the Liverpool School of Veterinary Science, Mr Blowey has shown three digital dermatitis treponemes are present in samples sent in from round the country, although it is not known whether they are primary agents or secondary invaders.

These are the same treponemes responsible for toe necrosis and digital dermatitis, a growing issue in cattle lameness globally.

However, he still has not been able to tie down what role the treponemes play in the condition.

“We have been able to isolate the digital dermatitis treponemes from the majority of lesions, although we of course don’t know if they are primary or secondary,” said Mr Blowey.



Veterinarian Roger Blowey wishes to secure funding for more research. Photo courtesy of Roger Blowey

He told TheDairySite that the key to the puzzle is assessing whether the treponemes are present at the interface between the healthy and diseased tissue.

“If they are, the digital dermatitis treponemes could contribute towards the pathogenesis,” he explained.

Part of their treponeme impact is to interrupt the skins’ healing process.

So far, common theories raised to explain the condition have extended to people questioning whether rubber liners on milking clusters should be replaced with silicone.

The cost to the industry is unknown but could be considerable. One farm has had to cull 20 per cent of heifers in each of the last two years due to the presence of ITN.

Reports of Ischaemic teat necrosis have come in from the Netherlands, although little has been reported much further afield, with no cases as yet in New Zealand.

ITN is present in Indian Buffalo herds, where published studies have described the condition. Anatomical differences mean Buffaloes are unable to lick their own teats.

Observations within the UK suggest the condition is more common in first calved heifers in early lactation. Aside from this, there is little known about trends regarding seasonality, breed, housing, or farm systems.

“What’s needed is a more concerted approach to do something about it,” urged Mr Blowey.

“A good database and survey would give an idea of what the condition is costing the industry.

“It requires more publicity, funding and someone with the right background to do something about it.”

<http://www.thedairysite.com/news/47969/help-needed-to-solve-teat-removing-condition/>



Michael Priestley, Editor

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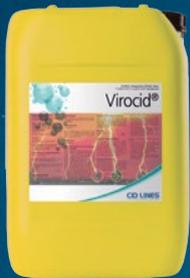


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TAG

SOUTH AFRICA



Voedingsbehoeftes van die Lakterende Ooi

Geskryf deur: Raché Stofberg

Die voeding van 'n grootste impak op of mislukking van derneming se pro- is uiters belangrik seerde rantsone voer wat aan hul hoeftes voldoen koopste basis.

Laktasie is die fase ie waar die ooi voedingstof aan- Die hoeveelheid we wat in aanvraag afhanklik van die mers wat gevoed



ooi het die die sukses 'n skaap on- duksie. Dit om gebalan- aan ooie te voedingsbe- op die goed-

van produks- die hoogste vraag het. voedinstow- is, is egter aantal lam- moet word.

As gevolg van die groot verskille in die voedingsbehoeftes van lakterende ooie, is laktasie 'n belangrike tyd om skape in produksie groepe te verdeel volgens enkelinge of meerlinge. Ooie met tweeling lam- mers produseer 20 tot 40% meer melk as dié met enkelinge, dus sal hul 'n groter voedingsbehoefte hê. Melkproduksie speel die grootste rol by voorspeense groei as enige ander faktor. Ongeveer 70% van die variasie in groeisnelheid word bepaal deur die hoeveelheid moedersmelk wat die lam ontvang.

Ooie se melkproduksie piek ongeveer 21 dae vanaf laktasie, waarna dit vinnig afneem en matige melk- produksie vlakke handhaaf tot en met 6-8 weke van laktasie. Melkproduksie van die ooi is hoog oorerflik, en deur vir swaarder speenmassas te selekteer sal die nageslag se melkproduksie potensiaal ook ver- beter. Daaglikse voer inname van die ooie kan verhoog word deur meer gereeld te voer, byvoorbeeld 'n ooi met 'n enkeling word een tot twee keer per dag gevoer, terwyl 'n ooi met 'n tweeling twee keer of meer 'n dag gevoer word.

Proteïen en energie is beide kritiese voedingstowwe vir melkproduksie. As enige van hierdie voedings- towwe onder die behoefte van die ooi gevoer word, sal melk opbrengste en lam winste met 10% of meer daal, afhangend van die grootte van die tekort. Omtrent alle ooie verloor gewig tydens laktasie, sekere ooie verloor meer as 15 kg. Dit word toegeskryf aan energie innames wat ver onder die behoeftes van die ooi is, en diere gaan in 'n negatiewe energie balans, dus begin hul vet reserwes mobiliseer om melk produksie te onderhou. Tradisioneel was vet mobilisering gedurende laktasie gesien as 'n manier om voerkostes te beheer, maar oortollige gewig verlies kan tot groot kostes lei. Hoe meer massa 'n ooi gedurende die eerste 6 weke van laktasie verloor, hoe later sal haar volgende teelseisoen begin. Ooie wat minder as 0.5 kondisietelling verloor gedurende 'n 60 dae laktasie periode, sal nie ly in terme van melkproduksie nie. Gewig verlies gedurende laktasie het 'n impak op proteïen behoeftes. Voldoende ver- byvloei proteïene is uiters belangrik wanneer die ooi te min energie inneem tydens laktasie. Hoe meer gewig die ooie verloor, hoe hoër sal hulle proteïen behoeftes word. Hierdie situasie kan toegeskryf word aan die vermoë van die ooi om effektief liggaams vet te mobiliseer, maar 'n minimale vermoë besit om liggaams proteïen te mobiliseer vir melk sintese. Indien die liggaamsvet ongeveer 30% bydra tot die en-

ergie behoeftese vir melkproduksie in die eerste 4 weke, benodig 'n 75 kg ooi wat 'n tweeling soog 110-115g verbyvloei-proteïen per dag. Die sleutel is om seker te maak dat die ooi nie soveel gewig verloor dat sy nie terug kan herstel na 'n goeie kondisie telling gedurende die onderhouds periode nie.

Die voorsiening van kruipvoer aan lammers ongeveer 'n week na geboorte, is nie net voordelig vir die lam nie, maar hou ook voordele vir die ooi in. Lammers bereik speenmassas vroeër en word vinniger gewoond aan vastestowwe. Daarom word minder druk op die ooi geplaas om hoë melkproduksie te handhaaf, want lammers se melk innames oor die totale laktasie periode is aansienlik minder. Ooie verloor nie so drasties kondisie oor 'n laktasie nie en kan op 'n beter kondisie opgedroog word.

Dit is belangrik om nie te veel graan aan ooie te voer gedurende die geboorte tydperk nie. Hierdie situasie kom dikwels voor wanneer daar probeer word om die melkproduksie van ooie te versnel wat nie genoeg melk het om hul lammers te soog nie. Hierdie oorvoeding van graan kan asidose (suurpens) en ander metaboliese steurnisse veroorsaak, wat lei tot minder melk produksie, eerder as meer. Pasgebore lammers neem ongeveer 10% van hul liggaams massa in die eerste dag of twee van hul lewe in, daarom is dit nie nodig om die ooie so vroeg te druk vir melk produksie nie. Graan of aanvullende voeding kan ongeveer 24 tot 48 uur na geboorte begin voer word. Die verdeling van die hoeveelheid voer wat per dag gevoer word sodat daar meer gereeld 'n dag gevoer word, kan ook help om asidose te voorkom, veral wanneer hoë konsentraat rantsone gevoer word.

Dit is ook belangrik om oorvoeding van ooie te voorkom rondom sewe tot tien dae voor speen. Dit is krities dat die voor-speense voeding aangepas moet word om sodoende mastitis probleme te voorkom. Dit word gedoen deur die hoeveelheid graan voeding vir die laaste tien dae voor speen te verminder en die toevoeging van lae kwaliteit hooi te verhoog. Deur hierdie bestuurs inset te volg, word die proteïen en energie inname van die ooi beperk, wat beide nodig is vir melk produksie. Die voer van strooi die laaste 2-3 dae voor speen sal melk produksie verder tot 'n stop bring. Na speen moet ooie onderhou word op 'n lae kwaliteit voer vir 3-7 dae om hul met die opdroog proses te help.

'n Goeie gebalanseerde dieet gedurende laktasie is nie net tot voordeel van die ooi se hittesiklus nie, maar ook vir die pasgebore lam en sy ontwikkeling om hoë speen persentasies te verseker. Die ooi sal ook vinniger weer op 'n goeie kondisie kom na speen om sodoende gereed te maak vir die volgende teel seisoen. Goeie bestuur en korrekte voeding is dus van kardinale belang om 'n winsgewende skaap boerdery te verseker.

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Local technology set to make waves internationally

Tuesday, 14 April 2015 01:02 Written by Jenni McCann



A local technology looks set to make waves internationally after SurePure, which uses photopurification technology to purify liquids, reported increased interest from global customers. SurePure's prime mover and CEO is former Springbok rugby prop Guy Kebble, who took the interesting step of listing the company on a secondary board of the tech-aligned NASDAQ market in the US. The company's offering revolves around a patented SurePure Turbulator, which increases liquids' exposure to ultra-violet and enables greater efficacy and consistency in purification.

In short, SurePure's technology hopes to offer a better alternative to traditional pasteurisation by delivering replicable, and predictable germicidal efficacy. The technology can be applied to microbiologically sensitive liquids like wine, fruit juice and milk – but also has applications in fuel and blood plasma.

Kebble said SurePure enjoyed a busy year of business development. "We established programs in different global markets and expect to continue to expand our footprint into the diverse industries that will be well-served by our technology."

He noted that during the first quarter of 2015 the company had secured additional orders of with a face value of over R12m. That means orders signed from the start of 2014 now touched R30m.

Kebble disclosed that since inception SurePure had signed orders with a value of around R60m.

“As of February this year, orders by customers to the value of around R36m have already been installed and commissioned. We expect the remaining orders will be installed and commissioned during the first half of 2015.”

SurePure’s recent accomplishments include the sale of its technology to a South African producer of fruit juice, carbonated soft drinks, water and non-alcoholic malt drinks, a tilt into the burgeoning craft beer market, signing a commercial deal with Helpac, a major essential oils and floral water bio-producer and announced a breakthrough in purification of contaminated diesel.

In the middle of 2014 SurePure also announced the production of cider for the craft brewing market with the use of its photopurification technology as well as demonstrated that its technology could trigger energy savings to the South African beer brewing industry through its collaboration with SAB Miller.

Most recently – and arguably the most promising development – materialised in December last year when SurePure announced commercial trials utilising its photopurification technology as an alternative to dairy pasteurisation in India. Earlier this year SurePure announced its first breakthrough in India when the company confirmed its technology had been selected for use in developing dairy communities in Northern India.

Clearly there is a way to go before SurePure is accepted as a mainstream purification application. But success in a mass market like India would lay a firm foundation on which to start building brand awareness for SurePure.

By Jenni McCann <http://www.cbn.co.za/agriculture/food-beverage-wine/item/2893-local-technology-set-to-make-waves-internationally>

Dehorn Calves with Paste

(A. Villarroel 2011 – Oregon State University)

Of the various dehorning methods, dehorning with paste is easy, effective and economical – as well as low-stress to the animal.

Here are the main points to consider when using dehorning paste.

1. Apply dehorning paste before the calves are 2 days old. After 2 days, calves have worked out how to scratch their heads against something to rub the paste off, and they can also stand on 3 legs to scratch with the other.
2. Using too much paste is the most common mistake beginners make. The result is a big bald spot around the horn area (although the hair will grow back in time). The amount of paste to apply on each horn is about the size of a 20 cent, as indicated in the package insert.
3. Don't let calves get wet for 24 hours after applying the paste. It can run off into the eyes and blind the calf. The paste dries in 1 day, **after which time** it is no longer necessary to keep calves dry.
4. Apply the paste just before feeding the calves. It takes a couple of minutes for the paste to start burning, so if you apply it immediately before feeding, calves are kept busy and they forget about their discomfort. By the time they are done feeding, the paste is almost done with the dehorning process, and they will not notice it too much.
5. Additionally, research performed with human babies shows giving breast milk, glucose, or sucrose before a single painful procedure significantly reduce heart rate and crying time compared to using distilled water, a pacifier, or swaddling. So applying the paste immediately before feeding milk or CMR (with a bottle) can help with any pain.
6. Producers who have switched to using paste to dehorn calves at birth report great success with no complications, and they like that calves are “done” without showing obvious signs of pain or stress. Only minor head shaking is reported.
7. Dehorn newborn calves or 1 day old calves:
Apply the dehorning paste right before feeding.
Make sure the paste doesn't get wet for 24 hours.



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Vehicle Biosecurity In Poultry Production

04 February 2007

By Luc Ledoux, CID LINES nv, Belgium - In this article, we want to share some advices on vehicle hygiene. The first rule is that hygiene consists of two parts: CLEANING and DISINFECTION. Cleaning is the removal of (organic) dirt in which micro-organisms live.

The recent outbreaks of Avian Influenza in three continents put question marks behind the application of biosecurity programs. One of the identified vectors for spreading the disease is the so called "mobile vector" caused by vehicles and people (catching crews,



collection of litter and dead birds, transport from the hatchery and to the processing plant, feed delivery trucks, ...) .

In this article, we want to share some advices on vehicle hygiene. The first rule is that hygiene consists of two parts : CLEANING and DISINFECTION. Cleaning is the removal of (organic) dirt in which micro-organisms live.

At the outside, it's the "traffic film". This is a build up of dirt consisting

of dust and grease (or petroleum and exhaust residues) that is attached to the body by the electrostatic load on the vehicle. During summer time, dead insects will be added to the traffic film (by themselves already a carrier of different bugs).

At the inside, the dirt depends on the load : it can be albumen and yolks from broken hatching eggs; fluff and droppings from day old chicks, droppings from broilers ready to slaughter, feed left overs, ...

So both inside and outside, the dirt is mainly organic. Therefore, a slightly alkaline detergent should be used (alkaline products remove organic dirt like fats and certain proteins; acids remove inorganic dirt like lime scale). However, if the product is too alkaline, or contains sodium hydroxide or chlorine, it will corrode the body of the truck, especially the aluminium parts. In other words, a SPECIAL product should be used (such as HATCHO-NET™, free of sodium hydroxide and chlorine, but rich in surfactants or wetting agents that will decrease the surface tension and break through the dirt). If only water with high pressure is used, it won't be possible to remove these specific types of dirt.

The list below shows what the characteristics of detergents are:

- Wetting: decreases surface tension
- Dispersing: splits up dirt particles

- Emulsifying: splits and suspends oil and fat
- Suspending: floats and carries away dirt particles
- Sequestering: dissolves salts

Ideally, the detergent should be applied as a foam, using a foam lance and a high pressure sprayer (min. pressure 500 psi), starting at the bottom and going up with the lance. The foam allows for a better coverage, and doesn't dry up that fast, ensuring the chemical does it's job, described in table 1. Therefore, it's advisable to clean first the inside and then the outside (especially during summer). Avoid vehicle washing in the sun.

After the cleaning, the vehicle shampoo or detergent should be rinsed off with plain water, before the disinfectant is applied. Here fore, the best result is obtained when starting at the bottom and going up , moving the high pressure lance from the left to the right and back. Then, do a quick rinse from the front towards the end to remove the remainders of the foam. (The high pressure replaces the brush : no need for "elbow grease").

A good cleaning job should remove about 80 % of the microbes. On a clean surface, it's possible to eliminate log 4 (i.e. 99.99 %) of the remaining 20 % microbes with an edequate disinfectant.

So what are the major criteria for a good vehicle disinfectant ?

1. efficacy: it should cover the full spectrum : bactericide, virucide, fungicide and sporicide to kill ALL types of bugs, in all temperatures, pH values and water hardnesses and in presence of some organic load ; therefore check if the product has the appropriate AOAC claims ! [The specific AOAC standard works with > 5 % organic load and in 400 ppm CaCO₃ hard water. VIROCID ® passed the Avian Influenza test per AOAC at 1:400 only.]
2. safety : for people : not carcinogenic (containing no formalin) and for the truck body : it should obviously be not corrosive (it should therefore have a neutral pH) neither affect the paint
3. residual activity: never rinse the disinfectant ! Particularly when applied as foam, the disinfectant will remain active a longer time and prevent early re-contamination.
4. versatility: the product should be applicable by spraying, foaming and fogging, without having to add any carrier or other additives.

Often, critical places are forgotten to treat, such as the underneath of the vehicle and the inside of the wheel arches. One of the most contaminated areas are the steps towards the cabin. Also the driver's cab itself should be disinfected inside! Equally important is the replenishment of farm gate wheel dips. Last but not least, we've observed wheel disinfectant pads that were smaller than the circumference of the vehicle's wheels!

(Automatic) spraying installations, reaching the underneath and the arches deliver a better job. Here, the non-corrosivity is even more important as different materials will be reached. They also assure “fresh” disinfectant to be used .

Don't forget to disinfect the feed delivery pipes of the feed trucks. Bulk carriers can be disinfected by misting or fogging, hence the importance of the product's versatility (ready to use for spraying, foaming and fogging).

If plastic chick boxes are used, they usually go back to the hatchery. There, they can be washed (and disinfected) in the tray washing machine (tunnel). The same procedure is required as for hatcher trays. Also crates for broiler transport should be washed and disinfected after every use. So should all tools that come with the vehicle (shovels, ...).

The principle for all these objects are the same: first wash, then disinfect. In a cratwasher, the non-foaming product DM-CID™ is recommended. Tools and all other equipment can be pressure washed with the foaming HATCHONET™. All disinfection can be done with VIROCID™.

As a summary, we can state that it's advisable to clean the truck on a daily basis at night and to disinfect it at every arrival on farm.

Source: CID LINES - June 2006



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