LIONEL'S
VETERINARY SUPPLIES

Jan & Feb 2018 *33rd Edition*

Lionel's News

Dear Business Partner

Herewith we bring you our monthly newsletter, containing up-to-date articles, tips & advice on improving different aspects of farming and relevant information on trusted, innovative products supplied by us.

True to our vision, we strive to deliver excellent service in the provision of products that contribute to the enhancement of animal health, well-being, and performance.

We hope you find this edition of our newsletter informative & worthwhile to read.

Thank you for your continuous loyalty. Feel free to contact us if you have any specific topics you would like us to cover in our future editions. Your inputs are welcome.

Many thanks for your loyal support throughout 2017, we look forward to doing our best to provide even better service to you and your company in 2018.

Visit our website: WWW.LIONELSVET.CO.ZA

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Kuilvoer Mielies – George

Minimize heat stress to maximize milk production and quality

Published on: 1/24/2018
Author/s: Dr. Amanda Stone / Mississippi State University

Influencers "Likes": Hassan Khan

Dealing effectively with heat stress in dairy herds is an essential management issue throughout the nation, but South-eastern dairy producers are forced to deal with extreme heat and humidity for prolonged periods. Heat stress decreases feed intake and milk production, decreases milk components including fat, lowers breeding success, and compromises the immune system, which increases the risk for multiple diseases. Hot and humid environments also allow mastitis pathogens to thrive. Below are several ways to help be proactive in heat abatement in dairy herds.

Watch for signs of heat stress. Mild to moderate heat stress signs include rapid shallow breathing, sweating, and about a 10% decrease in milk production and feed intake. As temperatures continue to rise, cows will show severe heat stress signs, including milk yield and feed intake decreases of greater than 25% and cows will begin panting. Cows never lie, so if they are showing signs of heat stress, corrective actions need to be taken to counteract it.

Think ahead. Each year, it's not a matter of if it will get hot enough for cows to be heat stressed, but when. Waiting until the heat hits to make cooling changes is adjusting a problem too late. Think about making improvements, like hanging new fans or cleaning the old ones, in the winter so that the cows can experience the positive effects as soon as the heat comes.

Increase water availability. Drinking water is one of the most important parts of deferring heat stress in dairy animals because water cools the animals internally. At least 25 gallons per cow per day available for all animals is recommended. Cows drink about 50% of their total daily water intake immediately after milking so providing water as cows exit the parlour is beneficial. Keep in mind that cows are more likely to drink cool and clean water, so cleaning water tubs frequently and keeping them in shaded areas will encourage drinking.

Use fans and sprinklers. Because cattle sweat at only 10% of the human rate, they need mechanical means to reduce heat. One of these ways is by using sprinklers and fans as an evaporative cooling method. Having enough properly angled fans is important because the water can actually hold the heat in the cow if it does not evaporate. Adding water into poorly ventilated barns can create a more humid environment, making the situation worse. Therefore, ensure that there is enough ventilation and air movement in the barn before using sprinkler systems.

Use shade. Shade allows cows to rest in a more comfortable environment outside. Trees can provide effective shade, but cows will often compact the area around the trees, which may cause the trees to die early and often creates a mudhole. Cows will continue to lie in the mud, which can result in greater risk of mastitis. Rotating fences between shady spots in the lot can decrease this problem. Portable shade is a great option because it can be rotated to new areas within a pasture and among different pastures to prevent mudholes. Centre pivots are a useful tool for pasture dairies, allowing for evaporative cooling outside.

Cool the holding pen. Cows spend hours each day standing in the holding pen and are often tightly packed, so it should be prioritized when examining ways to minimize heat stress. Although overstocking is never recommended, even more problems can occur during hot periods. The amount of airflow will be reduced and not all animals will be able to feel the moving air on their backs. If effective cooling occurs in the holding pen, less cooling will be required between milkings. Consider using both fans and sprinklers in the holding pen, but remember that adding water into a poorly ventilated holding pen will make it more humid and hot. Therefore, opening up the holding pen where possible, is recommended to allow for better ventilation.

Adjust the ration. Feed intake will decrease during periods of heat stress, which then decreases milk production. However, a cow's energy requirement for lactation is unchanged during this time, but her energy needs to remain cool actually increases by about 30%. Re-balancing the ration to be more nutrient-dense during these periods will allow the cows to maintain production while still eating a smaller volume of feed.

This article was originally published in the Southeast Quality Milk Initiative Quarterly, Spring 2017.

Company Advertorial 3rd January 2018

Our most valuable natural resource is water. All life depends on it to survive. Despite 70% of the earth being covered by water, 97% of that water is undrinkable salt water, with 3% being fresh water, of which a staggering 75% of this is polluted. With water supplies dwindling it is important that what is left is utilised efficiently and economically.

Western Cape Company, Alternative Water Solutions (Pty)Ltd (AWS) has utilised ground-breaking technology in providing the ultimate solution to iron removal from water via a filtration system.

The Western Cape, as well as various regions of Southern Africa, have high levels of iron in its water and these non-chemical filters are much more user-friendly than other filters available on the market, according to AWS Technical Director Tom Stoneley. The system is also useful in the removal of manganese, hardness, and heavy metals.

Company co-founder Laurie Gardener had searched the world for a solution to removing high iron content in water, particularly for use on modern day water-based Astroturf fields used in outdoor field hockey in the Western Cape region. Conventional filtration methods used chemicals, were not environmentally friendly, and were costly and did not fill the criteria that he had identified for a viable solution.

Laurie believes he has found the perfect solution with the Deferum Filter system, which he discovered were actively in use in Australia with a good track record. “With nothing else available in the Western Cape that came even remotely close to matching this technology, I quickly realised the potential and developed the manufacturing and marketing rights for Southern Africa.
Manufacturing of the Filters has since been set up in Cape Town, producing three sizes of filters here in South Africa, using local materials and labour.” The technology has been adopted and improved by AWS to suit South African standards and requirements. Ongoing R&D is being undertaken to improve the technology. Since starting 18 months ago, sales have rapidly increased with the company now exporting back to Australia.

Features of the AWS IronOUT filter system includes:

- The filter works hydro automatically and requires no external intervention.
- Combined continuous removal of iron, dissolved gases, suspended solids and turbidity
- No compressed air, pressurised water or electrical power. All processes are controlled and driven by the filter itself
- No pump. The volume of water required for back washing is held in the storage area inside the filter, which means there is no need for a back-washing pump
- No chemical reagents are used in the process
- Low failure factor due to absence of mechanical or electrical devices
- Minimal maintenance
- The system operation self-adapts to changing contaminant loadings
- A small amount of water is required for backwash (1.5% of output)
- No moving or rotating parts are used in the process

The filter comes in 3 sizes yet 5 configurations – the Domestic 12,000L, 24 and 48,000L, the Super Filter 100,000 and 200,000L model.
The filter will continue to process water 24 hours a day, year-round hydro automatically, and only requires the bore pump to deliver 75psi at the relative volume to the filter.
They are designed to clean themselves only when needed, thus greatly reducing water waste.
The process is triggered by the increase in resistance through the polymer floating filtering media as the iron and other contaminates is extracted.
The polymer floating filtering media has a life span of over 25 years.

Another important factor in this filter system is the hydromatic gravity filter comprising of an advanced AKV aerator / degasifier, a hydro-automatic floating filter and a hydro-robot.
Water on entering the filter passes through the AKV aerator / degasifier which intensifies the processes of liquid aeration and gas removal in a simple yet effective way with vacuum.
The hydro-robot houses the aerator / degasifier and delivers the water via a number of chambers into the filtration tank.
The water then passes through the hydromatic gravity filter containing the Polymer Floating Filter Media which facilitates the removal of iron, manganese, hardness, heavy metals. Treated water continues to the top of the filter where it is discharged into storage tanks.

More information: Alternative Water Solutions – Distributed by Lionel's Veterinary Supplies in the Agricultural and Animal Sector
Contact:

- ***Warnich Biersteker: +27 82 414 7293***
- ***Johan Botes: +27 73 925 2382***
- ***Jannic Zietsman: +27 82 923 6382***
- ***Namibia: Riaan Momberg: +264 81 124 0288***
- ***Botswana: Dr M Rajbar: +26 772 310 313***
- ***Denvet Pietermaritzburg: +27 33 345 1093***
- ***Overberg: Derick Coetzee: +27 82 373 6068***
- ***Southern Cape: CC Terblanche: +27 76 896 8748***
- ***Northern Cape: Jan Joubert: +27 73 303 6786***

Longer grazing steps up acidosis risk

With the latest research showing that acidosis can be an issue throughout the grazing season, not just in spring, we spoke to AB Vista's Dr Derek McIlmoyle to find out more.

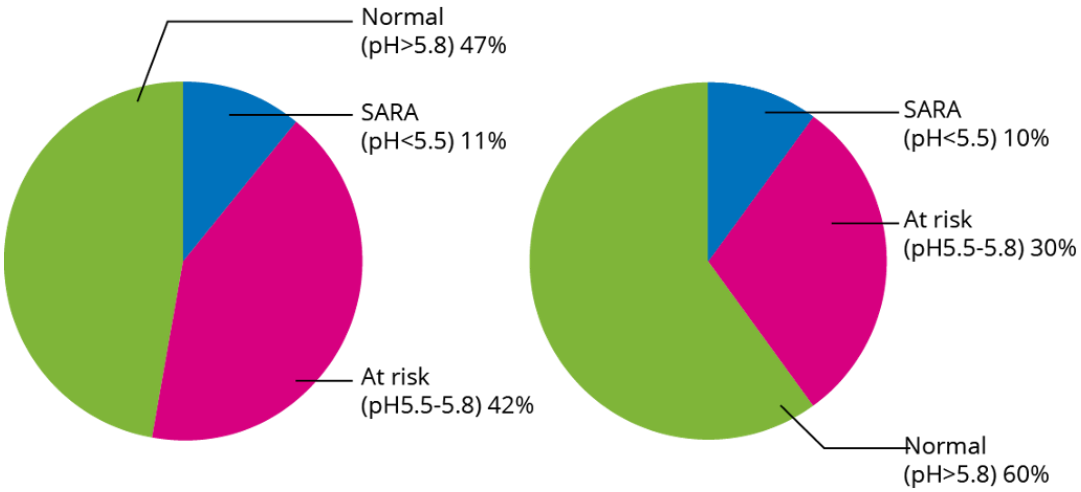
Although the increased risk of acidosis when cows are grazing lush spring grass is widely recognised, the fact this risk can continue throughout the grazing season is less well known. According to Dr Derek McIlmoyle, AB Vista's EMEA Ruminant Technical Director, there's now strong evidence to demonstrate that modern ryegrass swards pose a significant acidosis risk whenever cows are grazing. "The latest research shows it takes only a small meal of starchy concentrates to push cows over the limit when they're grazing, and not just during spring," he explains. "Most milk producers know the risk of sub-acute ruminal acidosis (SARA) rises as they feed more rapidly fermented concentrate. The risk is also much higher if there's insufficient digestible and structural fibre in the ration, both of which are essential to maintaining optimum conditions in the rumen. "The challenge is that the 30 litres/cow daily yields targeted on most farms nowadays require high ration energy density levels that risk inducing SARA regardless of how well formulated the ration is. When that diet includes grazing, it's much harder to maintain the necessary balance, even when grass fibre levels increase later in the season."

The challenge is that the 30 litres/cow daily yields targeted on most farms nowadays require high ration energy density levels. This can increase the risk to develop SARA. Photo: Wick Natzijl

Grazing research results

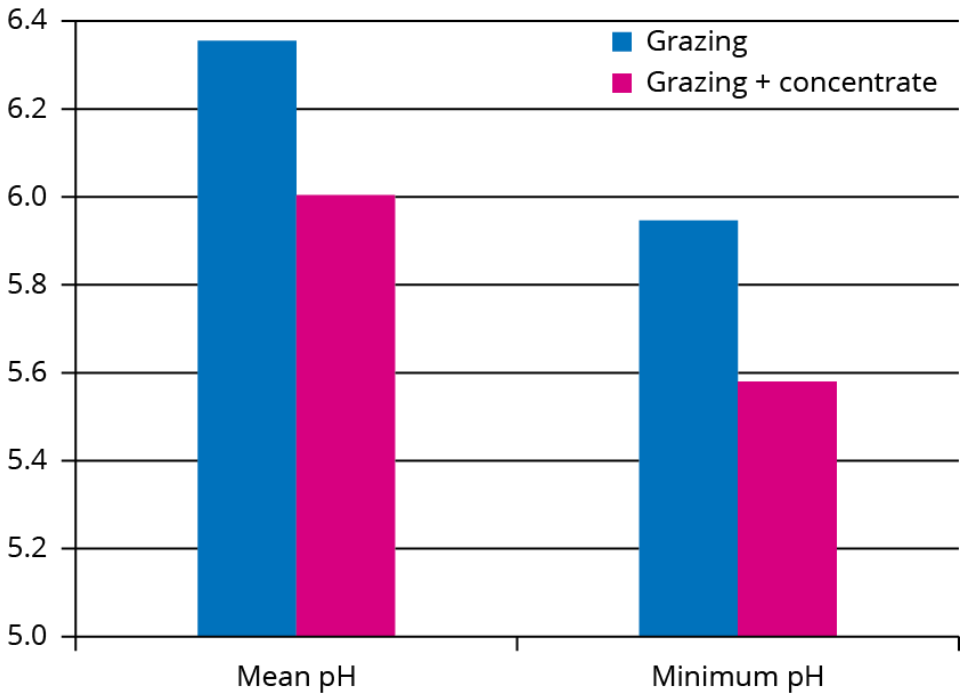
2 studies in particular have highlighted the potential extent of the problem. Analysis of 12 farms in Ireland covering 144 grazing cows supplemented with less than 2kg/day of concentrate (*left on Figure 1*) showed that 11% of cows were suffering from SARA, 42% were at high risk and only 47% had a rumen pH within the normal range (pH>5.8). A study of 100 grazing herds in Australia produced similar results (*right on Figure 1*). "That around half of the grazing cows assessed were either suffering from, or at high risk from, SARA is a major concern," highlights Dr McIlmoyle. "And where levels of supplementary concentrate are higher than in the studies, the incidence and risk of SARA will potentially be much greater."

Figure 1 – Incidence and risk of SARA in grazing cows. Left is Ireland, right is Australia.



A more detailed investigation carried out in Austria monitored daily rumen pH fluctuations in cows fed either grass only, or grass supplemented with 3kg of concentrate twice daily during milking. The cows receiving concentrate showed significantly lower average rumen pH and minimum rumen pH (*Figure 2*), plus a massive 347 minutes each day below pH 5.8 (compared to just 26 minutes in the grazing only cows) and 101 minutes below pH 5.5 (versus 3 minutes for the grazing only cows).

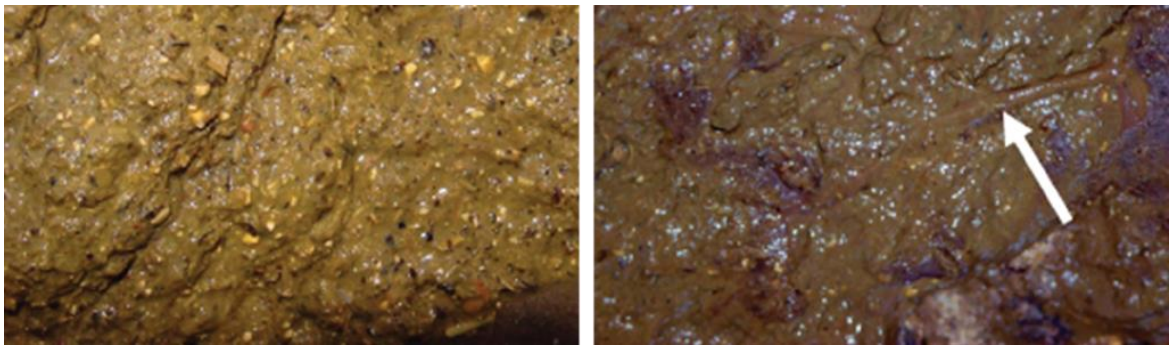
Figure 2 – Impact on rumen pH of supplementing grazing cows with concentrate.



Rumen fermentation efficiency

"Below pH 5.8, fibre digestion within the rumen starts to become impaired, and cows are generally considered to be suffering from SARA," Dr McIlmoyle continues. "That means a reduced nutrient supply to the cow, lower feed intakes, falling milk and butterfat production, and an increase in the incidence of health problems, such as laminitis. "It's therefore important to monitor cows for signs of SARA throughout the grazing season. Undigested grains and fibre in the manure, coupled with decreased butterfat levels, are indicative of poor fibre digestion due to increased rumen acidity, whilst mucin tags will also be visible in the manure in extremely acidotic conditions (*left picture on Figure 3*)." Where signs of SARA are found, or milk yields or quality fall unexpectedly, swift action is needed to both regain lost production, and to protect cow health and body condition, claims Dr McIlmoyle. "If possible, feed a higher proportion of the concentrates as part of the buffer ration, whilst swapping rolled cereals for slower releasing starch sources like maize meal and increasing the level of digestible and structural fibre," he advises. "Limit in-parlour feeding to 2kg/cow/day and consider switching to a compound feed that's high in digestible fibre. In addition, adding an efficient rumen conditioner or a metabolically active live yeast will also help stabilise pH, and can increase yields by up to 2 litres/cow/day, regardless of whether signs of SARA are evident."

Figure 3 – Abnormal manure is a key indicator of SARA. Left is undigested grains in manure. On the right you see mucin tags in the manure.



Optimising rumen function

However, it's important to realise that rumen fermentation can be significantly compromised even before acidosis becomes noticeable. For example, maximum production of the volatile fatty acids (VFA), the source of around 70% of the cow's energy supply, occurs when the rumen is kept above pH 5.8.

"This is why rumen buffering is so important when the acidosis risk factors are high, to both keep acidosis under control and improve feed efficiency," continues Dr McIlmoyle. "However, it's important to understand the differences between the various options available, with traditional sodium bicarbonate buffers acting very differently to the latest specialist slow-release rumen conditioners. Both are capable of reducing the extent, rate and duration of rumen pH drop, but a slow-release buffer is more effective in minimising the amount of time the rumen spends below pH 5.8. There also appears to be significant disadvantages to the way in which sodium bicarbonate exerts its effect on rumen pH." In a recent trial carried out at University College Dublin (UCD), early lactation cows fed a typical European diet containing sodium bicarbonate consumed on average 1kg/day more dry matter (DM) than those cows fed a calcareous marine algae slow-release rumen conditioner (*Table 1*). Yet despite this lower intake, because of the more effective rumen buffering and improved fibre digestion when the conditioner was fed, there was a numerical increase in energy-corrected milk (ECM) (+1.79 kg/cow) and a significant rise in total milk solids production (+0.1 kg/cow) compared to the sodium bicarbonate group.

Table 1 - Comparison of rumen buffers in early lactation Holstein cows.

* Acid Buf

	Negative control	Sodium bicarbonate	Rumen conditioner*
Dry matter intake (kg/day)	20.9	23	21.9
Energy-corrected milk yield (ECM kg/day)	33.68	34.54	35.42
Milk fat and protein production (kg/day)	2.19	2.25	2.35

By Dairy Global Created with LocalFocus Source: University College Dublin, 2017

Focus on feed efficiency

"The efficiency of the cows on the diet containing the rumen conditioner was clearly ahead of those on either the sodium bicarbonate ration or the control," Dr McIlmoyle explains. "It appears that sodium bicarbonate, although effective in maintaining rumen pH and reducing the risk of acidosis, also has a negative impact on rumen fermentation efficiency." It is being suggested that the mechanism by which sodium bicarbonate lowers acidosis risk involves increasing the rate of passage through the rumen, simply reducing the availability of ration ingredients for fermentation. Although the result is generally an improvement in production compared to an untreated diet, the extra milk output achieved is less than would be expected from the additional volume of feed consumed. "The problem of acidosis might be avoided, but there's a significant drop in feed conversion efficiency," Dr McIlmoyle states. "And that's not something most milk producers can afford, particularly with the current pressure on milk prices. "So, put the focus on feed efficiency to maximise the return from all feeds, rather than just aiming to avoiding problems like acidosis, using a slow-release rumen conditioner to optimise rumen fermentation, increase milk from forage and maximise margins throughout the whole year."

By James Marks

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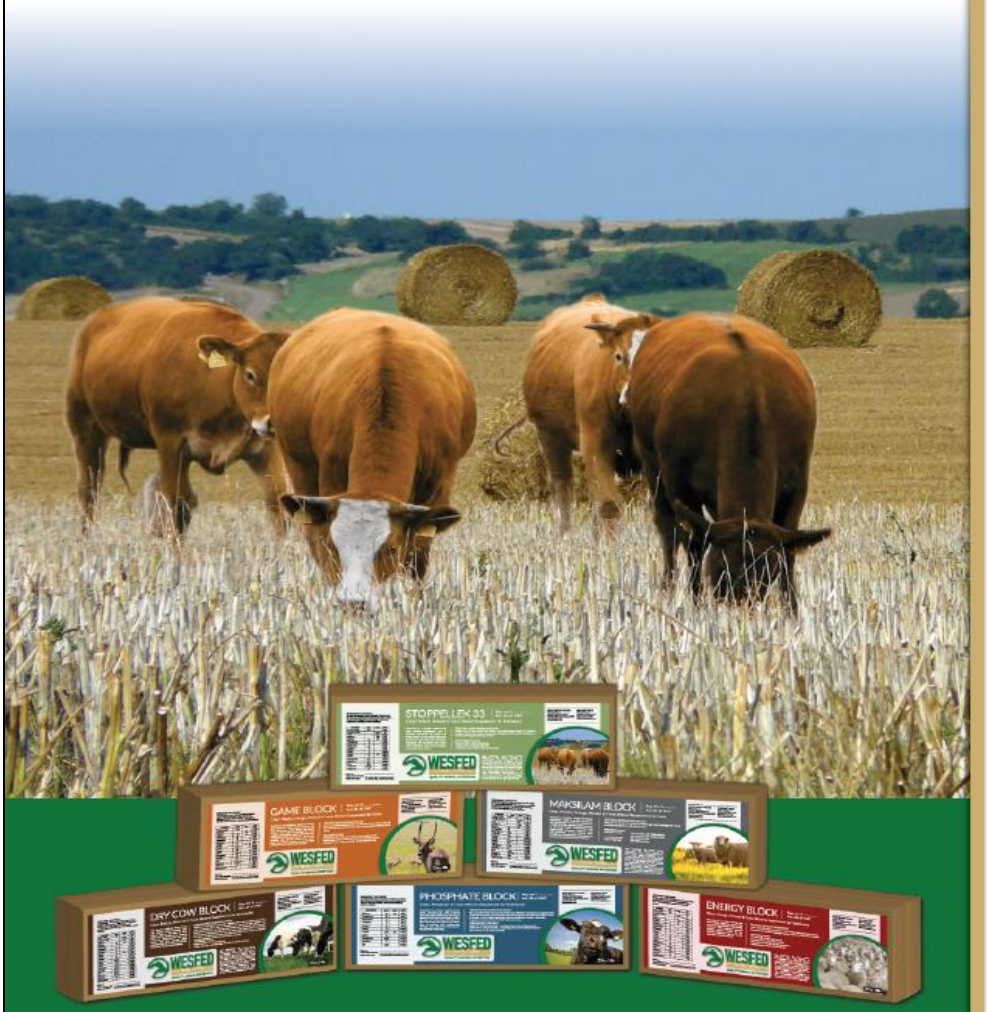

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environment.

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PHOSPHATE BLOCK

This block is a mineral supplement for sheep, lactating ewes, cattle, lactating cows and dairy heifers for the use on pastures that have a shortage of phosphorus and some trace elements. The block increases the intake and utilization of grazing and supplemental feeding, thus improving reproduction and growth of the herd.

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This block is an additional nutrient source for game grazing on poor quality pastures. This game block has a high energy and protein content, which helps to maintain the body weight and condition of game. The health and production of the animal is also held by the excellent trace element ratios of the game block. This product contains no urea or other medication and is suitable for all game.

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This block is a mineral, trace mineral and vitamin supplementation plus anionic salts for dry cows 21 days before calving. Feeding cows properly in the dry period ensures they start eating soon after calving which minimizes the risk of disturbances like ketosis and displaced abomasums.

MAKSILAM BLOCK

This block is a protein, energy and mineral supplement which improves production and reproduction of ewes on pastures. As a result of its high bypass protein content, it stimulates udder development and subsequently increases colostrum and milk production. It also reduces lamb mortality as it prevents the occurrence of abnormally thick and viscous colostrum.

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VIROCID is a very concentrated, broad spectrum disinfectant with a synergistic blend of 4 active components. The combination of quaternary ammonium compounds, glutaraldehyde and alcohol ensure efficacy at very low dilutions (0,25-0,50%), at all temperatures. The low dilution makes VIROCID very economical in use. VIROCID always proves its efficacy, in hard water (even in sea water) and in
presence of organic matter.

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VIROCID can be used in different sectors: animal husbandry
(poultry, pigs, cattle, ...), aquaculture, food processing, hospitals, animal transport, feed storage (*), horticulture and personal hygiene. (*) Check the registrations in your country.

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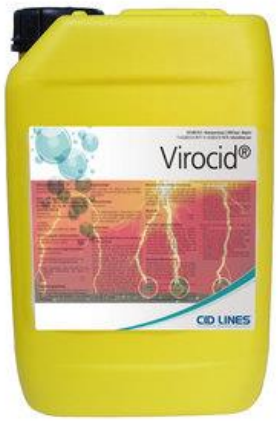

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Meer oor Lionel's Vet se Verkoopsverteenwoordigers

Ontmoet CC Terblanche ons verteenwoordiger in die Suid - Kaap

Ek is in die Vrystaat gebore en het matrikuleer aan die Afrikaanse Hoërskool, (Rooiskool) Kroonstad. My passie is landbou en ek was vir 21 jaar in die koöperasie bedryf. Vir die afgelope 17 jaar is die Suid-Kaap my tuiste. Ek is baie lief vir die buitelug en geniet dit om tyd saam met my dogters in die natuur te spandeer. GOD het aan my die genadegawe gegee om n verskil te maak in my omgewing en ek sien ook uit daarna om 'n positiewe verskil te maak in my werk as verteenwoordiger vir Lionel's Vet.

C.C Terblanche

cc.terblanche@lionelsvet.co.za

076 896 87 48

Ontmoet Byron Ott ons verteenwoordiger in die Wes- Kaap en Swartland.

Ek is 'n baie gedrewe, entoesiastiese en passievolle persoon. My geboortedorp is Queenstown en ek was op Laerskool in Port Elizabeth en Hoërskool in Stellenbosch. Na skool het ek in Stellenbosch Bemarking studeer. Kliëntediens is 1ste op my lys. Ek hou baie van die buitelewe en geniet dit om te kamp, is mal oor diere en het ‘n passie vir enigiets met 'n enjin. Ek gryp enige geleentheid aan om te leer oor die bedryf waarin ek werk en geniet elke oomblik van my beroep.

Byron Ott

Byron.ott@lionelsvet.co.za

072 668 0860

Ons wil graag baie geluk se aan Jan en Celia met die geboorte van hul dogtertjie Ronè!

Ronè Joubert

2 Febuarie 2018

2.6 kg

Welkom by Lionel's Vet

Graag wil ons Lorraine Simpson verwelkom by die Lionel's Span.

Sy is vanaf die begin van Januarie af by ons en sal optree as die Lionel's groep se nuwe Finansiële Bestuurder. Ons vertrou sy sal baie gelukkig wees by ons en wens haar alle sukses en voorspoed toe.

Julle kan haar kontak by: 083 602 7294 of lorraine@lionelsvet.co.za

Graag wil ons JD Marais verwelkom by die Lionel's Span.

Hy is gebore in Bothaville en het groot geword in Leeudoringstad. Hy geniet die buitelewe en hou van enige opwinding. Hy het studeer in veekunde in die Vrystaat en vir die Ayrshire beestelers genootskap gewerk die laaste 6 jaar waar hy ñ passie vir die ras kon uitleef en geniet. Hy is die Sales Manager Genetics Division van GE Dairy Supplies en sien uit na die nuwe uitdagings en om saam met almal te werk. Ons wens hom baie geluk en voorspoed toe as deel van die span.

Julle kan hom kontak by jd@lionelsvet.co.za of by 076 638 8609

The Sales Team

Naam	Sel nommer	E-pos adres	Area
Andreas du Toit	082 641 8944	andreasdtl@gmail.com	Karoo
BH Botha	079 885 7421	bh@xseed.co.za	NKZN
Byron Ott	072 668 0860	byron.ott@lionelsvet.co.za	Wes-Kaap / Swartland
CC Terblanche	076 896 8748	cc.terblanche@lionelsvet.co.za	Suid-Kaap
Debbie Elliott	082 376 3702	dmelliott@netactive.co.za	Midlands
Derick Coetzee	082 373 6068	djcoetzee@telkomsa.net	Suid-Kaap
Gavin Dargie	072 246 7750	gavdargie1@gmail.com	Oos London
GJ du Preez	082 042 3303	dupreez.gj@gmail.com	Oos-Kaap
Jaco Swanepoel	072 658 2960	jacoswanepoel@outlook.com	Noord-Wes
Jan Joubert	073 303 6786	jan_safp@yahoo.com	Noord-Wes
Janique Fourie	083 603 3323	janique@lionelsvet.co.za	Oos Kaap
Jannic Zietsman	082 923 6382	jzietsman@lionelsvet.co.za	Oos-Kaap
JD Marais	076 638 8609	jd@lionelsvet.co.za	Vrystaat
Jenni Soutar	082 783 8513	jennisoutar@gmail.com	NKZN
Johan Botes	073 925 2382	johan@lionelsvet.co.za	Wes-Kaap (Varke)
Johan du Plessis	072 806 7266	johandup@lionelsvet.co.za	Noord-Kaap
Juan Welman	082 907 7486	juan.welman@vodamail.co.za	Mpumalanga
Jacques Faure	082 896 1827	jacquesfaure@mweb.co.za	Vrystaat
Karin van der Merwe	082 851 9474	karin.vdm@vodamail.co.za	EG & Underberg
Matthew Elliott	078 552 2400	mpjelliott@hotmail.com	Nth & South Coast (Varke)
Neville Brown	084 577 1721	nevillebrown1234@gmail.com	EG & Underberg
Nico Vorster	082 782 3710	nicosmail@webmail.co.za	Vrystaat
Riaan Momberg	+264 81 124 0288	riaanm@mweb.com.na	Namibië
Sarah March	082 771 1809	sarahmarch@vodamail.co.za	Midlands South
Shaun Bovey	074 586 4199	shaun@lionelsvet.co.za	Eastern Cape
Warnich Biersteker	082 414 7293	warnich7@gmail.com	Pluimvee Adviseur
Werner van Rooyen	083 462 0474	wvrvers@mweb.co.za	Suid-Kaap

Meet the team!

LIONEL'S

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