

# *Lionel's News*

*April/May 2016 21st Edition*

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Duncan Stephenson

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# New project to verify fertilizer efficiency tools

By [Environmental Defense Fund](#) March 08, 2016 | 7:33 am EST



The Environmental Defense Fund (EDF) launched NutrientStar, a new independent, science-based program that reviews the performance of commercially available nutrient management tools.

Nitrogen fertilizer is one of the most important inputs in agriculture, but up to 50 percent of nutrients applied are not absorbed by crops, leading to air and water pollution and wasted money for farmers, who spend approximately half of their input costs (seed, nutrients, and chemicals) on fertilizer.

Major food companies are launching sustainable sourcing programs to reduce fertilizer runoff, improve air and water quality, and reduce the risk of supply chain disruptions. Precision agriculture tools, in particular those that improve nutrient management, can help farmers meet this demand and reduce fertilizer losses, but little data is publicly available on how these tools work in the field.

“NutrientStar will showcase how well products work in real-world farming scenarios,” said Karen Chapman, agricultural sustainability project manager at EDF and administrator of the NutrientStar program. “NutrientStar’s independent science review panel conducts rigorous assessments of all tools on the market, particularly looking at on-farm field trials, to determine how a tool works in croplands, in different regions, and on different soil types.”

Fertilizer management tools reviewed through NutrientStar include enhanced efficiency fertilizer compounds, such as nitrogen stabilizers, and decision support tools, such as optical sensor technologies or models used to aid nutrient applications in the field. Tools and products already assessed or soon to be assessed include:

- Adapt-N (made by Agronomic Technology Corp.), an online software program that uses a linked crop model and soil model to estimate nitrogen rates for individual fields or areas within fields.
- Fertilizer management products including N-Serve (made by Dow AgroSciences); AGROTAIN, AGROTAIN PLUS, and SUPER U (made by Koch Agronomic Services).

- Reviews being made public this spring include: Nutrisphere N (made by Verdesian); Instinct II, ESN (made by Agrium); DCD; Thiosulfate; and, Slow Release Foliar N products made from methylene urea.

Assessments later in 2016 will focus on Fieldview Pro Nitrogen Advisor (made by Climate Corporation) and Encirca (made by DuPont Pioneer).

“NutrientStar is the first-ever review program to provide farmers, their advisors, and agricultural supply chain companies with reliable data on the performance of these popular tools,” added John McGuire, EDF advisor and precision agriculture expert. “Farmers need certainty that the tools they purchase will work as advertised.”

An independent review panel, composed of leading soil and agronomy scientists from across the country, establishes the criteria for NutrientStar review. The panel assesses tools based upon available data demonstrating their ability to improve nutrient use efficiency, defined as unit of yield over unit of applied nutrient, in the field. NutrientStar review will also show yield impacts from use of a tool and summarize key characteristics important to farmers and advisors such as cost/benefit, ease of use, and required data inputs.

The NutrientStar program also establishes guidelines for field testing nutrient-use efficiency tools, setting standards and providing a geographical framework that can substantially advance the research agenda in ways that will benefit the entire agriculture industry.

NutrientStar assessments provide numerous other benefits, including:

- Farmers gain confidence by knowing that the nutrient management tools they purchase will work as advertised to reduce fertilizer losses, improve soil health, lower input costs, and maintain yields. Farmers can also showcase their stewardship to food companies and suppliers by using the NutrientStar review to inform their decisions.
- Ag retailers and crop advisors earn a competitive advantage by offering field-tested and geographically relevant products to their grower customers.
- Food companies improve transparency with customers, more easily navigate the fertilizer management world, and can now directly support farmers in implementing on-farm conservation practices.
- Agribusinesses ensure they are offering the most competitive, farm-tested products to growers, thereby earning customer loyalty.

“As food companies’ demand for sustainably produced ingredients continues to skyrocket, they’ll need to support farmers and the entire supply chain in implementing on-farm conservation practices,” added Chapman. “NutrientStar will help food companies navigate the fertilizer management world, and will spark further innovation,

research and development for better nutrient management tools.”

“NutrientStar also enables farmers to more easily execute the 4Rs of nutrient stewardship, which include applying fertilizer at the right source, the right rate, the right time, and the right place,” noted McGuire. “NutrientStar complements the 4Rs by informing farmers on tools that will most effectively help implement these important practices.”

For more information on NutrientStar, including scientific assessment criteria, visit [www.nutrientstar.org](http://www.nutrientstar.org).

What companies, ag retailers and ag associations are saying about NutrientStar [listed alphabetically]:

#### Campbell Soup Company

“Campbell is committed to growing and sourcing ingredients as sustainably as possible while supporting farmers in their stewardship efforts. NutrientStar will provide science-based review of fertilizer efficiency tools so that farmers and companies can invest in the best available technologies and products to optimize their crop.”

Dan Sonke, Manager of Agricultural Sustainability Programs at Campbell

#### Kellogg Company

At Kellogg, we strive to make great-tasting food people love. People care about where their food comes from, the people who grow and make it, and that there’s enough for everyone. NutrientStar is a great tool for farmers to ensure the highest quality ingredients for our foods.”

Amy Braun, Senior Sustainability Manager at Kellogg Company

#### National Corn Growers Association

“Our corn farmers rely on a growing set of tools to help make better decisions to improve entire farm sustainability. The NutrientStar review system can help us find solutions that are tested and effective - saving time and money while promoting better yields, improved economics and healthier soils.”

Chip Bowling, Newburg, Maryland; President, National Corn Growers Association

#### Smithfield Foods

“We’ve been overwhelmed with the positive response to Smithfield’s MBGro program, which offers free agronomic advice to independent grain growers to help them improve productivity, profitability and sustainability. The program also offers farmers free trials of precision agriculture tools that help to improve fertilizer applications and soil health. NutrientStar is the perfect complement to MBGro because it provides growers certainty that the tools we’re recommending work as advertised.”

Kraig Westerbeek, VP of Engineering and Environmental Support Services, Smithfield Foods

## Unilever

“At Unilever, our purpose is to help make sustainable living commonplace. Through our sustainable sourcing goals, Unilever is working to find the best ways to support farmers in their sustainability efforts. NutrientStar is a great instrument for growers to utilize to help determine which tools work best for achieving tangible environmental results.”

Stefani Grant, Senior Manager, External Affairs and Sustainability at Unilever

What growers and ag experts are saying about NutrientStar [listed alphabetically]:

Keith Alverson, Corn & Soybean Farmer & President, South Dakota Corn Association (South Dakota)

“The more information growers have on the tools and technologies available to them, the better choices we can make to save money and protect the land. NutrientStar will help growers keep their strong tradition of stewardship.”

Brent Bible, Corn & Soybean Farmer, Farmer of the Soil Health Partnership (Indiana)

“As a corn producer, my highest input cost after land and seed is fertilizer, specifically nitrogen. A tool that can objectively verify, with confidence, ways to make more efficient use of this input will absolutely help us save money and reduce our environmental footprint. In a time where profit may be measured in single dollars per acre, NutrientStar has can positively impact the economic return for our operation.”

Todd Hesterman, Farmer and Certified Crop Advisor (Ohio)

“We really don’t know which nutrient management tools work, since there isn’t adequate data to prove their efficacy. I welcome NutrientStar as a way to help me make better decisions on fertilizer efficiency products.”

Bruce Knight, Consultant and former Chief, Natural Resources Conservation Service

“The more we can help farmers meet the dual challenges of increased production and greater fertilizer efficiency, the better off we’ll be. Programs like NutrientStar that step into the void by providing third-party, unbiased efficacy information and ratings not served by university or government agencies is a big step forward in helping them meet those challenges.”

Fred Yoder, Farmer and Chairman of the North American Climate Smart Agriculture Alliance (Ohio)

“The Paris Climate Accord didn’t include specifications for agriculture, but that won’t stop global momentum for climate-smart agriculture practices. Agriculture must do its part to reduce greenhouse gas emissions, and farmers must adapt to climate change impacts. They are invested in stewardship because land is their livelihood, and resilience must constantly be improved.

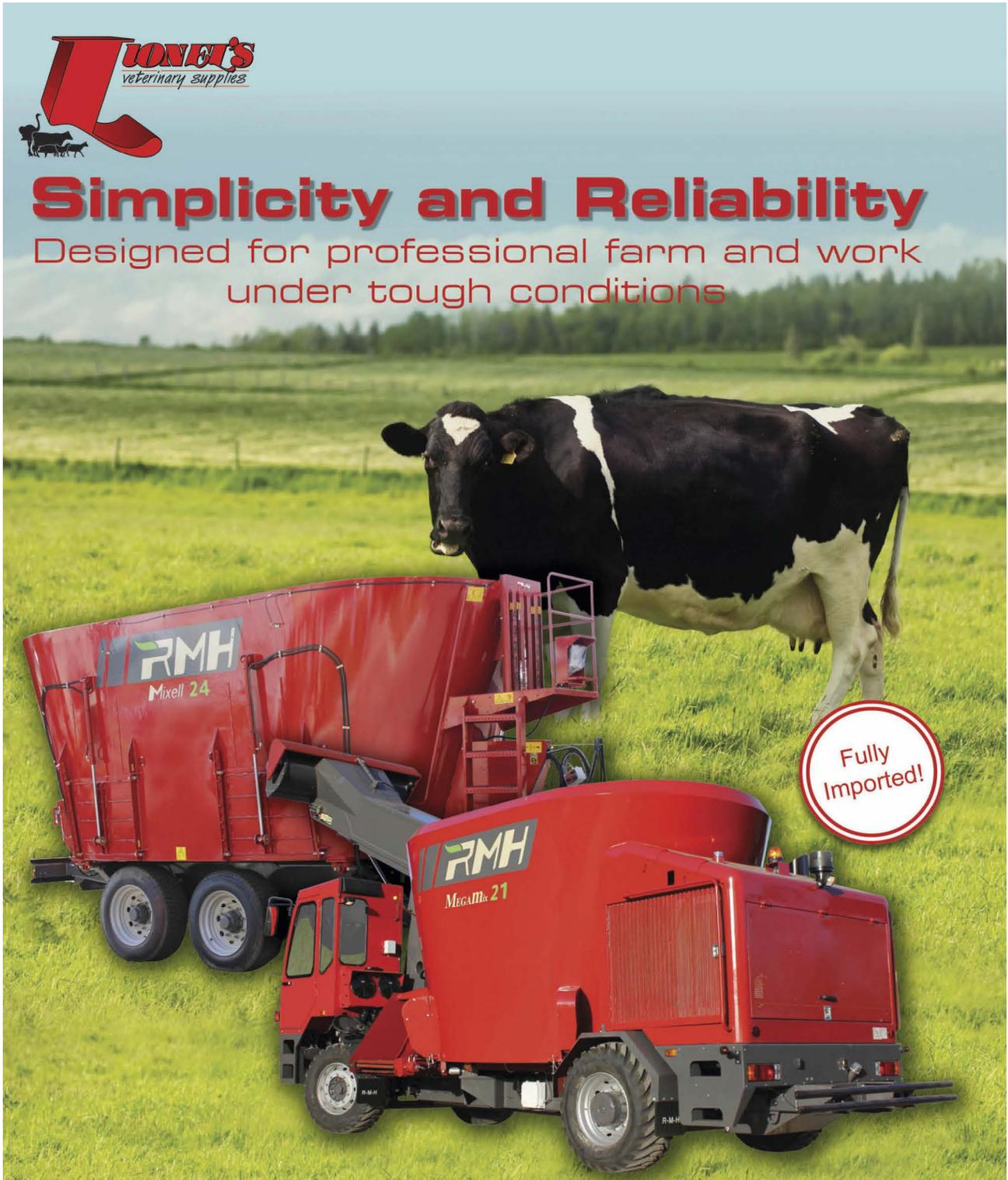
Margins are tight these days, so it makes great sense to strive to do better in stabilizing the nutrients in the soil profile. NutrientStar is a proven way to help farmers

reduce the environmental impacts of farming, with great potential for reducing input costs. NutrientStar is an important tool for moving the ag industry towards adoption of climate-smart practices."



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# South Africa: The Cost to Farmers of Cheap Meat Imports

10 March 2016



**SOUTH AFRICA - Poultry and pork producers in South Africa are struggling to keep their heads above water, not only because of the impact of dry climatic conditions on production, but also because they have to compete with “cheaper” imported products. Glennis Kriel reports.**

South Africa, which has an unemployment rate of over 25 per cent, is exporting thousands of jobs each year due to poultry and pork imports.

Gary Arnold, director of business development at Astral Foods, explained that imported poultry directly competes with locally produced products for market share, as the imported products are exported at lower, largely subsidised, prices making it difficult for local producers to compete.

Imports in effect limit the potential of the local industry to reinvest and expand production with the creation of much needed jobs.

The poultry industry employs more than 120,000 people through both direct and indirect jobs. The South African Poultry Association (SAPA) has estimated that another 18,000 jobs could be created if poultry meat imports were stopped.

“It is estimated that we lose a thousand jobs for every 10 000 tons of poultry imported,” Mr Arnold said.

The same is happening in the pork industry. According to Simon Streicher, CEO of the South African Pork Producers Association (SAPPO), South African producers have the capacity to increase produc-

tion by at least ten per cent to meet the country's full demand.

“Increasing production would however result in an oversupply in the market, because we have signed a trade agreement that allows Europe to export pork to South Africa,” he said.

Imports were also having a negative impact on up-stream supply chains, such as the feed industry and raw material farming businesses that supply ingredients for feed production.

Andy Crocker, managing director of Meadow Feeds, said the feed industry had spare capacity, which was not being filled by growth in the livestock producing sectors, because of imports that have become a significant competitor in the poultry, pork and dairy sectors.

### **High production costs**

There are various reasons why South African producers are struggling to compete with imported products.

Feed for one is more expensive. Arnold pointed out that maize is currently R1500 (about £71) more expensive than the Chicago Board of Trade (CBOT) price, because of the drought that has turned South Africa from a net exporter into a net importer of maize as well as the weakness of the local currency, the South African Rand, against other major currencies. The Rand has deteriorated by about 40 per cent against the American Dollar and British Pound over the past year.

“Maize makes up 65 per cent of the average broiler diet in South Africa. A further 20 per cent is made up of soy bean meal.

“The price of soy bean meal is import parity based, but also subjected to export taxes in South America and import duties in South Africa. This makes it much more expensive for us to produce chicken than our Brazilian counterparts for example,” Mr Arnold said. Mr Streicher added that pork feeding prices increased by almost 70 per cent over the past year.

Administered costs, particularly energy costs, are high relative to competitors and these continue to experience double digit increases well above inflationary levels. Labour costs are also high, especially when measured in terms of productivity level, according to Mr Arnold.

The main reason why poultry producers were struggling, however, was that South Africa had to compete with whole birds, while the competitors export their “waste products” from the North American and European eating habits, according to Mr Arnold.

He explained that breast meat in these countries were in high demand and priced at levels high enough to cover the cost of the whole carcass: “Bone in portions, such as leg quarters are then exported to any receptive country, such as South Africa, for a price that exceeds the relative value that can otherwise be attained by including these low value portions in pet food.”

There wasn't such an issue with imported pork, as the quality of these products were generally high, according to Mr Streicher.

South Africa also has a shortage of ribs, which cannot be supplied by the local industry on its own. The problem was that the import ratio of pork products have gone from 70 per cent ribs and 30 per cent other cuts, to equal volumes of ribs and other cuts over the past five years. "South African high value cuts in effect has to compete with these high value subsidised cuts," he said.

Mr Streicher is also concerned over the potential impact that the AGOA agreement with America could have on South African production, as South Africa has agreed to import pork with lymph nodes to maintain this agreement.

"Up until now we only allowed imported pork meat with the lymph nodes removed to prevent Porcine Reproductive and Respiratory Syndrome (PRRS) as well as Classical Swine Fever. Producers have lots thousands of Rands due to these diseases in the past. They won't be compensated by government if there is another of these outbreaks," he said.

#### **A solution**

Resolving the issue would be difficult, as a number of measures, such as anti-dumping duties and the weak local currency, have not really had an impact on these imports.

"Brazilian and European poultry producers have merely reduced their export selling prices in order to offset the depreciation of the currency and anti-dumping duties that were imposed on them," Mr Arnold said.

The country also recorded a record level of poultry imports in July 2015 at 48,357 tons for the month, in spite of these measures. This equates to the equivalent of about 8.6 million bird per week.

"To place this in perspective, Astral in its financial year 2015 processed on average 5 million birds per week. The local industry produces and processes about 19,5 million birds per week," Mr Arnold said. Total imports increased by 20 per cent from 2014 to 39,500 tons per month or about 7 million birds per week.

The same happened to pork, with imports hitting 35,000 tons last year in comparison with the long term average of 25,000 tons to 30,000 tons per year.

"Our market was flooded when the Russian market closed for pork and the EU decided to stop subsidising the storage of this meat," Mr Streicher said.

Mr Arnold strongly feels that countries should only be allowed to export whole birds to South Africa to

level the playing field, bone in chicken pieces should otherwise be subjected to anti-dumping tariffs.

“SAPA is busy with an Article 16 agricultural safe-guard of the Trade Development Cooperation Agreement with the EU action.

“This is an action that will take place against all EU producers providing tariff protection against all EU countries. Currently poultry imports into South Africa from the EU are not subject to any import tariff except the Netherlands, UK, and Germany, against which anti-dumping duties were granted in February 2015,” he said.

*ThePigSite News Desk*

# Voeding van suiwelkoeie tydens die wintermaande

*Geskryf deur: Steyn Pretorius*

Die variasie van 'n suiwelkoei se nutriëntbehoefte verskil taamlik tussen somer- en wintermaande. Die winter het ander uitdagings wat, as dit reg bestuur word, minder verliese sal meebring.

## **Nutriëntbehoefte:**

Een van die belangrikste faktore wat 'n effek sal hê op die melkproduksie, samestelling en algemene gesondheid en kondisie van die koei, is die nutriëntbalans wat aan die koei verskaf word tydens die winter. Tydens die winter verhoog die nutriëntbehoefte van die koei om haar liggaamstemperatuur en metabolisme te handhaaf. Die voeding van verskillende tipe energiebronne soos stysels in plaas van vette, kan help met die verandering van inname wat waargeneem word tydens wintermaande.



Daar moet in ag geneem word, dat die voeromsetvermoë verswak en dat koeie meer voer nodig, om hul liggaamskondisie en produksie te handhaaf. Om hierdie probleem op te los, kan die gebruik van meer verteerbare veselbronne, soos lusern, gebruik word om die rantsoendigtheid te verlaag maar die droë materiaal waarde te verhoog. Daar moet seker gemaak word dat die nutriëntsamesstelling gebalanseerd bly volgens die koei se produksie stadium.

## **Voerkomponente:**

Maak seker dat daar genoeg ruvoer beskikbaar is om die kudde deur die winter te dra. Afhangend van die area, en of dit 'n winter- of somerreënvalstreek is, sal bepaal of daar weiding beskikbaar sal wees deur die winter. 'n Paar ruvoeropsies kan as volg benut word deur die winter.

## **Hooie:**

'n Goeie kwaliteit hooi kan 'n groot verskil maak deur verteerbarevesel aan die dier te verskaf, en so ook te kan help met melkkomponente soos bottervette en melkproteïen. Lusern bly die beste opsie as daar na hooi gekyk word. Dit is 'n goeie verteerbare vesel en proteïenbron vir ruminante diere. Die beskikbaarheid van lusern varieër aansienlik deur die jaar, en raak 'n probleem tydens die winter. Hawer, medic en grashooi kan ook dien as goeie bronne van ruvoer in 'n TGR rantsoen. Alhoewel die laaste 3 'n laer proteïen inhoud as lusern het, kan dit maklik aangepas word, deur ander proteïenbronne te voer om die rantsoen te balanseer.

## **Kuilvoer:**

Kuilvoer is 'n baie algemene bron van ruvoer onder suiwelboere wat die TGR stelsels voer. Hoofsaaklik omdat TGR boere normaalweg in die saagebiede van die land gevestig is. Een van die belangrikste aspekte van kuilvoer is wanneer die gewas gestroop word. Soos 'n plant groei, bou dit struktuur op om die plant te stut,

deur die proses verander die verhoudings tussen verteerbare- en onverteerbare vesel. Die % onverteerbare vesel styg soos wat die plant verouder, wat die beskikbaarheid van die kuilvoer tot die dier sal verlaag. As die plant te vroeg geoes word, sal daar te min deegvorming in die saadomhulsel plaasvind, wat die energie beskikbaarheid van die kuilvoer sal verlaag en so-ook die kwaliteit. Dus is dit belangrik om die gewas te monitor en op die regte tyd te oes, om sodoende die beste kuilvoer moontlik te maak.

Daar moet in ag geneem word dat wanneer kuilvoer in die winterreënvalareas gebruik word, die insluiting van water aangepas moet word. Vogverliese is minder in hierdie areas tydens die winter, so dit raak belangrik om die droëmateriaal inname konstant te hou, veral na reën.

### **Aanvullende voeding:**

Die tipe aanvulling wat die boer benodig op die plaas, hang hoofsaaklik af van die roumateriale wat die boer beskikbaar het, of wat die boer in staat is om self te meng.

Sekere boere het ruvoer en energiebronne beskikbaar, maar kort n proteïen- en mineraalaanvulling. 'n Voedingkundige formuleer dan 'n gebalanseerde rantsoen met wat die boer beskikbaar het, en wat hy moet aankoop. Hierdie opsie werk normaalweg goedkoper uit, omdat die grootste persentasie van die boerse rantsoen teen kosprys beskikbaar is op die plaas. 'n Hoë proteïen konsentraat (HPK) kan vir hierdie doeleindes gebruik word.

Kragvoer word normaalweg gebruik wanneer die boer ruvoer in die vorm van kuilvoer of hooi beskikbaar het, maar 'n aanvulling van proteïen, energie en minerale kort. Hierdie produkte word geformuleer deur voermaatskappye en kan volgens individuele kliënte aangepas word, om aan die behoeftes op die plaas te voldoen.

Tydens die winter kan 'n groter hoeveelheid vette vervang word met grane, daar moet net seker gemaak word dat die stysel en NFC % nie te laag raak nie. Dit kan lei tot metaboiese teurnisse soos suurpens. Die rede vir die verskuiwing is, dat die hitte inkrement van die rantsoen sal verhoog en meer energie beskikbaar stel aan hitteproduksie om termoregulering te verbeter. Dit is uiters belangrik om met 'n kundige te werk, voordat sulke vernaderinge gemaak word.

### **Koeikondisie:**

Koeie moet reg voorberei word vir die winter. Omdat voeromset verswak met kouer weer, is dit belangrik om 'n koei op kondisie te kry voordat die winter aanbreek. Pas die voer aan om 'n effense hoër energie-inhoud te bereik. Dit kan verkry word deur grane of vette te verhoog. Koeie wat in 'n beter kondisie is, sal kouer dae beter hanteer as onderkondisiekoeie.

### **Wenke vir wintervoeding:**

- Rantsoene met 'n hoë voginhoud moet aangepas word in areas waar temperature onder vriespunt daal. Gevriesde voer verlaag innames en verhoog energieverbruik vir vertering. As dit gebeur, voer meer keer per dag, om te verseker dat voer nie te lank in die bakke lê nie.
- Verhoog ruvoervlakke in rantsoen, om sodoende die rumen fermentasie en die hitte inkrement van die voer te verhoog.
- Voer meer keer per dag, om innames konstant te hou en om mif in voerbakke te voorkom.
- Maak seker dat voerbakke skoon en droog is voor elke voeding (veral in winterreënvalstreke.)
- Maak seker dat waterbakke nie gevries is nie. Die koei moet altyd varswater beskikbaar hê.
- Kyk of daar genoeg ruvoer beskikbaar is, om die kudde deur die winter te neem. As daar 'n tekort gaan wees, maak die nodige besluite rondom aankope eerder vroeër as later.
- Werk saam met 'n voedingkundige om veranderings in die rantsoen en voedingspraktyke te maak.

Dit is 'n algemene denkwysie dat produksie en kondisie van diere daal tydens die winter, maar met die regte praktyke en bestuur, kan dit drasties verminder word.

# Verwag veevrektes weens bosluise – Faffa

Deur Charl van Rooyen  
22 Februarie 2016

663 keer gelees

<http://landbou.com/nuus/verwag-veevrektes-weens-bosluise-faffa/>

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Die droogte het in groot dele van die land tot 'n styging in die voorkoms van inwendige en uitwendige parasiete gelei, sê dr. Faffa Malan.



Vee wat weens die droogte in 'n swak kondisie verkeer, kan begin vrek as hulle ernstige bloedarmoede het weens die styging in die voorkoms van veral bloubosluike. Boere moet ook na 'n toename in inwendige parasiete oplet.

Baie beeste, skape, bokke en wild verkeer in 'n swak kondisie weens die langdurige droogte wat nog nie oral in die land gebreek is nie. Selfs in dele waar dit gereën het, het diere nog nie weer genoeg herstel nie en is vatbaar vir parasiete en siektes.

Dr. Faffa Malan, bestuurder van die Herkouerveterinêre Vereniging van Suid-Afrika (RuVASA), sê in sy maandverslag vir Januarie dat veeartse in groot dele van die land 'n styging in die voorkoms van inwendige en uitwendige parasiete aangemeld het.

Bosluisgetalle het gestyg en daarmee saam die bosluisgedraagde siektes soos Afrika-rooiwater, Asiatiese rooiwater, hartwater en anaplasmose. Baie diere is weens die droogte in 'n swak kondisie; daarom kan bloedverlies weens bloubosluike tot ernstige verliese ly.

Bosluis-skade weens bosluis met lang monddele (bontpoot- en bontbosluis) neem ook toe. Spykerwurmvlieë lê hul eiers in die wonde waar die larwes wat uitbroei selfs vrektes kan veroorsaak.

Boere het reeds kleinvee weens inwendige parasiete verloor, veral aan besmetting met haarwurms. Let op vir tekens van besmetting met inwendige parasiete, soos bloedarmoede, kwakkeel, gewigsverlies en maagwerking. Diere wat aan stres ly en 'n tekort aan proteïene en energie het, is meer vatbaar vir parasietbesmetting.

Namate die water in damme en vleie minder word, sal die tussengashere van lewerslakwurms en peervormige lewerslakwurms meer gekonsentreerd raak en diere sal met dié parasiete besmet word.

In die tabel is 'n opsomming van die parasiete en siektes wat gedurende Januarie aangemeld is.

## Bosluisgedraagde siektes

Siektes wat deur bosluis na vee oorgedra word, neem in die somer toe wanneer bosluisgetalle styg. Wanneer vatbare diere na rooiwater- en hartwatergebiede geneem word, kan hulle siek word. Vatbare bosluis word selfs in grasbale vanaf besmette dele vervoer. Entstof beheer die meeste bosluisoordraagbare siektes.

Bosluisvergiftiging in die vorm van sweetsiekte is in verskeie provinsies aangemeld.

## Insekoordraagbare siektes

Siektes wat deur insekte na diere oorgedra word, is aan die toeneem, soos knopvelsiekte, drie-dae-stywesiekte en bloutong. Faffa waarsku dat slenkalkoors al in die verlede uitgebreek het wanneer dit ná 'n droogte baie

reën.

## Geslagsiektes

“Nuwe gevalle van trigomonose is weer eens aangemeld en is steeds buite beheer,” sê Faffa. Dié maand was daar weer gevalle waar besmette bulle van elders na 'n kudde geneem is en die siekte het toe daar uitbreek. Boere behoort bulle slegs by telers te koop wat nie geslagsiektes in hul kuddes het nie. Hou ook grensheinings deeglik in stand sodat die bulle nie anderkant die draad by besmette koeie gaan kuier nie.

## Bakteriese siektes

Daar was 'n groot toename in bakteriese siektes. Faffa raai veral kleinveeboere aan om hul vee teen bloednier in te ent, aangesien dit baie kan voorkom wanneer skape en bokke tydens 'n droogte ekstra voerkonsentraat ontvang.

RuVASA se verslag word maandeliks opgestel uit inligting wat van veeartspraktyke ontvang word. Die doel is om boere in te lig oor die voorkoms van siektes, maar veral om siektes wat in hul gebied voorkom of kan voorkom, voorkomend te bestry en te let op diere wat met siektes en parasiete gekoop word.



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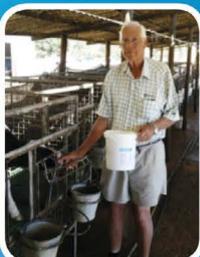
**Glentana Dairy**  
**Kookhuis - Oos-Kaap**  
Niel Wilke en Jakob Mavempie van Glentana Dairy, Cookhouse, het Pectospeed gebruik in hul laaste kalfseisoen en sal nie weer sonder dit deur 'n kalfseisoen gaan nie. Dis hul voorste produk vir diarree.



**Watervlak Jerseys**  
**Vryburg - Noordwes**  
Volgens Oom Sas van der Merwe van Watervlak Jerseys naby Vryburg word Pectospeed met groot sukses gebruik. Hy is baie tevrede met die produk.



**Die plaas Weltevreden**  
**Riebeeck-Wes in die Swartland**  
Nicol Serdyn maak 30 kalwers per maand groot en Pectospeed is een van die beste hulpmiddels tot dusver teen kalfdiarree.



**Zaaiplaats**  
**Commondale**  
Johan van der Merwe, melkstalbestuurder op Zaaiplaats, Commondale naby Paulpietersburg sê: "Dit is die beste produk teen kalfdiarree wat ek nog gebruik het!"



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# Rethinking claw-lesion treatment

[www.bovinevetonline.com/animal-health-center/rethinking-claw-lesion-treatment](http://www.bovinevetonline.com/animal-health-center/rethinking-claw-lesion-treatment)

By Geni Wren, American Association of Bovine Practitioners September 01, 2015 | 4:18 pm EDT

Iowa State University veterinarian Jan Shearer surveyed veterinarians and hoof trimmers regarding treatment practices for claw lesions and their outcomes.

Noted dairy cattle-welfare expert Jan Shearer, DVM, MS, Iowa State University, believes it's important that the dairy industry understand how most lameness disorders are treated or managed in North America. Using co-sponsored funds from the AABP Foundation and the Hoof Trimmers Association (HTA), Shearer conducted a survey looking at how lame cattle are treated, if treatment causes discomfort/ inflammation, and if treatment can lead to residues.

"Funding for our studies permitted us to work on a clinically important issue that is nearly impossible to get support for from other granting agencies or companies," Shearer explains. "Until this study, there has been no documentation of claw-lesion treatment practices in the United States or Canada. Anecdotal evidence suggests that treatments used by practitioners and hoof trimmers are empirical and we speculate, in some cases, potentially detrimental."

Shearer's survey was used to document treatment practices by veterinarians and hoof trimmers. "We found that 59 percent of veterinarians and 53 percent of hoof trimmers use topical medications on claw lesions," he says. Survey results found that the topical medications used most consistently were tetracycline and oxytetracycline powder, used by 48 percent of veterinarians and 81 percent of hoof trimmers.

The use of a bandage or wrap on claw lesions was cited as a routine procedure for 53 percent of both veterinarians and hoof trimmers. "Of interest is that none of these treatment procedures are supported by information from the literature," Shearer says. "On the contrary, there are no scientific studies documenting a benefit or detriment, for that matter, from topical treatment. Based upon a Cornell study by White *et al.*, bandages are unlikely to provide benefit and may even delay healing of claw lesions."

The study found that lesions from cows treated with oxytetracycline or copper sulfate on day one following treatment had an inflamed surface surrounded by varying amounts of black necrotic debris. Shearer says although there was none of the black-colored debris in lesions from control cows, it was not possible to determine if the degree of inflammation in treated lesions differed from untreated controls based upon



visual observation.

Conversely, there was a significant difference in the presence of excessive granulation tissue observed at day 21 for lesions treated with oxytetracycline or copper sulfate and a bandage. “The importance of this observation is that granulation tissue normally indicates delayed healing,” Shearer says. “Our speculation is that the granulation tissue observed was a result of increased inflammation associated with the topical treatments applied in this study. If that is true, it suggests that topical treatment with tetracycline or oxytetracycline may be contraindicated for claw lesions.”

Preliminary results of observations of a subset of cows in the immediate post-treatment period for discomfort associated with treatment support anecdotal observations that tetracycline and/or oxytetracycline can cause additional discomfort in the early post-treatment period. “Reasons for this may be the acidic nature of these compounds that causes additional discomfort when used topically on claw lesions,” Shearer explains. “We believe this is an important area for continued study.”

In order to determine the likelihood of creating a detectable residue, researchers collected blood and milk samples from 11 cows with claw lesions treated topically with oxytetracycline soluble powder or tetracycline soluble powder. Shearer says all samples had detectable levels of drug. “We also observed that lesions with larger surface areas tended to have higher log-transformed drug concentrations in both plasma and milk. We conclude that topical treatment with either tetracycline or oxytetracycline derivatives is likely to result in detectable residues, but concentrations are well below actionable levels.”

### **Results may change treatment decisions**

The major findings from the study are:

- Topical treatment may increase inflammation and delay healing and recovery rate of claw lesions.
- Topical treatment with tetracycline, oxytetracycline and copper sulfate may increase post-treatment discomfort.
- Topical tetracycline and oxytetracycline powder formulations may cause detectable residues in plasma and milk.

Shearer’s study included surveying veterinarians and hoof trimmers, and he was pleased by the willingness of busy veterinarians and hoof trimmers to fill out the survey. “A total of 345 people responded to the survey, of which 196 identified themselves as members of AABP, 111 as members of HTA, nine having membership in both organizations, and 29 providing no affiliation. A total of 307 respondents were included in the final analysis.”

Shearer says many of us at times do not take the time to fill out surveys simply because we don’t have the time to do so. “I applaud my colleagues in both organizations for taking the time to do so in our case. There

would be no other way to gather this kind of information. The topical treatment of claw diseases study reported here is a good example of clinically relevant research that the foundation funded but is not usually high on the list of those who normally provide support.”

This research has contributed to other publications, most notably the “Perspectives on the Treatment of Claw Lesions in Cattle,” a refereed article published online in the open-access *Veterinary Medicine: Research and Reports*. This paper reviews the topical treatment of claw lesions and includes recent findings from the work conducted at Iowa State University. The next step is to make sure that this information is made available through other industry publications. Shearer also presented this information at the HTA meeting in February.

“Our lameness research group at Iowa State is enormously grateful for the AABP Foundation and the Hoof Trimmer’s Association’s support of this project,” Shearer says. “We hope that others will glean insight from our work and expand on our observations. There is, indeed, much to be learned about the treatment of claw lesions.”

### **AABP Foundation**

The AABP Foundation supports advancements in the well-being and productivity of cattle through applied clinical research and scholarship programs that benefit present and future cattle practitioners, producers and the public.

Find out more about the AABP Foundation at [foundation.aabp.org](http://foundation.aabp.org).

# SABS develops standard on dairy cattle welfare



By Staff Reporter - March

W25, 2016

A *South African Bureau of Standards (SABS)* working group has developed a draft standard on dairy cattle welfare, which is aimed at providing guidance to owners of dairy cattle and persons who are responsible for these animals. It will include requirements for the provision, design and maintenance of facilities and equipment, the allocation of operational responsibilities, as well as the competence and supervision of employees.

Organized dairy industry members participated actively in the process of drafting the SANS 1694 document. The last physical meeting for this purpose took place on 9 June 2015, with most of the tasks being assigned to working group members who duly attended to outstanding issues such as the locomotion scoring index, which was communicated to the technical committee and subsequently discussed on 24 November 2015. Once issues are finalised, the document will be distributed as an SABS committee draft for voting and commenting. – [Milk SA, Milk Essay March 2016](#)

# Russia to tackle feed antibiotic problem

21 Mar 2016 last update:6 Apr 2016 1440

Antibiotic residues in livestock production has become a growing problem in Russia in the last couple of years. This is according to the head of Russian sanitary service Rospotrebnadzor, Anna Popova. But how will Russia tackle this problem?



Russia has strict rules on the use of antibiotics. However, violations are taking place, and sometimes they even pose a danger to the health of consumers. Last year Russia produced 87.9 tonnes of antibiotics, twice the amount compared to 2014. And several people in Orlov Oblast have been hospitalised with poisoning and after investigation it was discovered that the all ate meat with antibiotic levels exceeding the maximum allowable rate by 270 times.

## Call for a decrease in allowable rates

Management of Rospotrebnadzor admit that Russia has a problem with antibiotic use, in the same way almost all other countries do, and announced the intention to take some measures to gradually decrease it, over the coming years. **"A large number of products arriving at consumers tables, including meat, milk, fish and eggs may contain residues of antibiotics that farmers have been feeding their animals,"** said Anna Popova, adding that Russia has even stricter rules on the use of antibiotics than the European Union (EU) do, but still within the next several years the country will launch a revisal of these rates with a view to their reduction. "We believe that even permitted levels of antibiotics in food increase rates of gastrointestinal diseases of consumers, in particular, children," she stated, also claiming that feed antibiotics will ultimately lead to the appearance of superbugs. "In the end, they will cease to be effective, and simple infections and minor injuries again become lethal. Antibiotic use in agriculture will result in widespread of incurable diseases."

## Lack of control

Experts pointed out that the allowable rate on tetracycline is 0.01 mg/kg, and Rospotrebnadzor annually collects 20,000 samples from the market to monitor the rate of antibiotics. However, a consumer protecting organisation still complains about the lack of control on the market.



"For example, in cows drugs are excreted from milk within 14 days after the end of its use," commented chairman of the Russian Consumer Rights Protection Society Mikhail Anshakov. "However, for manufacturers it is not profitable to allow such a delay in the production process, so they simply add treated animals to healthy herd. **As a result, milk with antibiotics hit grocery store shelves.**" At the same time, there is currently an increase in the trend for organic food products in Russia. However, this label in Russia means nothing, as milk claimed to be organic also contains antibiotics. "Milk from private farms, or milk with the organic label, based on the results of our tests, often is not healthy either. **We purchased samples of farm milk at the markets and in special machines and received positive test results for tetracycline,**" Mikhail Anshakov has added.



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# KEEP THESE CALVES CLEAN ...OR ELSE!



## Keep These Calves Clean...Or Else!

By [Karen Hunt](#)

Friday, April 3rd, 2015

Most managers of dairy facilities are excellent at managing the obviously dirty things. However, with the ever rising statistics on calf scours, “looking” clean isn’t good enough. Having said that, removing visible manure, soil, spoiled or spilled milk or other substances from surfaces and equipment is a critical and logical first starting point.

### 21 GERM LADEN PLACES THAT ARE PUTTING YOUR CALVES AT RISK!

For every easy to see nasty, there are a host of under-the-radar pathogen producing threats that persist beyond what the eye can see. Here are 21 surprisingly dirty things and what to do about them.

#### **If it Touches a Calf, It’s Got to be Clean!**

*It is only logical that everything that comes into direct contact with the calf must be sanitary!*

- **Bottles**  
The bottles should be disinfected before every feeding. Disinfect nipples go in a pail with chlorine water before they go on the bottle. If you only rinse a bottle with hot water, bacteria will grow on the film that remains and then you will be feeding that to the calves.
- **Esophageal feeders**  
Have separate feeders for calves from those that are used for sick animals.
- **Buckets**  
Watch for buckets that are becoming scratched. Even though they don’t leak, the scored places could provide a breeding ground for bacteria.
- **Feed Pails**  
Don’t stack buckets on cement or wood to dry.
- **Calf blankets**  
Not just a warm comfort for young animals they can also be home to several type of fungi and

germs. The natural hours spent sweating, shedding and drooling milk create ideal conditions for pathogen growth. Have a regular system of thorough cleaning so that blankets are pristine for each new calf.

- **Other calves**

Calf to calf contact. Within the imitations of your situation, always ask the question “Based on what I have to use, what steps must I take to minimize exchange between calves.”

- **Feeding order**

Feed youngest first and work up to the oldest

- **Feed**

Feed small quantities of feed more often, if that is the only way to prevent the feed from harboring bacteria as it gets wet from the feeding process or becomes affected by the environmental conditions or natural breakdown of its own components.

## **Clean Up Your Personal Hygiene or Risk Staff Infection**

*All your hard work and good intentions will go nowhere if the people who work with the calves are themselves carriers of bacteria. The all-inclusive nature of the job means that hands, feet, clothing, and equipment are constantly being exposed and transported by the very people whose responsibility it is to keep things clean for the calves.*

- **Gloves**

It’s easy for bacteria to get trapped in fabric, creating ideal conditions for bacteria to breed. Even plastic, if not sanitized, can harbor pathogens.

- **Coveralls**

Change into clean coveralls on arrival and at mid-day. It might be necessary to change whenever the clothes you’re wearing have become particularly dirty, either from a messy job or from working with other animals. The latter could raise the risk of cross-contamination significantly.

- **Footwear**

Wear separate footwear for working with calves and be aware that every step you take could be a mode of transportation for something that will put your calves at risk.

## **Equipment Clean as a Whistle**

Beyond the obvious equipment used only for calves, it is crucially important to make sure that more general use items are also clean.

- **Livestock Trailers**

Once again, the degree of cleanliness that passes eye inspection is not enough to keep calves safe. A thorough sanitation plan must be in place and *used* to prevent the spread of infection between animals, farms and handlers.

- **Spiggots**

Even though, equipment or calves don’t actually come into contact – airborne and other contact pathogens can build up on these supposedly clean (because they deliver clean water) places. Clean them every day.

- **Sponges**

Try antibacterial sponges and soaps to limit the lesser of bacteria evils—but neither are very effective at controlling the big name baddies like E.coli and salmonella. Disinfect sponges regularly and depending on frequency of use, soak them in a bleach solution for 4 minutes or microwave on high for two minutes (microwaving has been shown to kill 99 percent of bacteria).

- **Water Sources**

Be vigilant about testing water. Most hoses are not delivering water that hot enough to kill anything growing in the wet, dark environment provided by an undrained hose. Rinsing with 50/50 mix of water and vinegar or — bleach — is a regular routine to instigate.

- **Hoses**

Again the assumption is that something that is filled with /delivers water will be clean.

## **Wherever surfaces come into contact, those joining places can breed pathogens**

Flat surfaces. A lot goes into caring for animals, and there can be a lot of airborne bacteria that is bound to find the nearest flat surface. To minimize the risk, some experts recommend using a disinfectant on flat surfaces several times a day. If human hands or equipment can touch it, it needs to be kept clean. Keep antibacterial wipes handy for easy access. This is another place to be aware of heavily nicked surfaces and replace them regularly.

## **Keep Your Housing So Clean You Could Eat Off the Floor**

There is no such thing as going too far when it comes to sanitation of calf-raising environments. In fact, overkill (of bacteria) is exactly what you're targeting.

These five place should all have sanitation protocols that are planned, posted and acted upon.

1. Maternity pens
2. Newborn pens
3. Calf pens / hutches
4. Calf barns
5. Calf transporters
6. Automated feeders

## **SSOP – STANDARD SANITATION OPERATING PROCEDURES**

When setting up your own customized sanitation procedures, make sure you consider these recommendations:

### **For removal of biofilm and sanitation of calf feeding equipment**

- Rinse equipment with lukewarm water.
- Soak with hot water, at least 140° F that contains a chlorinated alkaline detergent with a pH of 11 to 12.
- Vigorously wash the calf feeding equipment with a brush for one to two minutes.
- Rinse with cold water and then rinse a second time using an acidic solution with a pH of 2 to 3.
- Allow the calf feeding equipment to thoroughly dry. Do not stack buckets on concrete floors or boards. Bottles and nipples should be air-dried on a drying rack.
- Sanitize both the inside and outside of the calf feeding equipment two hours or less before use.
- Sanitize calf feeding equipment using 50 ppm ClO<sub>2</sub>.

- One to two minutes contact time.
- Bottles, nipples, buckets, pasteurizers, mixing equipment, etc.

## **For removal of biofilm and sanitation of calf pens using low-pressure foam cleaning:**

- Remove all the bedding and organic material from the calf pens.
- Thoroughly wet the calf pens with water, starting with the highest and ending with the lowest point of the calf pen.
- Apply an alkaline foaming detergent (pH 11 to 12) to the calf pens using either a hand-held airless or an air-driven foamer.
- Go from low to high and apply the foam evenly to all the surfaces of the calf pen.
- Soak 10 to 15 minutes (don't allow the foam to dry).
- Rinse with water, going from high to low.
- Apply a foaming acid (pH 3 to 4) using either a hand-held airless or an air-driven foamer.
- Go from low to high and apply the foam evenly to all the surfaces of the calf pen.
- Soak 10 to 15 minutes (don't allow the foam to dry).
- Rinse with water, going from high to low.
- Allow the pens to dry. Not for a few hours or overnight. Letting a hutch sit without organic matter or calf, pathogens have nothing to feed on.
- Disinfect with a suitable disinfectant, going from the highest point to the lowest point of the calf pen.

## **Misting (livestock present), using 100 ppm ClO<sub>2</sub>**

- At least 30 seconds contact time.
- Use in maternity pens, calf pens, bedding packs, calf's feet, legs, brisket, and belly.

## **Environmental disinfecting (no livestock present), using 250 ppm ClO<sub>2</sub>**

- Five to ten minutes contact time.
- Use in maternity pens, hutches, calf pens, calf barns, calf transporters, automated feeders, livestock trailers.

## **Environmental fogging (no livestock present), using 500 ppm ClO<sub>2</sub>**

- At least 30 minutes contact time.
- Use in calf barns and livestock trailers.

Note: Since chlorine dioxide concentrations vary quite a bit between different manufacturers, it is obligatory that the working concentration of chlorine dioxide be verified each and every time prior to use. When using chlorine dioxide at concentrations of  $\geq 200$  ppm, operators should wear protective eyewear, and an R95 approved particulate respirator mask that is carbon lined (grey color). The masks can be obtained in the paint section of any local hardware store.

## WHEN IS THE BEST TIME TO COME CLEAN?

The simplest answer regarding sanitation timing is, “Be clean all the time!” However, when looking specifically at dairy calves there are several factors to carefully consider:

- little gastric acid production, which protects against enteric disease, during the first 5 to 7 days;
- an immature “fetal” gut for the first 7 to 14 days of a calf’s life;
- limited adaptive immunity during the calf’s first 2 to 3 weeks of life;
- loss of colostrum protection against K99 *coli*, rotavirus, coronavirus and *Salmonella* at about 7 to 10 days.
- levels of IgA on mucosal surfaces declines after 7 to 10 days of age.
- About 20 to 25 percent of dairy heifers in the United States require electrolyte therapy before reaching 21 days of age.

*It is obvious from the above points that every day of the first month of a calf’s life has a profound influence on whether it will make it through without contracting ( ).*

### The Bullvine Bottom Line

Calf scours takes an economic and emotional toll on calves, staff, and facilities. A hyper-vigilant program of calf facility sanitization will pay dividends. When it’s done properly, the only bill you will have to pick up is a clean bill of health.

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