Lionel's News

Dear Business Partner

As our valued customer we give you access to interesting and helpful articles that will assist you in getting the most out of your farming business. In this month's issue we start off with an article on how economic creep feeding is for lambs. Then we look at biosecurity for employee entry. Our 3rd article for this month discusses the magic of post-milking teat dips. We also give you an article on the construction of the world's first floating dairy farm and the benefits it holds for cities, what it looks like and the overall benefit for the whole dairy sector. Lastly, we included Kalvonews that deals with nutrition in calf rearing.

We hope that you also find the products advertised useful. You are welcome to contact the sales representative in your region for any further details on advertised products. All contact details are included at the end of this newsletter.

You can also read more about our sales representatives since we are putting a short description of our friendly staff at the end of every edition.

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

Many thanks to all our loyal customers. Going forward, we hope to bring you more exciting products/services and the best possible customer experience available.

Visit our website: WWW.LIONELSVET.CO.ZA

e-mail: info@lionelsvet.co.za **; Tel:** (021) 932 2019

Kruipvoeding vir lammers: Is dit ekonomies?

Afgriland Maart/April 2018 - Johan Loubser

http://www.agtag.co.za/view_shared_post/19464

Die insetkostedruk op veëboerderyondernemings neem jaarliks, weens 'n verskeidenheid redes, toe. Dit, gepaardgaande met droogte-omstandighede, dwing produsente om jaar na jaar te streef na groter doeltreffendheid. Dit is deurslaggewend om ingeligte besluite te neem en die regte dinge reg te doen, ongeag die boerderystelsel wat gevolg word.

Parings- sowel as telingstegnieke word bykans jaarliks verbeter om meerlinggeboortes (fekunditeit), vleis- of wolproduksie, asook speenpersentasie te verhoog, wat belangrike bepalers is van winsgewendheid in skaapboerderyondernemings.

Die invloed van spesifiek voeding op die haalbaarheid van laasgenoemde produksie-uitsette is meer as 70%. Kruipvoeding van lammers speel 'n al hoe groter rol in die bereiking van hierdie produksiedoelwitte.

Doel van kruipvoeding

Die doel van kruipvoeding is hoofsaaklik om addisionele energie aan jong lammers te voorsien. Sodoende word stres op ooie verlig, sodat so min as moontlik kondisie tydens die laktasiefase verloor word, met die oog op beter herkonsepsie.

Omstandighede waar die voorsiening van kruipvoeding aan lammers ter sprake kom, is tydens droogtetydperke, asook in meer intensiewe lamstelsels. Die grootste uitdaging is seker wanneer ooie met 'n reeds laer kondisietelling in tye van droogte moet lam. Kruipvoeding het dan ten doel om speenmassa van lammers te verhoog, lammortaliteit te verlaag en gepaardgaande verliese te beperk (tabel 1). Selfs al sou ooie 'n produksielek tydens droogtetoestande kry, is die kanse baie goed dat hulle nie genoeg melk gaan produseer om gesonde, lewenskragtige lammers te speen nie.

In meer intensiewe lamstelsels is die doel van kruipvoeding om die druk op ooie wat meerlinge soog te verlig, die vroeë speen van lammers te bewerkstellig om sodoende 'n hoër lamfrekwensie by ooie te bevorder, asook om lammers, wat in 'n voerkraal afgerond gaan word, vroegtydig aan te pas.

Tabel 1: Oorlewing van medium-wol Merino-lammers op droë weidings (New South Wales, Australië)

Speenmassa	Oorlewing
15kg	78%
20kg	90%
25kg	97%

Voordeel van kruipvoeding

Kruipvoeding word gegee in 'n tydperk wat die lam se voeromsetvermoë op sy beste is. Voeromsetsyfers van 2 tot 3:1 (2 tot 3 kg voer vir 1 kg lewende massatoename) is heel haalbaar. Sterk, groeikragtige lammers het die vermoë om reeds binne die eerste twee weke na geboorte hulle geboortemassa te verdubbel, indien hulle genoeg melk ontvang. Verder het lammers die vermoë om onder goeie voedingstoestande tot op vier maande ouderdom tussen 175 en 400 gram per dag in massa toe te neem, en kan reeds op die ouderdom van drie maande 50% van hul eerste jaar se liggaamsmassa bereik. Kruipvoeding kan dus 'n groot rol speel om hierdie groeitempo's te handhaaf, of om lammers vroeër te speen. 'n Verdere voordeel van kruipvoeding is dat dit veral tydens minder gunstige voedingstoestande - en selfs intensiewe lamstelsels - speenskok aansienlik verminder, omdat lammers vinniger leer vreet en verbeterde rumenontwikkeling reeds op 'n vervroegde ouderdom plaasvind.

Ekonomie van kruipvoeding

Kruipvoeding is gewoonlik betalend wanneer slaglampryse goed is en voerpryse laag is. Weens die hoër voeromsetvermoë, asook laer liggaamsonderhoud van lammers, is dit goedkoper en meer effektief om lammers kruipvoer te gee, as om die ooie te voer vir beter melkproduksie sodat lammers hul gewenste speenmassa bereik.

Kruipvoeding is egter slegs ekonomies indien groot genoeg innames verkry word om voldoende groei te stimuleer sodat speenmassas betyds bereik word. Innames behoort gemiddeld 250 g/dag te wees vanaf 21 dae ouderdom tot speen (45 g/dag in week een tot 250 g/dag in week vyf). Lammers kan suksesvol vroeg gespeen word (ses tot agt weke oud) op 'n kruipdieet, indien hulle minstens 250 g daarvan per dag inneem. Die vroeë speen van lammers moet dus eers plaasvind wanneer die spysverteringskanaal voldoende ontwikkel is op tussen ses en agt weke, sodat daar geen vertraging in die groeitempo plaasvind nie.

Voerinname (> 250 g/dag) moet dus as maatstaf dien en nie net liggaamsmassa alleen nie, aangesien lammers met hoë groeitempo's die voorafbepaalde teikenmassa kan bereik voordat die rumen voldoende ontwikkel het.

Kruipvoervereistes en algemene riglyne

- Begin om kruipvoer tussen een week (droogtetoestande) en twee weke (normale toestande) ouderdom uit te sit. Jong lammers is meer nuuskierig as ouer lammers en kom gouer op die voer af.
- Vreetspasie van 5 cm per lam is 'n aanvaarbare norm.
- Plaas bakke uit in areas waar aktiwiteit redelik hoog is, byvoorbeeld naby 'n waterpunt of lekbakke indien diere nie gekraal word nie.
- Ooie moet verkieslik geen toegang tot kruipvoer en die kruipfasiliteit hê nie.

Behalwe die voorgeskrewe spesifikasies waaraan 'n kruipdieet moet voldoen, moet dit ook smaaklik en in 'n aanvaarbare vorm wees, om voldoende inname te verseker. Die ideaal is dat kruipvoer hoë vlakke van goeie deurvloeiproteïen en energie bevat en ureum-vry is. Sojaboonoliekoekmeel, lusernhooi, hawergraan, gars, gemaalde mielies en melasse (stroop of meel) verhoog die smaaklikheid, terwyl 'n verpilde dieet die beste inname sal verseker en vermorsing verminder. Vir die voorkoming van blaasstene by ram- en hamellammers moet 0,5% ammoniumchloried (of 0,5 - 0,8% ammoniumsulfaat) ingesluit word. Ionofore word ingesluit om koksidiose te beheer, suurpens te voorkom en groei te bevorder.

Kruipvoeding moet aanvanklik nie “ad lib” in selfvoerders voorsien word nie, omdat dit tot aansienlike vermorsing kan lei, weens die aanvanklike lae inname van die lammers en omdat lammers vars voer verkies. Deur die kruipdieet daagliks in die bakke te gooi en die ou voer te verwyder, sal die lammers gouer leer vreet en hulle inname verhoog. Soos die lammers beter leer vreet, kan oorgeskakel word na ad lib-voeding. Kruipvoer moet altyd beskikbaar wees tydens die voerperiode.

Voorsien skoon drinkwater aan lammers apart van ooie indien moontlik.

Lammers moet vir ten minste nog een week ná speen op die kruipdieet gehou word, om speenskok te verminder.

Gevolgtrekking

Die doel van kruipvoeding is om addisionele proteïen en energie aan jong lammers te voorsien, om die lam se groeipotensiaal beter te ontwikkel. Kruipvoeding kan dus 'n groot rol speel in verskillende omstandighede, hetsy dit droogtetoestande of intensiewe produksiesisteme is. Die grootste voordeel is normaalweg dat lammers reeds op ouderdomme van agt weke suksesvol en op 'n aanvaarbare gewig van 25 kg gespeen kan word, wat massaverlies van lakterende ooie beperk vir beter herkonsepsies tydens die volgende paarseisoen of siklus.

Kruipvoeding maak dus nie noodwendig die las op die ooi ligter nie, veral nie as die doel van die sisteem is om meerlinglammers vroeër te speen en markgereed te kry nie, maar kan wel 'n bydrae lewer tot verhoogde winsgewendheid van die boerderystelsel.

Nutrifeed

everything to help you grow

Kalvolac

LIONEL'S VETERINARY SUPPLIES farmers' first choice

FrieslandCampina

LIONEL'S VETERINARY SUPPLIES

For more information contact:

info@lionelsvet.co.za

CPT: 021 932 2019 | JHB: 010 591 2030 | PE: 041 451 1900 | KZN: 033 345 1093

Northern Region: 082 784 5275 (Herman Bezuidenhout)

Southern Region: 082 923 6382 (Jannic Zietsman)

Natal: 083 788 1219 (Steve Elliot)

Crossing the line: Biosecurity for employee entry is still a work in progress

18 May 2018

Routine failures and how to avoid them

By Derald Holtkamp, MS, DVM, Associate Professor, Iowa State University

Several decades ago, most sow farms installed showers so employees could routinely shower in and out. These days, it's rare to find a sow farm that doesn't have a shower, though they do still exist.

Many producers feel confident that showers eliminate the risk of disease transmission due to employee entry, but that's not the case. Employees entering sow houses still pose a serious threat, particularly regarding the introduction of porcine reproductive and respiratory syndrome (PRRS) virus

My students and I have been conducting PRRS-outbreak investigations since 2013. The project is part of a pilot program funded by the Iowa Pork Producers Association. In nine of 17 cases, employee entry was rated as having a high likelihood of being responsible for the PRRS outbreak.

This doesn't mean every employee entry is a high-risk event, but it does mean there are lots of opportunities for something to go wrong each time an employee steps onto the farm or into a pig house.

Assessing risk vulnerability

When we conduct outbreak investigations, we assess risk events, including employee entry. Risk events occur when carrying agents enter the site. Carrying agents are defined as anything that may be contaminated or infected with PRRS virus that is brought onto the farm. For employee entry, carrying agents include the employees themselves, their vehicles, lunches and other personal belongings such as cell phones and watches.

To assess how vulnerable a farm is when employees enter, we consider all of the carrying agents and the series of failures that must occur for PRRS virus to be introduced into a herd. We assess what producers are doing poorly that leaves the herd vulnerable as well as what they are doing well.

First failure: Carrying agent was contaminated with PRRS virus

This failure occurs when employees, their lunches or other personal belongings contact swine that are shedding PRRS virus or environmental surfaces that are contaminated with the virus.

Practices producers have implemented to reduce the risk of this failure include these rules:

- No visiting or working on other swine farms or working in livestock-related jobs such as driving livestock trucks or taking a job at a feed mill.
- No living with an individual who works on another swine farm (no-cohabitation rule).
- No raising pigs, including show pigs.

Second failure: Not taking steps to mitigate contamination of carrying agents

This failure occurs when farms lack sanitation and decontamination procedures or these procedures are poorly executed.

To reduce the risk of this failure, here are steps some producers have taken in addition to basic shower-in/shower-out facilities.

These procedures apply to the "dirty" side of the shower where employees disrobe before showering and entering the "clean" or pig side of entry:

- Towels are prohibited on the dirty side of the shower or, if used on the dirty side, they must be disposed of on the dirty side.
- Clean, heated mats are provided on the dirty side of the shower to discourage employees from standing on towels as they dress.
- If towels are permitted on the dirty side, they are colour-coded to indicate that's where they belong, and there's a washer and dryer on the dirty side to launder them.

The best employee-entry procedure we've found had three basic elements:

- A sink is just inside the entry from the outside where hands can be washed and disposable polypropylene shoe covers are donned upon entry from the outside.
- A bench entryway leading to showers has a boot jack for hands-free removal of covered outside shoes.
- Shower

Here are several other procedures implemented by producers to reduce the risk of this failure:

- Plastic disposable shoe covers are provided to employees to wear when stepping out of their vehicles. Once donned, employees are trained to avoid touching floor boards or other surfaces inside their vehicles with their covered shoes.
- Entryways and showers are cleaned and disinfected daily.
- At the entrance to the farm, there's a window with a pass-through box where lunches and other belongings brought onto the farm are decontaminated with ultraviolet light.

- Floors are covered in entryway and showers with a non-porous epoxy coating for easy cleaning.
- Cell phones, watches and other personal belongings are prohibited in the swine facility or restricted to the breakroom.
- Company provides cell phones and watches to employees while in the barns and these items are never removed from the barns. In one case, the company paid for a worker's second pair of eye glasses. In other cases, cell phones, lunches and other personal items were restricted to the breakroom.
- Lunches are double-bagged and the outside bag removed as lunches are put through the pass-through box.
- Downtime is required from overnight to 3 days if employees visit or work on another swine farm or swine-related location (e.g., feed mills, cull buying stations, swine exhibitions, etc.).
- Environmental swabs are periodically collected from entryways, employee hands and shoes so they can be tested in case of an outbreak.
- Colour-coded boots and coveralls indicate attire that may be worn inside or outside of pig houses. Note: Even if chores performed outside the barns are done at end of day, this helps avoid contaminating employee vehicles, which may be a source of virus on the following day when employees return to the farm.
- Signs are strategically placed to describe standard biosecurity operating procedures in all languages spoken by workers on the farm.

Third failure: Allowing PRRS virus to be transmitted from carrying agent to pigs

Any time a carrying agent enters the site, we consider it a risk event. Even when carrying agents such as personal employee items are taken into pig houses, they may not come into direct contact with pigs, but employees do. When employees or their personal items directly contact pigs in the herd, the likelihood of this last failure is relatively high.

Here are some of the practices we've observed that reduce the risk of infecting pigs with PRRS due to contaminated carrying agents:

- There are clear lines of separation between the employee breakroom and barns. A bench can be provided where employees can remove boots worn in barns on one side, then swing socked feet to the breakroom side of the bench without stepping on the barn side.
- Boot and hand-wash stations are used when entering barns and when returning to the breakroom.
- Cell phones, watches, other personal belongings and food and drinks are restricted to the breakroom.

Frequency of event

The fewer employee entries there are, the lower the risk for introducing PRRS virus.

The frequency of employee entry we've found on our investigations has ranged from 42 to 1,120 times over a 4-week period. The frequency was primarily determined by farm size and the number of employees but also by how farms scheduled jobs that needed to be performed outside the barns, whether employees left for lunch, performed jobs elsewhere and how many smokers they had that went outside to smoke.

Good practices we've observed that can reduce the frequency of employee entry include:

- Schedule outside chores, such as moving deads, collecting garbage or going to care for gilts in an on-site isolation unit, etc., at the end of the work day whenever possible.
- Employees are prohibited from leaving the farm for lunch.

Culture and training

It's helpful to have a "culture" of biosecurity that's understood and reinforced by everyone in the company. It takes time to establish but it's well worth the effort.

To help ensure all employees understand biosecurity procedures and have a reference, the procedures can be provided in writing and in every language, employees speak as their first language.

Some producers not only train new employees, they provide retraining, and a few reward employees with bonuses for completing online training.

Audits can help spot weaknesses in compliance with biosecurity procedures. Most audits are conducted by company employees such as production supervisors, veterinarians or biosecurity officers and sometimes by contract veterinarians. Few producers we've encountered use a third party for auditing.

Wrapping up

The lists of helpful biosecurity practices here are by no means exhaustive. None of the farms we've investigated have incorporated all of these practices and many have incorporated very few.

However, we hope our compilation of good practices we've observed regarding employee entry will help producers learn from each other, thus reducing their vulnerability.

THE MAGIC OF POST-MILKING TEAT DIPS

Today, almost all dairy farmers use a post dip or spray. They use these products to disinfect teats, to form a physical barrier, especially at the teat end and help to improve teat condition. In the United States alone, the use of post-dips and sprays rose from less than 50% of US dairies in 1974, to circa 95% of dairies by 2007 and this trend contributed to a spectacular drop in clinical mastitis cases from over 100 cases per 100 cows per year in the mid 70's, to below 40 cases per 100 cows per year by the mid 80's.* Today in the UK, we have a vast range of active ingredients and products available which can be applied in a variety of ways, depending on the parlour and system in place and as long as the specific system is being used correctly and effectively, good results should be achievable year-round. However, it is when a system is not being used optimally, that results can suffer.

So, what is achievable?

A proprietary post-milking teat dip product needs to be applied well immediately after the clusters are removed. This is because the teat sphincter is open and can take over 30 minutes to close and with a small residue of milk inevitably being left in the teat canal and the ideal temperature for bacterial growth, colonisation with pathogens can happen fast. Therefore, a physical barrier in the form of a teat dip can help to mitigate the risk of mastitis pathogens entering the teat through the sphincter.

Slightly less time-sensitive but also very important is the need to disinfect teats post-milking. A well-applied teat dip with germicidal properties should kill a very high proportion of the pathogens present on the teat post-milking that have been transferred from the liners. Additionally, a more viscous product that clings to the teat longer should continue this process when the cow is back in her housing where the increased levels of dung and soiling means that the risk of infection is increased.

Finally, a product with quality emollients can help to maintain and improve teat skin condition which plays a key part in maintaining teat hygiene.

How can we ensure we get the most from the process?

Firstly, the choice of product is essential. The four main active ingredients used in the UK are:

- Iodine
    - Broad spectrum however best used as a post-dip only due to slow kill-speed and potential for residue issues if used pre-milking
- Chlorhexidine
    - Broad spectrum and often associated with improving teat condition
- Lactic acid
    - Very fast acting
- Chlorine Dioxide
    - Very high efficacy but needs combining with an activator and used quickly as many such products are unstable once mixed

Depending on the specific needs on-farm, one of these active ingredients in the right formulation should be suitable for most farms.

Secondly, it is vital that the chosen product is applied well and whilst there are numerous different systems and manufacturers of equipment, the typical choices in the UK are based upon:

1. Dipping
2. Spraying

Dipping is recognised as the most effective way to apply products, due to the high chance of poor technique or set-up when applying spray. However, a well-applied spray can be equally effective if done well. Choice of system is again based upon the specific needs of the farm which is often a trade-off between speed of the process and the higher usage rate when using a spray version, (typically 15-20ml with a spray compared to 5-10ml with a dip).

The CID LINES post-dip and spray range

CID LINES and its distributors across the UK and Ireland recommend and supply the CID LINES range of products which contains a product in each category of active ingredient as well as a range of VMR-approved dips and sprays.

- **Kenomix** is a very high efficacy teat dip in a vividly-coloured, non-drip formulation. Kenomix is unique in being the only single-active chlorine dioxide-based product available in the UK which is stable beyond a few days
- **Kenolac** is based on lactic acid which has a high germicidal effect on bacteria and viruses. It is the UK's only registered fly-repellent teat dip and also contains a sunscreen making it ideal for summer grazed cows. Kenolac is also organic approved (EC834/2007)
- **Kenostart (VMR registered)/Kenodin** contain "Complex" iodine that constantly regenerates to ensure a guaranteed level (ppm) of iodine is always available to cover the teat. High levels of quality emollients ensure teat condition is optimised.
- **Kenocidin (VMR registered)/Kenomint** contain chlorhexidine digluconate for fast, effective kill. It also contains high levels of quality emollients as well as Menthae arvensis for its teat conditioning and anti-inflammatory properties

Post Milking Farmer Experience

Herd manager Tom Moore runs the day to day operations at Hill Farm Dairy, Crewkerne, Somerset. The farm milks 450 cows on an all-year-round calving system with summer grazing, supplying organic milk as part of the Coombe Farms Milk Pool. Whilst milk quality was good, there is a culture of improvement at the unit which meant that Tom was always looking at new ways to improve. He commented:

"We wanted to focus on two areas. These were teat condition and milk quality which we could measure through improving teat condition, cell counts and bactoscans. This meant a close look at both pre and post milking routine".

Tom initially switched to using Kenopure teat foam and paper towel wiping for teat preparation which had instant results. Tom said:

"Straight away teat condition improved and bactoscans which had fluctuated between 20 and occasionally 50, dropped to below 10 and remain there".

Next, Tom looked at post milking routine. Working with their Dairy Hygiene Specialist of CID LINES, they together decided that a move to a quality chlorhexidine-based teat dip which would help to address their environmental pathogen concerns, would be best. The CID LINES sales representative commented:

"Kenocidin is a VMR-registered, medicinally approved teat dip which as well as containing chlorhexidine, also contains quality emollients and Menthae arvensis for its teat conditioning and anti-inflammatory properties"

Teat condition improved even more, bactoscans remained low and finally, cell counts improved measurably. Tom commented:

"By all measurements, what we have done has shown an improvement. Teat condition is much improved and it's now the best it's ever been".

BioProteXion
by CID LINES

Increase your benefits by protecting your livestock

Post-dip comparison

Kenostart™

The premium iodine teat conditioning dip.

Based on an active iodine complex. Registered as veterinary medicine in 13 E.U. countries for mastitis prevention. Economic in use.

Kenocidin®

For smooth and silky soft teats!

Improves the skin condition considerably. Based on chlorhexidine and mint.

Kenolac™

The first patented fly-repellent teat dip!

Offers protection against flies and sunburn. Based on lactic acid. Ideal for organic production.

Bacteriacidal actions

Teat conditioning

Teat skin evaluation scores:

Score 1	Score 2	Score 3	Score 4
Teat skin is **smooth**, free from scales, cracks or chapping.	Teat skin shows some evidence of scaling.	Teat skin is **chapped.** Some small warts may be present.	Teat skin is **chapped and cracked. Redness, indicating inflammation** is present. Numerous warts may be present.
			

Teat end evaluation scores:

Score 1	Score 2	Score 3	Score 4
Teat end sphincter is **smooth**, with no evidence of irritation.	Teat end has **a raised ring.**	Teat end sphincter is **roughened** with **slight cracks**, but **no redness** is present.	Teat end sphincter is covered with many cracks, giving a **"flowered"** appearance. Teat end may have old but healing scabs.
			

Kenomix™

Kenomix + activator is a chlorine dioxide 2-components teat dip.

Kenostart™ SD

Iodine spray

Based on an active iodine complex. Registered as veterinary medicine in 13 E.U. countries for mastitis prevention. Economic in use.

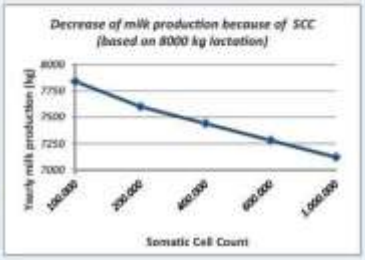
Kenocidin® SD

Chlorhexidine and mint spray

Improves the skin condition considerably. Based on chlorhexidine and mint.

Bacteriacidal actions

Teat conditioning



CID LINES
Believe in hygiene!

LIONEL'S
VETERINARY SUPPLIES

DenVet
Solving your animal health problem
More than just products

For More Information contact:
info@lionelsvet.co.za
CPT : +27 21 932 2019
JHB : +27 10 591 2030
EC : + 27 41 451 1900
KZN : +27 33 345 1093
Northen Region : 082 784 5275(Herman Bezuidenhout)
Southern Region : 082 923 6382(Jannic Zietsman)
Natal : 083 788 1219 (Steve Elliot)

NOW YOU CAN FIND THE ARTICLE ABOUT THE BOOK LAUNCH OF THE BOOK "8 MYTHS ON ANTIBIOTIC RESISTANCE DISPROVED" ONLINE FROM CID LINES.

PLEASE CLICK ON THE LINK BELOW.

http://www.cidlines.com/en-INT/booklaunch-8-myths-antibiotic-resistance-disproved

CID LINES®

Believe in hygiene !

Construction of world's first floating dairy farm underway

Article originally published in Dairy global

https://agriorbit.com/construction-starts-on-worlds-first-floating-dairy-farm/

22 March 2018

It has taken a lot of time to get the green light but finally construction of the world's first floating dairy farm is underway in the Netherlands.

This innovative farm is being built in Rotterdam and will be home to 40 dairy cows when completed. The idea is that the farm will supply the city with fresh dairy products every day, produced, say the developers, "in an animal-friendly and circular manner."

Three concrete floats are currently being constructed in a drydock that together form the foundations for the floating farm. The plan is that these floats are expected to be shipped to their definitive location in the Merwe4Haven in Rotterdam in the middle of May. However, over the course of developing this farm a few target dates have been shifted along the way, prolonging the final opening of the farm. The brains behind this bold move are from Courage, the innovation institute of the Dutch agriculture and dairy sector; Uit Je Eigen Stad, the national frontrunner on city farming and Beladon, a leading Dutch company on floating concepts.

Perfect scalable solution for cities

Peter van Wingerden is the project initiator on behalf of property developer Beladon. He says this is a real milestone for the project. "We are absolutely delighted that construction of the floating farm has now begun," he said. "After all the preparations, this is an unprecedented milestone for everyone who has worked to get this project up and running. Building on water always brings additional challenges with it, although it offers us the opportunity to restore food production to the inner city at the same time. We believe that building on water is the way ahead in a country with a changing climate and ever-increasing urbanisation. The floating farm is the perfect scalable solution for cities such as Rotterdam, with a lot of space on the water," he explained.

Van Wingerden sees huge opportunities for this prototype all over the world. "We will be building with all due speed in the months ahead, so that we can welcome our first cattle later this year," he added. Other benefits of such a system, close to urban populations, is reducing the distance that milk and other dairy products need to be transported to urban consumers, reducing greenhouse gas emissions and putting shoppers back in touch with nature and farming.

The cows will be able to use a ‘cow garden’ at the top of the structure, with a soft floor which will have the feel of a natural living environment. There will be trees and bushes available to offer areas of shade and the roof of the cow garden can be entirely opened.

Robots, LED lights and roof garden

The farm will house 40 cows on the floating structure, measuring 40 metres by 32 metres. The cows will be able to use a ‘cow garden’ at the top of the structure, with a soft floor which will have the feel of a natural living environment. There will be trees and bushes available to offer areas of shade and the roof of the cow garden can be entirely opened. Urine produced by the cows will drain through the floor and into an air-tight storage facility. By keeping it contained there, ammonia emissions will be limited, and it will be able to be distributed for use as fertiliser for city farms. Manure, on the other hand, will be collected and stored separately. A biodigester will be employed to turn the manure into biogas and fertilisers, which in turn can be used to help grow the grass used to feed the cows. Rainwater too will be collected and filtered for the cows to drink. Cows will have access to an adjacent pasture by using a bridge between the farm and the dock to cross the water, when tides permit. The cows will be milked with a robotic milking machine and they will have access to additional grass on the farm grown under LED lighting. Initially the goal was that when the trial period is deemed a success the goal is then to extend the facilities, so the farm can house 200 cows producing 5,000kg of milk per day.

Artist impression of the floating farm. The developers see huge opportunities for this prototype all over the world.

Benefits for the whole sector

Raw milk will be dispensed to consumers via a public 'milk tap' and vending machines will sell processed produce. Dairy produce will also be sold to local catering outlets, hotels and shops. The new farm will showcase the latest technology and is said to be an enormous asset for the Dutch agricultural sector. "Realisation of the floating farm is an enormous asset for the Dutch agricultural sector as a whole," said Carel de Vries, project initiator on behalf of the Courage innovation organisation. "It's almost impossible to bring cows and dairy processing closer to the city residents. Moreover, the latest technology will be tested on the floating farm going forward with the aim of drastically reducing environmental impact. We are developing opportunities that will benefit the entire dairy farming sector throughout the country in the fields of animal welfare, manure processing and circularity. We are thankful for the help we have had to date from all partners involved."

FrieslandCampina Ingredients

Nutrifeed everything to help you grow

Kalvonews

the newsletter for nutritional experts in calf rearing

Kalvolac contains the optimal fat ratio for the best performance in calves

Fat or oil in feed for young animals provide energy. They are also important for absorption of fat soluble vitamins (Vitamin A, D, E and K) and play a role in processes like resistance, metabolism and gene expression.

At birth, the overal digestive system is underdeveloped. From birth to about two weeks of age, the calf is a monogastric, or simple-stomached animal. The fat digestion during this period is also underdeveloped and improves with time.

Fat digestion by the Lipase enzyme and bile salts.

In the new-born calf, saliva is initially the only source of the enzyme lipase used for fat digestion. This enzyme mainly splits fats with short- and medium-chain fatty acids. The lipases of the pancreas are formed from the second week of life and are better able to split long-chain fatty acids.

Next to enzymes, bile salts (secreted by the liver) stimulate fat digestion, by emulsifying and micelle formation. This enables the fatty acids to move through the digestive system.

The energetic value depends on the fat source

The digestive efficiency and therefore energetic value of fat differ greatly between fat sources and is the result of their chemical structure. The fat digestibility depends on the fatty acid chain length, the ratio between saturated and unsaturated fatty acids and free fatty acid content.

Therefore, the composition of fat content in calf milk replacers for young calves is essential for the technical performance of calves.

Fat in calf milk replacers

Fat is the best energy provider for a young calf. Premium calf milk replacers contain mostly 16-20% spray dried fat. The higher the fat content, the higher the percentage of coconut oil, rich in medium-chain fatty acids should be, to assure optimal digestion.

Optimal ratio fat sources in Kalvolac calf milk replacers

Nutrifeed uses spray-dried vegetable fat sources in the recipes of calf milk replacers. The sources are palm and coconut oil.

Nutrifeed conducted trials with different ratios of palm and coconut oil in calf milk replacers. Growth was increased for calves receiving a 60% palm and 40% coconut ratio in a calf milk replacer compared to a 100% palm, due to better digestibility. The calf milk replacer with coconut inclusion also resulted in less calves with diarrhea.

Kalvolac calf milk replacers contain a palm: coconut ratio of 60:40 as it gives the best performance in calves.

Did you know?

<u>Palm oil</u>

Palm oil is mainly extracted from the fruits of the oil palm. Palm oil mainly contains the fatty acids C16:0 and C18:1. These are long chain fatty acids that need bile salts for optimal digestion. The double bond in C18:1 results in increased digestibility

<u>Coconut oil</u>

Coconut oil is refined out of the ripe fruit of the coconut palm, from which the edible kernel is subjected to extraction. Coconut oil is rich in the medium chain fatty acids C10:0 and C12:0, which can be directly absorbed from the small intestine to the liver, where it is converted into available energy. Thereby, it has antimicrobial and immune-system supporting properties and improving health conditions

New Product coming soon

Watch this space!

Please click on the link below to see more about Kalvolac CAIR

https://www.youtube.com/watch?v=a8EPDIY-3Js

https://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwiT4qbI67baAhUmKsAKHdE3CS4QFjAAegQIABAs&url=https%3A%2F%2Fwww.stgen.com%2F&usg=AOvVaw3cn5HJYnULAiMIrTH41GwZ

STgenetics®

CUTTING EDGE 055

REGN.#: SA 0079305686
DOB: 11/02/2010

Sire: Laflins Cutting Edge 2075

Red Haycow Cutting Edge 055

Dam: Red Haycow 370 Princess

** Milk Machine* ** Fertility Improver* **Calving Ease*

Based on April 2018 EPDs Red Angus															
	Birth Weight	Weaning Weight	Yearling Weight	Milk	Total Maternal	Scrotal Circ.	Calving Ease	Mat Calving Ease	Yield Grade	REA	Carcass Weight	Marbling	Fat	Stay	HPG
EPD	+0.6	+59	+83	+36	+66	-	+2.2	+4.6	+0.17	-0.23	+20	+0.97	+0.005	0	+20
Acc.	85	85	84	82	-	-	81	80	34	29	59	32	42	18	40

CASH 2R

REGN.#: SA 0079305736
DOB: 07/01/2005

Sire: Red Pie Atlantic 2204

Red Corner Creek Cash 2R

Dam: Red Northline Princess 59L

** Add Substance and Capacity* **Magnificent Muscle*

Based on April 2018 EPDs Red Angus															
	Birth Weight	Weaning Weight	Yearling Weight	Milk	Total Maternal	Scrotal Circ.	Calving Ease	Mat Calving Ease	Yield Grade	REA	Carcass Weight	Marbling	Fat	Stay	HPG
EPD	+2.6	+72	+104	+3	+39	-	-4.8	-5.7	+0.07	+0.63	+35	-0.19	+0.051	+10	+10
Acc.	88	87	87	85	-	-	85	85	31	24	60	28	39	41	44

IRON HIDE 4Z

REGN.#: SA 0080806409
DOB: 28/02/2012

Sire: Red Six Mile Sakic 832S

Red Wrights 832S Iron Hide

Dam: Red BWB Faye 48N

** Calving Ease*

Based on April 2018 EPDs Red Angus															
	Birth Weight	Weaning Weight	Yearling Weight	Milk	Total Maternal	Scrotal Circ.	Calving Ease	Mat Calving Ease	Yield Grade	REA	Carcass Weight	Marbling	Fat	Stay	HPG
EPD	-1.7	+47	+66	+18	+41	-	+1.5	+8.6	+0.11	-0.28	+7	+0.05	-0.002	+14	+11
Acc.	66	65	64	60	-	-	58	57	26	20	49	23	32	21	13

JD MARAIS jd@gedairy.co.za 076 638 8609

STgenetics®

Meer oor ons Verkoopsverteenwoordigers

Ontmoet vir Gavin Dargie

Gavin is gebore en het groot geword in Elliot, Oos-Kaap, en woon tans in Oos-Londen. Hy het gematrikuleer aan Weston Agricultural College te Mooirivier, Natal. Gavin het ‘n 2 jaar Agric Diploma by Glen Agric College in Bloemfontein verwerf. Daarna het hy vir 20 jaar geboer in die Elliot-distrik. In 1998 het hy sy loopbaan in Queenstown begin as verkoopsverteenwoordiger by Voermeester Feeds Standerton vir ‘n jaar en in 2000 het hy aangesluit by Voermol Feeds waar hy tot 2007 gewerk het. Gavin het verhuis na Oos-Londen en was vir 4 jaar as tegniese adviseur by Monti Feeds werksaam. Gedurende 2013 tot 2016 was hy deel van die Novartis & Elanco Animal Health span. In 2014 het hy vir Meadow Feeds as agent begin werk en het in 2016 sy loopbaan by Lionel’s Vet begin. Gavin is getroud met Judi, ‘n verpleegsuster en eienares van ‘n arbeidsterapie kliniek. Hy het 2 kinders, Sally, wat haar kwalifikasie as Cordon Bleu Chef te Silwood Kitchens, Kaapstad, verwerf het en Craig, ‘n gekwalifiseerde chef wat tans werksaam is op seiljagte in die Mediterreense Oseaan. Gavin stel baie belang in dierevoeding, - gentika en -gesondheid en het ook ‘n liefde vir sport, mense, die natuur, wilde diere en reis graag, veral na wildreservate. Sy grootste passie is sy familie.

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
Deon de Jager	064 625 8320	deondj@lionelsvet.co.za	Vrystaat
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
Herman Bezuidenhout	082 784 5275	herman@lionelsvet.co.za	Noordelike Streek
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@gedairy.co.za	Verkoopsbestuurder Genetika - GE DAIRIES
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
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!

1ste ry (vlnr): Riaan Momberg; Juan Welman; Shaun Bovey; Janique Fourie; Johan Botes; Jannic Zietsman

2de ry (vlnr): Byron Ott; Deon de Jager; Herman Bezuidenhout; Werner van Rooyen; Jan Joubert

3de ry (vlnr): JD Marais; Johan du Plessis; Gavin Dargie; GJ du Preez

4de ry (vlnr): Andreas du Toit; CC Terblanche; Derick Coetzee; Warnich Biersteker