Milk & Honey

- THE GENIMEX JOURNAL -

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The Limousin National Show
Genimex and Sersia France as sponsor with an overview from Jean-Marc Cazillac

Semen Handling
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Press Release
Q Impuls produced half a million doses!

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Louw's van Eensgezind Plase as algehele wenners aangewys

Drought Strategy
Ken Bartlett from Farm Wise discuss drought strategy for grassland farmers

Nageslagtoer
Verskeie bulle se dogters laat 'n baie goeie indruk

- Foreword -

WHAT A year it has been. I have no excuse for the limited publications of Milk and Honey but have to admit I was caught up in the many happenings that have taken place during the earlier part of the year.

Nobody but nobody can dispute that the World Cup was just wonderful. The euphoria that united the country during the few months that led up to the world cup was electrifying. During my travels to agents and breeders at the time of the event I was struck by the number of breeders that either went to matches themselves, had arranged tickets for their personnel or sat glued to their televisions or attended the fan-fests. The only negative was that productivity of the country definitely suffered pre and post the World Cup. Some did not know what to do with themselves when there was no soccer to watch and vuvuzelas to listen to.

Then along came the fiasco in the dairy industry. If I have used the wrong word, please would someone give a better and more apt one to use. Milk prices came tumbling down due to a surplus, some producers were even advised that their milk would no longer be collected.

One is left wondering if it does not all revolve around greed. I need to ask myself and dairymen alike whether the lack of involvement by producers in the marketing of their product is not contributing to milk buyers doing whatever they please for their own benefit and that of their shareholders.

Enough said, anymore may only be regretted later!

What I should say is that I question the actions of some suppliers of semen during this period of difficulty. Milk producers tend to save on their semen budget in times of financial stress, only to be met by sympathetic AI Centres who dump STUFF, which should have been discarded, at next to nothing prices.

"As you sow' in this instance comes true when the progeny of such sires come into lactation with disappointing results to the producer as well as affecting production of the national herd. If the semen company was to supply you semen of bulls that you would use under normal circumstances but at a discount then obviously grab the opportunity. Do not allow your breeding programme to collapse in order to save money on the smallest expense in your operation. If you save a small percentage on your large expenses you will be better off than a large percentage of your small expenses.

Whether times are good or bad, three years henceforth the losses will outweigh the savings of the short term.

Genimex has enjoyed a very active year, some of which is highlighted in this publication.

During February I had the privilege of visiting NZ where I attended the LIC national sales conference. This was a real eye opener. 120 Sales persons attended and they, as a group of sales persons, are totally dedicated to livestock improvement. Led by a group of motivated leaders this must be a formidable team to face.

What is really interesting this year is that the sale of Genomicaly proven sires has come under the spotlight. Some AI centres are basing their sales almost exclusively on Genomically proven bulls. LIC NZ is selling large volumes of Genomic Sire at the expense of daughter proven bulls. See the very interesting article written by the Internationally renown Peter Gatley, the General Manager Genetics for LIC NZ.. The success of Genomics in New Zealand lies very much in the fact that the breeders use very large teams of bulls.

The Danes are still to supply complete profiles of their genomically proven Jersey bulls as they believe they cannot accurately do the weightings of the DNA information and the pedigrees index.

There have been some horror stories of bulls sold on their Genomic proofs and then they collapse when they get their actual daughter proven proof. Only time will sort this out. All I can say is use Genomically proven bulls in team/groups and with care so as to limit your risk.

April saw Genimex arrange two progeny days in the Southern Cape. The days were attended by Peter Larson of Viking Genetics. Peter was the guest speaker during the evening dinner where no less than 50 breeders attended. Congratulation to the sales staff of Genimex in the Southern Cape for a wonderful presentation of the progeny from Jersey semen sold by Genimex as well as bringing together such a large group of breeders.

A new development this year is that Genimex has developed a computer programme that will be used to predict the inbreeding coefficient when matings are planned. Using the pedigree data of the cows and heifers in a herd and selecting the bulls that breeders wish to use, we can accurately tell the breeder when to not use a bull or when a bull can be used safely. This is NOT a computer mating programme it is solely for predicting inbreeding.

The end of the year is upon us and I wish you all well for 2011 and may the dairy industry improve, but not so dramatically that there is an overreaction. May it become stable and show gradual normal improvement and price increases.

All the best for 2011.
Chris

- Management -

Chris Cloete

Tel: 012 667 1012 (Office) • Fax: 012 667 1015 • Cell: 082 807 1433 • E-mail: chris@genimex.co.za • www.genimex.co.za

- Sales Representatives -

Hendrik Bezuidenhout
Tel: 042 293 3786 (Eastern Cape)
Cell: 083 458 1709 • P.O. Box 4139
Astonbaai • 6332

Errol Dicks
Tel: 033 702 1949 (East Griqualand & Underberg) •
Cell: 082 570 1812
P.O. Box 489 • Underberg • 3257

Gary Dicks
Tel: 033 330 5161 (KwaZulu-Natal)
Cell: 082 772 5151 • P.O. Box 600
Howick • 3290

Rochè Cronjé
Tel: 021 975 2133 (Western Cape)
Cell: 082 411 7608 • Franshoek str 45
Durbanville Heuwels • 7550

Shawn Buckley
Tel: 044 871 2886 (East Southern Cape)
Cell: 082 828 8481
P.O. Box 4138 • George-Oos • 6530

Johan Muller
Tel: 023 626 4600 (South & Eastern Cape)
Cell: 082 807 1548
P.O. Box 515 • Robertson • 6750

Ferdi Myburgh
Cell: 083 658 9691 (Gauteng, Southern Mpumalanga, Northern KZN-Natal)
P.O. Box 28016 • Sonlandpark
Vereeniging • 1939

Dave Swift
Tel: 043 737 4758 • Cell: 083 440 7291
P.O. Box 138 • Homeleigh
East-London • 5212

Herman van Dyk
Tel: 028 388 0934 • Cell: 084 273 6770
P.O. Box 1603 • Gansbaai • 7220

Willem van Lingen
Tel: 023 615 1252 (Southern Cape)
Cell: 082 375 1252 • George str 6
Ashton • 6715

Simon Alderson-Smith
Cell: 083 379 4656
(Eastern Cape - Alexandria & Interior)

Poena van Niekerk
Cell: 082 893 2783
(Jersey Specialist)

NAGESLAGTOER

deur **Johan Muller**

OM DOGTERS van verskillende bulle op plase aan kliënte te wys klink nie na 'n moelike taak nie. Dit is egter wanneer 'n mens wil hê dit moet van waarde vir jou verbruikers van beproefde genetika wees, wat dit 'n taak word wat met intergriteit, eerlikheid en akkuraatheid aangepak moet word. Die verskil is - wil ons semen ten alle koste verkoop of wil ons, ons kliënte 'n goeie aanduiding gee van wat hulle kan verwag as hulle bul A uit 'n sekere populasie gebruik. Verskeie faktore beinvloed die resultaat van die gebruik van beproefde bulle. Die belangrikste is:

Korrektiewe paring - met ander woorde is die bulle gebruik om spesifiek swakpunte en sterkpunte aan te spreek of is die bulle gebruik op 'n voor die voet basis in groot hoeveelhede om die totale kudde met die bul se sterkpunte te komplementeer. Hiedie stelsel bly die beleid van Genimex en lei dit tot die besigtiging van dogtergroepe wat die bul se liniêre eienskappe en produksie data omskryf en bevestig. Natuurlik sal daar telers wees wat ander doelstellings as net suiwer kommersiële suiwel boerdery het en daarvoor het ons ook respek.

Is die bul gebruik? Gebruik groot hoeveelhede van 'n bul. Die gebruik van ten minste 200 dosisse semen per bul is nodig om vir ons op 'n gegewe dag 'n groep dogters te gee wat die bul se prestasie sal kan bevestig of nie.

Op watter tipe voedingstelsel is die teler? Sommige kuddes wat op 'n weidingsstelsel is, se gemiddelde produksie per dag kan so laag as 10 liter per dag wees. Daarteenoor kan die produksie per dag van volvoer kuddes so hoog as 24 liter per dag wees. Daar is dus verseker 'n duidelike verskil in voorkoms van dogters uit die stelsels. Daarom is daar 'n verantwoordelikheid op die skouers van enige semenagentskap om hierdie faktore in ag te neem, om sodoende 'n eerlike en korrekte weergawe van nageslag resultate aan kliënte te wys. Daar is egter baie min of geen waarde om uiters streng geselekteerde groepe dogters (VYF OF SES IN 'N GROEP) op 'n verhoog soos bv. skoue ten toon te stel nie - en dit dalk 'n bul wat 5000 dogters in sy ontleding het.

Dit is dus met inagneming van hierdie feite dat ons vroeër die jaar 'n Jersey toer in die Wes Kaap aangebied het. Vyf plase is besoek en groepe dogters van bulle uit Denemarke en Nieu-Seeland is besigtig. Die algemene indruk van die nageslag groepe was uiters positief. Nie minder nie as 50 boere het elke dag bygewoon, en die kommentaar was veral uitstekend betreffende die betroubaarheid van die tipe en produksie eienskappe. Peter Larson - Algemene Bestuurder van Jersey Denemarke het die toer meegemaak en ook 'n lesing aagebied oor beskikbare bulle en die nuutste feite aangaande "Genomic" ontledings.

Dogters van die volgende bulle het veral beindruk:

DJ LOOK - By Werner Hartman het ons dogters gesien van gemiddelde grootte, uitstekende kapasiteit en uiers

Q LEERDEN - Die Leerdens by ALFALFA op Worcester het veral beïndruk met fantastiese suiwel eienskappe en besonderse middelstelle

Q LUF - Nog een van die Lemvig seuns waarvan groot groepe dogters gesien is. Die Lufs by Pietie Uys het uitstekende uiers met veral hoë produksies gehad.

LIKABULL - Hardwerkende koeie met veral hoë proteien persentasies.

SPADES - Die algemene indruk van die Spades dogters was baie goed en by CHAD ROUCH is 'n uitstekende groep gesien.

BLAKE - Die produksies en uiers van die Blakes onder volvoer toestande by ALFALFA was vir baie 'n groot verrassing - piek produksies van 30 kg!

Q ZIK - Miskien een van die hoogtepunte van die toer! By TIENIE DURR is groot groepe dogters van die bul Q ZIK in verskillende laktasies besigtig. Gemiddelde grootte koei met besonderse uiers, hoewe en bene het almal geweldig beïndruk. Produksies en uitstekende vastestowwe het bevestig waarom so baie van sy dogters op die top 100 koeilys van JERSEY SA verskyn.

Baie dankie aan **PIETIE UYS, WERNER HARTMAN, CHAD ROUCH, JOHAN RABIE, JOHAN VAN DER MERWE VAN ALFALFA en TIENIE DURR** vir hul samewerking en groot bydrae wat hulle gemaak het om die twee dae 'n sukses te maak. Almal was dit eens dat dit 'n uiters doeltreffende manier is om 'n indruk te probeer kry hoe bulle werklik teel. Die toer het ook bevestig dat daar geen plaasvervanger vir KI bulle beproef in betroubare stelsels uit groot populasies is nie.

GENIMEX AND SERSIA FRANCE SPONSOR THE 2010 LIMOUSIN NATIONAL SHOW

comments by **Jean-Marc Cazillac**

ALL OVER the world Limousin breeders and associations speak about the "carcass breed" clearly referring to the beefing abilities of the Limousin as well as the ability of breeders to produce purebred cattle that exhibit these characteristics. For the South African breeder, it seems that the archetype of a good Limousin is: of average size, ample beef, light calves at birth, good fertility, enough milk, attractive udders and especially good legs and good hair quality.

At Vryburg show where the Limousin Breeders Society of South Africa held their National Championships, the animals shown had the size and the morphology required by the commercial market. I found the cattle mainly mixed, or mixed beefy type, especially the males. I was pleased to find that French AI bulls appear in the pedigrees namely sires like Tarvis, Dauphin, Villy, as well as Mas-du-clo, and On-dit. I noted some difference between the South African show and the shows in France. Generally it is not the owner who led the animals, the females are not necessarily in calf, it's not always the taller/larger ones that win and they are smooth coated.

Chatting with the farmers, gave me an understanding what their breeding goals are. I think that the accuracy and extent of the French on farm records (more than 140 000 new Limousin animals are added to the national data base each year) and the purchase of economic efficient sires for AI and accurate performance and progeny testing of these bulls will ensure that there is always something available that will suit the requirements of the South African breeders.

Instead of looking for the higher index, especially for skeletal development, well balanced bulls seems to offer more satisfaction to farmers.

French bulls like Tastevin, On-Dit and Uskudar will fit in well with the breeding expectations of this country. Progeny of these and other bulls on offer from France will do well at the next National Show to be held in three years time. More importantly they will make a huge contribution in improving the National herd.

Jean-Marc Cazillac

An excellent team of Limousin sires on offer to the discerning

South African Breeder

Uskudar

A wide well muscled bull. His progeny excell in beef production and conformation.

Calving ease	93
Weaning proofs	132
Beef abilities beef calves	117

Tastevin

A well balanced bull where female progeny show excellent maternal qualities.

Calving ease	100
Maternal qualities	114
Weaning proofs	104
Beef abilities young cattle	98

Remix

The overall balanced sire. He is a calving ease sire with all the traits that make him easy to use on any type of cow or heifer.

Calving ease	106
Maternal qualities	116
Weaning proofs	110
Beef abilities young cattle	104

On Dit

Well known in SA for the overall type and production seen in his progeny. This was expected from his excellent progeny test results in France.

Calving ease	96
Maternal qualities	106
Weaning proofs	113
Beef abilities young cattle	109

SEMEN Handling

WHEN INSEMINATING large numbers of cows, shortcuts in semen handling are easily adopted.

BUT REMEMBER: SHORT CUTS WILL CUT RESULTS SHORT

Short cuts in semen handling can and will cause many millions of sperm cells to be destroyed. If enough cells survive to gain access to the oviduct and result in fertilization, it is easy to get a false sense of security that the shortcut adopted or procedure omitted has no effect on fertility. However, the injurious effects of repeated warming and cooling of semen is cumulative.

IMPORTANT DO'S AND DON'T'S:

DO NOT allow the canister to linger in the neck of the flask for longer than ten seconds, before lowering it back into the nitrogen. The correct position to hold the canister is just below the frost line where the temperature is relatively safe. It is the straws going back into the nitrogen you must worry about and not the one in the thawing bath!

DO NOT try to identify a straw by any means other than its position on your flask inventory. Only confirm that it is the right straw after thawing.

DO keep an accurate and up to date inventory of the contents of your flask.

DO check the nitrogen level of your flask at least once a week.

DO use the recommended thawing procedures, i.e.: Thawing Temperature: 35°C; Thawing Times: thin straw minimum of 20 sec and thick straw minimum of 30 sec.

DO NOT thaw more straws than you can inseminate in 10 – 15 minutes. Once a straw is thawed, sperm cells start to burn energy!

DO warm up your pistolet, before putting the straw into it.

DO keep the pistolet warm on the way to the cow and get it into the vagina as soon as possible. Ensure that the pistolet tip enters the vagina cleanly.

DO work as cleanly as possible. Always open the packet of sheaths at the end with the green plugs. NEVER touch the front part of the sheath, because that is the part that eventually goes through into the uterus.

Clean pistolets (remove the plunger as well) and scissors on a regular basis. Replace water in thawing unit daily preferably with bottled water.

I would strongly recommend the use of sanitary sheaths. This is a plastic sheath pulled over the normal sheath and once at the mouth of the cervix it is pulled back thus ensuring the front part of the pistolet entering the uterus is clean.
By applying the above rules, chances of damage to semen will be minimized.

SEMEN TECHNIQUE

DO concentrate not to penetrate the uterine horns when you deposit the semen. You have a centimeter to a centimeter and a half before the split into two horns. Penetrating the horns will result in blood on the pistolet tip which can kill semen besides the fact that you could leave the semen all in the wrong horn that is not on the ovulating ovary side. The uterine horn is also not as tough as the vagina and cervix and can easily be punctured without you knowing it. Rather deposit half to a third in the last section of the cervix. Do not try and AI as quickly as possible. The 'proof of the pudding' in this case is pregnant cows.

HENDRIK BEZUIDENHOUT
Cellphone number: 083 458 1709

Genimex™

Drought Strategy for Grassland Famers

LIC FarmWise

THE AIM is to preferentially feed spring calved cows as they will be peaking in production and more importantly they are coming up for mating also needing to maintain body condition in a 28-30 day grazing rotation.

Strategy

Limit the pasture intake of the Autumn calved cows to one grass feed a day (12Hours) and the night feed to be on a dry kikuyu paddock where they will be fed a supplement of maize silage and or grass silage supplemented with Palm Kernel feed. The maize silage can be up to 35% of their daily dry matter intake, i.e. 4-5 kg DM and the balance can be Palm Kernel feed up to 4kg, or grass silage / maize grain. This mixture would be fed in tyres and this night paddock can last up to 20 plus nights or until the drought breaks and the grass growth starts. In the shed a 15-17 % crude protein meal can be fed up to 4-5 kg /cow/day. (2-2$^{1}/_{2}$kg at milking).

The amount of feed fed in the shed will depend on what is fed at night. If grass silage / maize grain is available the meal in the shed may be less. The aim is to feed the least amount of the dearest feed as is possible.

Young stock

Spring Calves: Young calves need a complete feed ad lib with a protein content of 17-18 %.

Autumn heifers: Dry matter requirement 7kg/day. Feed 4-5kg maize silage on a dry matter basis plus 2-3 kg of a 14% protein meal (Palm Kernel).

Spring heifers: Dry matter requirement 9kg /day. Feed 5-6kg maize silage on a dry matter basis plus 2-3kg of a 14% protein meal (Palm Kernel).

Spring Calved Cows

If possible pasture feed twice a day if the grazing rotation can be kept at 28-30 days. The reason for this is when it rains the pasture recovery will be quicker and the nitrogen response will be better.

Ken Bartlett Farm Wise consultant in charge of the South African market

If the spring calved cows cannot be fed twice daily on pasture because of the rotation cycle a similar feeding strategy to the autumn cows needs to be put in place. These animals need 18-19kg of DM/cow /day and the aim of the feeding mixture is to use the least possible amount of the highest priced feed which would usually be high protein meals. So in the milking shed you may end up feeding 6kg of meal , 15-17 % crude protein, evenly split for each milking.

The night feed could consist of maize silage or grain plus Palm Kernel feed. An example would be 4-5kg Palm Kernel feed, 4 kg of maize silage and if the cows are getting 6kg in the shed they only have to harvest 4-5kg of pasture with a high protein content.

Another strategy that could be used if the drought continues well into October.

1. Autumn Cows milked once a day.
2. Dry off Autumn Cows earlier to reduce demand on the farm and the feed supplies.
3. Timely cull unproductive cows (autumn cows first then spring calving cows).
4. Re-examine feed cost relative to milk price, it may be prudent to dry off cows early to reduce their demand on high cost feeds.

GRASSLANDS DAIRY WORKSHOP

During a recent visit to New Zealand by Chris Cloete, the role that Livestock Improvement Corporation NZ and Genimex can play in improving the profitability of the farmers that based their production systems on pastures, were discussed.

From these discussions and the findings by Ken Bartlett during his recent visit it was decided that LIC (NZ) and Genimex (South Africa) should facilitate a forum for grassland farmers where those in attendance are able to participate and discuss matters of common interest.

There will be two workshops in the two major grassland areas of South Africa. These workshops will be held over two days in April- May 2011. The workshops will concentrate on the goals and objectives of farmers and that of their wives. Risk management is to be included in the programme.

These workshops will be limited to 90-100 people (50 couples) allowing individuals to participate on an individual basis.
If you are interested in such a workshop please contact Chris Cloete at 082 8071433

LIC

Mark Dewdeny - CEO Livestock Improvement Corporation NZ,
Chris Cloete - Genimex,
Jock Richardson - LIC NZ General Manager International,
during a recent visit to New Zealand by Chris Cloete.

Lichtblick Red

Awarded the "Holstein Sire of the Sales Ring" 2010 award!

At the recently held Holstein AGM it was announced that daughters of Lichtblick sold on auction averaged the highest price during 2010.

5 Lichtblick daughters were sold for an average of R 41 667.00 at the Riksma Herd dispersal sale. The highest price being R43 000.00.

Congratulations the seller Boet Reinecke and the buyers Jan Geritsen of De Liemers Boerdery, and Mr. KM Grobler.

Lichtblick currently has 16 000 daughters in his proof and has been used in many countries as a sire of sons. Lichtblick was imported into South Africa and marketed by Genimex from German Genetics International.

Chris Cloete of Genimex receives the award from Mrs Wilene Roberts.

Two Lichblick heifers bought by Jan Geritsen of De Liemers Bdy

Eensgezind Plase

Presteer tydens die 2010 Philadelphia Kudde Kompetisie en is bekroon as algehele wenners

Toekennings aangewys gedurende die 2010 kudde kompetisie. Beste Uier in Kompetisie: Boss Iron (06.40)

Behaal plekke in al drie laktasie groepe:

1 ste Lakt. Groep Malin, Radical, Banderas, Zarik, Zarik. (plek)

2 de Lakt. Groep Woody, Fiction, Fiction, Fiction. (wen)

3 de Lakt. Groep Boss Iron, Farmer, Eric, Eric. (plek)

Daar was deurgaans besonderse kwaliteit wat die Louw's van Eensgezind se algehele oorwinning verseker het. Sedert Genimex se ontstaan is die Louw's baie lojale kliente.

Oor die jare het Eensgezind al beter in die Kuddekompetisie begin vaar totdat hulle welverdiend vanjaar as algehele wenners bekroon is. Pa Kobus Louw, Danie Louw en Enrico Tolken (Kudde Bestuurder by Eensgezind) werk as 'n span al jare saam en die prestasie is die gevolg daarvan. Genimex is al 14 jaar hier betrokke. Vandag melk hulle 570 koeie teen 37-40 lts stalgemiddeld met Bv 3.7% en Prot 3.15% - 3.2%.

Dankie en veels geluk aan die Louw familie. Rochè Cronjè - Genimex Agent Wes Kaap.

TWO NEW HOLSTEIN SIRES FROM

SEMENZOO ITALY

Two bulls that excel in all aspects of dairy production.
The semen is in short supply due to high demand and should be used carefully, or in embrio transfer programmes, in order to maximize their impact in your herd.

ARDEN

LAS FARM MR SAM ARDEN ET

Mr Sam X LAS Farm Mtoto Dadina VG 89 (Mtoto)
X LAS Farm Mat Saptie (RC Matt)

Milk Kg	1259	
FAT Kg	66	0.18%
PROTEIN Kg	44	0.02%

Type	2.13
Udder comp.	2.47
Feet & Legs comp.	2.95

STRUIK

GIESSEN STRUIK 245

Shottle X Charity 504 EX 94 (Leader) X
Hannoverhill Raider Char EX (Raider)

Milk Kg	357	
FAT Kg	37	0.23%
PROTEIN Kg	26	0.13%

Type	3.26
Udder comp.	3.77
Feet & Legs comp.	3.26

Groot Belangstelling in Genimex Jersey Genetika

'n Uitstekende groep Q Luf dogters by Lukas Wentzel - Bonnievale

'n Dogter van die bul DJ Lirsk by Pietie Uys - Swellendam

Die Blake dogters by Alfalfa het veral beindruk met hul uitstekende produksie en suiweleienskappe

Willem van Lingen (Genimex), Peter Larson (VikingGenetics) en Johan Rabie (Alfalfa) in druk gesprek

DJ Look dogters by Werner Hartman - Bonnievale

Peter Larson van Viking Genetics het 'n baie leersame lesing aangebied oor onderwerpe soos onder andere die Deense teel doelwitte

By Tienie Durr van Malmesbury is fantastiese dogters van die bul Q Zik gesien

Besonderse uiers met veral uitstekende agteruiers en speenplasing, was kenmerkend van die Zik dogters

Chasing BW: Cost/Benefit

Peter Gatley
General Manager Genetics, LIC
October 2010

Background

Breeding Worth (BW) is an economic index comprising the seven traits deemed to have the greatest impact on net farm profit. Decisions regarding the component traits and their respective weightings are made by a pan-industry body, NZ Animal Evaluation Ltd (NZAEL), based on science and economics, with an industry-good focus.

Since its introduction as the National Breeding Objective in 1996, BW has been found to be a valuable asset to the industry, and has achieved a high level of credibility throughout the industry.

Because genetic gain is both permanent and cumulative, even modest annual increments have an enormous impact on productivity, and indeed, genetics is considered to be the largest single contributor to on farm productivity improvement, accounting for 60% of the increase in per cow production. Consequently, any improvement in the annual rate of genetic gain will be important to the retention of New Zealand's low-cost milk production status.

It is widely accepted that the biggest potential boost to the rate of genetic gain since the development of progeny testing and Artificial Insemination over 60 years ago, will come from the science of genomics. It is now clear that genomic evaluation significantly increases the reliability of young sire evaluations, but there are different views on the subject of its readiness for market, and its value. This paper examines the evidence.

How does genomics confer an advantage?

For most of the last century, dairy cattle breeders world-wide have relied on observations of daughter performance to inform as to the genetic merit of sires. Today it is possible to analyse DNA from a newborn bull calf and the results help us predict how its daughters would milk, what they would look like, and even how they would behave in the shed. All of this is achieved while the calf is not even old enough to produce semen.

There are 3 billion base pairs in the DNA, and genomics involves identification of many thousands of the variants that are most informative in regard to heritable traits. Clearly this is a hugely complex task, and it is made more so by the fact that some genes interact with each other and/or with the environment. Understandably then, our current knowledge of genomics is embryonic, so there will be plenty of surprises, but also huge gains to be made as we unravel the mystery.

The primary advantage of genomics in its current form is achieved by shortening the generation interval. The importance of this is seen in the breeders' equation which drives genetic gain for any trait, in any species:

$$\text{Genetic Gain} = \frac{\text{Selection Intensity} \times \text{Accuracy} \times \text{Heritability}}{\text{Generation Interval}}$$

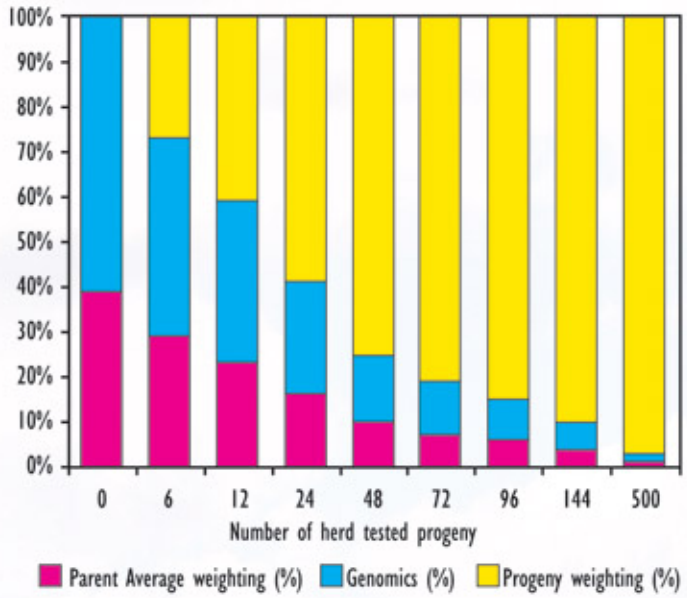
For example, halving the generation interval can be expected to double the rate of genetic gain. By circumventing the need for progeny testing, which takes several years, and enabling bulls to be selected for widespread use as yearlings or two-year-olds, the generation interval is substantially reduced. The main issue then, is the reliability of the genomic evaluation.

A typical bull calf with only ancestry information in its evaluation may have a reliability of ~35%, and a normal 80-daughter progeny test will lift individual reliability to 80%+. By comparison, the addition of genomic information to ancestry will lift individual bull reliability to 50-55%, but by using groups of young genomically selected bulls, team average reliability can reach acceptable levels and certainly exceed 90%.

As long as the team average exceeds the BW of the alternative option, the farmer will achieve a net benefit in genetic gain.

How much influence does genomic evaluation have on a bull's evaluation?

Official BW for a young sire will be heavily influenced by genomic evaluation, but as progeny test data accumulates, the influence of genomics diminishes. By the end of the first lactation of a typical crop of ~80 daughters, genomics accounts for <15% of the sire's evaluation. When a widespread proof is achieved, genomics will account for <2% of the total.



Is there a systematic over-estimation in genomic evaluations?
Yes, this has been observed in NZ as well as the USA and Europe. The important question is whether or not, after any slippage, a net benefit has been achieved relative to the alternative.

In New Zealand, NZAEL have recommended that slippage be factored in to expectations by adjusting team averages downward by "15-30" BW units. LIC has chosen to deduct 20 units from its predicted team averages, and these adjustments feature on the Premier Sires wall charts that are provided to all dairy farmers. Note that if the 20-point reduction does occur, the teams will deliver considerable advantage over the alternative Daughter Proven product (HF 18 BW, J 39 BW, KX 38 BW). Even a 30-point reduction would deliver value to users of the Jersey and KiwiCross service this spring.

LIC is not comfortable with the over-estimation which appears to apply particularly to the Jerseys. LIC scientists are working with NZAEL on a solution that will obviate the need for any adjustment to official BW.

Have genomically selected bull teams delivered a BW advantage?
LIC made the decision to offer teams of genomically selected bulls at the earliest opportunity, in 2008, based on its retrospective analysis of prior bull teams. Many of the bulls used in 2008 now have a full lactation progeny test, and the others have ~50 daughters with typically one herd test. Based on the latest official NZAEL evaluations (9 Oct 2010), all three breed teams show some BW advantage as shown in the following table:

(2008 PS teams)	HF	J	KX
Predicted BW diff.	7	24	33
Current BW diff.	4	8	30
% of insems	1	34	64

With the addition of more progeny test data, it is possible that the advantage could be eroded, particularly in the case of Holstein Friesian and Jersey where the differential is small. It is, however, important to bear in mind the following points:

- The Holstein Friesian DNA Proven team advantage was predicted to be only 7 units, so the slippage to date has not been large. The reason for the small advantage was the fact that the 2008 Daughter Proven team was exceptionally strong.
- The Holstein Friesian team was withdrawn very early in the 2008 season and so accounted for only 1% of the inseminations.
- The Jersey team was negatively impacted very heavily by two bulls and the potential for this to occur in future has been diminished by significantly increasing the size of the teams used (from 16 bulls to 25 bulls), and by utilising all bulls in equal proportions, whereas in 2008 some bulls were more heavily used than others.
- The Jersey team differential advantage is small, but it conferred an additional benefit in respect of genetic diversity as the 2008 progeny tested team was in desperate need of new bloodlines.
- Likewise the 2008 KiwiCross team, albeit that it appears to have delivered a considerable benefit in BW terms, also provided some much needed genetic diversity at a time when the progeny test team was heavily dependent on one bull (Scotts Northsea) which was in the team for an extraordinary fourth consecutive year.
- Nearly two thirds of the inseminations were provided by the KiwiCross team which retains an impressive (30 BW) advantage over the alternative. It is noteworthy that 33 BW units was the differential predicted on the 2008 wall chart.
- LIC offered farmers the opportunity to avail themselves of this new technology as soon as it was possible. Many welcomed this approach which enabled farmers to make an informed individual choice about the risk and reward.
- LIC believes that the advance in our knowledge of genomics has been hastened because of the bold move to launch commercially. If this were strictly a research project, there would not be the same urgency or willingness to commit resource.
- It now appears that a net advantage has been conferred by the 2008 launch in respect of genetic gain, and it should be noted that each BW unit in the national herd is valued in industry good terms at ~$4m of net farm profit.

Only some of the bulls used in the 2009 DNA Proven teams now have a part-lactation proof, and others will not have daughters in milk until next spring, so little can be inferred by examining their current evaluations, but at this stage, we expect the bulk of the inseminations to have delivered an advantage. The following table provides the latest information:

(2009 PS teams)	HF	J	KX
Predicted BW diff.	22	34	41
Current BW diff.	10	37	36
% of insems	16	25	59

What BW advantage is required to justify premium pricing?
The genomically selected bulls provided by LIC currently carry a premium of $5 per insemination ($4.50 for most clients as the 10% Investamate discount applies). Taking into account the time-value-of-money and the number of inseminations required to generate a heifer replacement, NZAEL have calculated that an advantage of more than 10 BW units is required to justify the investment.

On this basis, most of the inseminations carried out since 2008 are expected to deliver a net benefit to the early adopters, but it is contended that there is more to the value equation than just BW.

... continues pg13 >

The issue of genetic diversity, as outlined above in relation to the Jersey and KiwiCross bull teams in 2008, is a factor which will be worthy of special consideration from time to time depending on the strength of the Daughter Proven bull teams. That is, moving to the DNA Proven option can provide instant access to new bloodlines.

The potential value to be generated by genomics has yet to be accurately ascertained. As the technology advances, it is estimated that the annual rate of genetic gain could increase by 30-50% or more. Even at the low end of this scale, the industry good value would be huge.

LIC's view is that genomically selected bull teams will be priced at a level that will justify a rational economic decision to utilize the technology for the benefit of individual farmers and therefore the industry as a whole. Farmers who want their herd BW at the top end of the bell curve will be aware that it will be increasingly difficult to reach the upper quartile without making use of genomically selected bull teams.

How is genomic technology advancing?

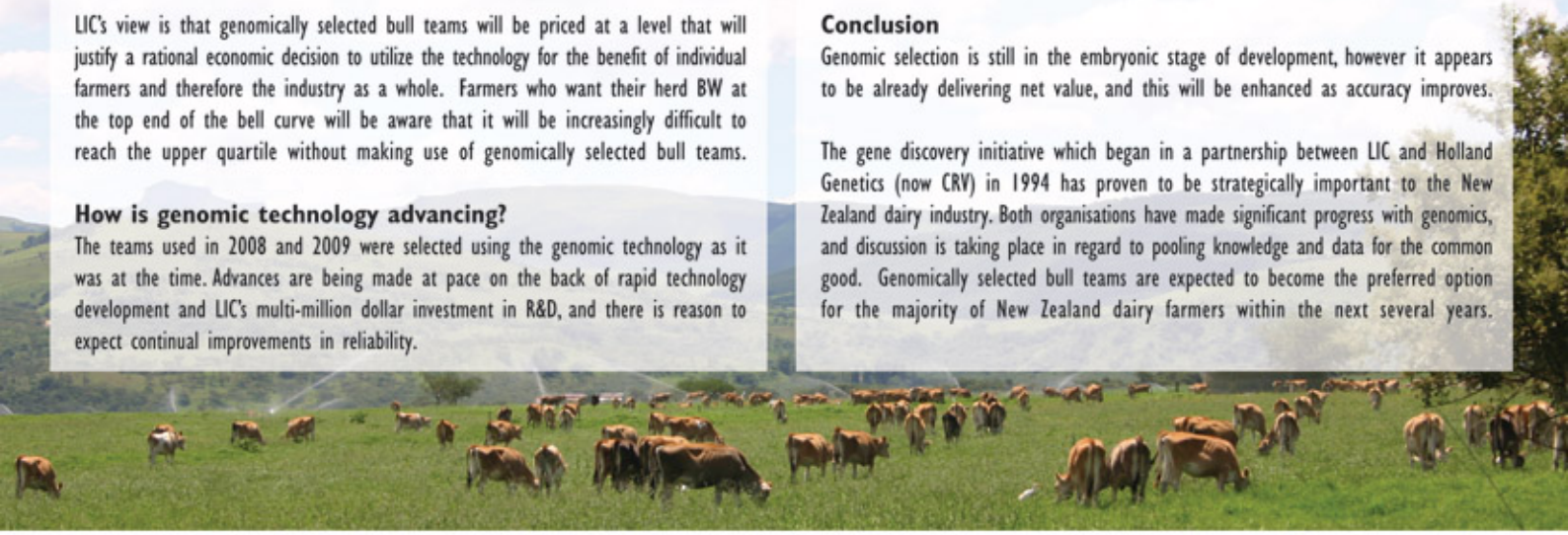
The teams used in 2008 and 2009 were selected using the genomic technology as it was at the time. Advances are being made at pace on the back of rapid technology development and LIC's multi-million dollar investment in R&D, and there is reason to expect continual improvements in reliability.

- Each year more progeny tested bulls become available for genomic profiling to add to the dataset.
- Until recently the genomic analysis has relied heavily on 50k SNP panels. High density panels (>500k SNPs) are now becoming available.
- Genotyping of females including bull dams and SPS daughters is expected to add further value.
- The statistical tools used to identify the correlation between phenotype and genotype are being continually refined.
- Collaboration between LIC and other research initiatives has begun and will continue.

Conclusion

Genomic selection is still in the embryonic stage of development, however it appears to be already delivering net value, and this will be enhanced as accuracy improves.

The gene discovery initiative which began in a partnership between LIC and Holland Genetics (now CRV) in 1994 has proven to be strategically important to the New Zealand dairy industry. Both organisations have made significant progress with genomics, and discussion is taking place in regard to pooling knowledge and data for the common good. Genomically selected bull teams are expected to become the preferred option for the majority of New Zealand dairy farmers within the next several years.



INBREEDING

A lot of talk and speculation goes into the concept of inbreeding. Preventing inbreeding is easier said than done, some even claim that there is value in inbreeding. However one looks at it inbreeding is a problem. Just look at any of the many lists of AI sires that are so easily and liberally thrown around and you will be shocked as to the inbreeding coefficient of some bulls that are being sold.

I have noted bulls that have inbreeding coefficients of higher than 13%.

Most breeders will be aware of inbreeding when selecting AI sires to use on their herds. Most however will speculate and not know for certain if they should or should not use a bull.

Genimex realized that it was time to do something about this and contracted an Irish company "Farm Wizard" to develop a computer programme to assist breeders to prevent inbreeding in their herds.

This is NOT a computer mating program. The program simply takes the sire that a breeder would like to use and flags the possible matings where there is a risk of inbreeding.

The program is now up and running, the application for registered Jersey and Holstein herds is very simple as the data of the cows in the herd is available form the relevant society. For commercial herds the data will have to be captured.

For more information and the use of the programme please contact the Genimex office.
Chris Cloete

Genimex™

farmwizard

Below is an example of an inbreeding report generated from the programme.

Should the breeder use Impuls on cow number TEP 090049 then the inbreeding coefficient of the calf will be 12.5%. However if Impuls is used on a TEP 090065, the inbreeding coefficient of the calf will be zero.

NATIONAL ID	BREED	Q IMPULS-ET	Q LUF-ET	Q ZIK-ET	DJ IZZY-ET	DJ LIRSK-ET	DJ PLYS-ET	DJ ZUMA
TEP 090049	Jersey	12.5% *IB RISK*	0	0	12.5% *IB RISK*	0	1.5625%	1.5625%
TEP 090053	Jersey	12.5% *IB RISK*	0	0	12.5% *IB RISK*	0	0	1.5625%
TEP 090005	Jersey	12.5% *IB RISK*	6.25%	1.5625%	12.5% *IB RISK*	6.25%	0	4.6875%
TEP 090007	Jersey	12.5% *IB RISK*	6.25%	1.5625%	12.5% *IB RISK*	6.25%	0	4.6875%
TEP 090065	Jersey	0	1.5625	12.5% *IB RISK*	0	1.5625%	0	12.5% *IB RISK*
TEP 090067	Jersey	0	9.375% *IB RISK*	1.5625%	0	9.375% *IB RISK*	3.125%	4.6875%
TEP 090069	Jersey	0	1.5625%	12.5% *IB RISK*	0	1.5625%	0	12.5% *IB RISK*
TEP 090071	Jersey	0	1.5625%	12.5% *IB RISK*	0	1.5625%	0	12.5% *IB RISK*
TEP 090072	Jersey	0	4.6875%	12.5% *IB RISK*	0	4.6875%	0	14.0625% *IB RISK*
TEP 090073	Jersey	12.5% *IB RISK*	0	0	12.5% *IB RISK*	0	0	1.5625%
TEP 070043	Jersey	0	18.75% *IB RISK*	3.125%	0	12.5% *IB RISK*	0	6.25%
TEP 090044	Jersey	0	12.5% *IB RISK*	3.125%	0	12.5% *IB RISK*	1.5625%	6.25%
TEP 080004	Jersey	0	6.25%	1.5625%	0	6.25%	0	3.125%
TEP 080005	Jersey	0	9.375% *IB RISK*	1.5625%	0	9.375% *IB RISK*	0	4.6875%
TEP 080006	Jersey	0	7.03125% *IB RISK*	2.34375%	0	7.03125% *IB RISK*	1.5625%	3.90625%
TEP 080007	Jersey	0	6.25%	1.5625%	0	6.25%	0	3.125%
TEP 080011	Jersey	0	0	0	0	0	0	0
TEP 080012	Jersey	0	0	0	0	0	0	0
TEP 080013	Jersey	0	6.25%	1.5625%	0	6.25%	0	3.125%
TEP 070027	Jersey	0	12.5% *IB RISK*	1.5625%	0	6.25%	0	3.125%
TEP 080027	Jersey	0	7.03125% *IB RISK*	2.34375%	0	7.03125% *IB RISK*	0	3.90625%
TEP 080039	Jersey	0	7.8125% *IB RISK*	3.125%	0	7.8125% *IB RISK*	1.5625%	4.6875%
TEP 070012	Jersey	0	6.25%	1.5625%	0	6.25%	0	3.125%

Q ZIK
IS BESLIS DIE LEIER!

IN DIE nuutste SA ontledings van September 2010, bou **Q Zik** voort op sy reeds verstommende prestasies. Met reeds duisende dogters in Denemarke bevestig sy Suid Afrikaanse nageslag net weereens wat 'n super bul hierdie is.

Nie alleen beklee hy nou reeds 'n geruime tyd die Nr.1 SAINET posisie op die lys vir aktiewe bulle in Suid AfrikA nie maar is daar 12 van sy dogters onder die top 20 koeie in Suid Afrika. 'n Ongelooflike prestasie en wat meer is, - **die** 20 dogters het 'n gemiddelde uier indeks van 115!

Sy sterkpunte is beslis 'n fantastiese produksie ontleding waarvan die proteien afwyking van meer as + 0.25 %, uitstaan. Verder teel hy dogters met gemiddelde grootte, uitstekende bene en hoewe en veral besonderse uiers. Lanklewendheid word ook versterk met uitsonderlike lae somatiese seltellings. Q Zik is nog steeds beskikbaar.

Die Nr. 1 bul tans op die internationale arena - **DJ Zuma** is tans sy mees populêre seun. **DJ Zaga**, nog 'n seun van Q Zik is ook 'n uitstekende keuse vanweë baie goeie tipe en produksie ontledings. Baie geluk aan Tienie Durr van Preekstoel Jerseys - Malmesbury, wat Zik intensief gebruik het en nou voorwaar die vrugte daarvan pluk!

COMPNR	NAME	SIRE	SAINET
62552385	Preekstoel 05205	Q Zik-ET	117
64940935	Tierwil Erina	Beulah Taranak Badger-ET	116
49190648	Elevation Jace Bev 1	Windy Willow Montana Jace	115
62552658	Preekstoel 05170	Q Zik-ET	115
61785168	Schoongezicht 05155 Act Snowlindy	Forest Glen Avery Action-ET	115
49801285	Preekstoel 04143	Q Zik-ET	114
63012041	Preekstoel 06101	Q Zik-ET	114
62552757	Preekstoel 05181	Q Zik-ET	114
64976798	Elevation Jace Morn 3-ET	Windy Willow Montana Jace	114
62658166	Preekstoel 0602	Q Zik-ET	114
62658216	Preekstoel 0607	Q Zik-ET	114
64242555	Preekstoel 06187	Q Zik-ET	114
64242779	Preekstoel 06110	Q Zik-ET	114
64242902	Preekstoel 06126	Q Zik-ET	114
44607471	HI-Klaas Fabs Robin	Molly Brook Berretta Fabulous-ET	113
47294509	Elevation Lemvig Lee-ET	Fyn Lemvig	113
62318696	Boulloff Ziks Diana	Q Zik-ET	113
48897623	Cohanma Avery Mandy 2de	Bancrest Lester Avery-ET	113
49801202	Preekstoel 04131	Q Zik-ET	113
48578991	Schoongezicht 04045 Quince Melba	Windy Willow Montana Jace	113

South African Jersey Adventure

with Genimex staff & customers

comments by **Peter Larson**

HAVING NOT VISITED South Africa since 2006, I was pleased and excited to be invited by Genimex. I was looking forward to see how the Jersey breed had progressed, to see how different types of genetics expressed themselves and not least to see how daughters of Danish bulls were doing.

It was great to see the herds and especially that the cows were presented in daughter groups and not as individuals. It gave the viewer a good impression of how the sire is breeding and made it possible to compare the groups and the sire effect.

During earlier visits the focus has been on individuals, which does not leave one with a reliable picture of how the sire is breeding. All sires can produce an excellent individual (and the opposite).

I was most impressed by the groups of cows from Danish bulls. In general more stature, capacity and strength than other cow groups, along with excellent udders and high production with high tests. These cows were working, they were healthy and long living, - and last but not least: THEY MADE PROFIT and satisfied their owners.

I was very pleased to be given an opportunity to make a presentation, focusing on modern cattle breeding and new techniques. Genomic selection is a revolution in cattle breeding, increasing the genetic gain with 50% and changing our way of thinking and acting. We are now testing all potential bulls and bull dams at a very early age and we foresee that in the very near future we will use bulls much younger to what we are doing today. Reliability on the Genomic selected bulls is still low, but increasing with more bulls tested, better gene marker tests and international cooperation. Later in 2010 Danish Jerseys and US Jersey will exchange data to extend their reference groups and increase reliability, in mutual interest.

To see and compare daughter groups also gave me an opportunity to explain the Danish way of publishing breeding values. Especially the Danish linear classification causes misunderstandings. The Danish breeding values always refer to a reference group that consists of Cows that have calved first time within the latest 24 months. In that way you can see if a bull will give you progress compared to the reference group (the population). If breed average, or the deviation, is low for a trait, a bull with a low breeding value can actually bring progress. Used in a population, low on the same trait, he can give an excellent result. It helps a lot understanding this, when visiting South Africa and see all different kinds of Jersey genetics expressed.

Finally it gave me great pleasure to see that our new International top bull, DJ Zuma, will be an excellent sire to use on daughters of FYN Lemvig sons, such as Q Laf, Q Luf, Q Leerden, DJ Look and DJ Lirsk. DJ Zuma will be an excellent choice for Q Impuls daughters as well. But still there is plenty of room for World leader Q Impuls, - don't forget him!

I need to apologize for naming my top bull Zuma, - but he is not named after your President. I would never name a bull after a politician! Zuma is named after Sibusiso Zuma, the South African soccer player, with great success in Denmark. Sibusiso Zuma has scored spectacular goals in the Danish league. The two Zuma's will meet at our bull station, and I am sure that you will see a photo of the two in a later edition of this magazine.

Thank you to the Genimex staff for inviting me and for showing me around. Thank you to the breeders preparing visits and showing us excellent daughter groups and to all participants for good discussions.

You are all invited to Denmark next year! I would love to take you around, show you good herds and cows, along with a bit of our culture and nature, and pay back some of the fantastic hospitality I met in South Africa.

In the hope of success with your cows and your breeding,

Kind regards
Peter G. Larson
Breeding Manager/Executive Secretary
Danish Jerseys

Nageslag van Deense Jersey bulle presteer in die skou ring. Baie geluk aan die Tierwil & Rubicon Kuddes.

TIERWIL 0587 Vaar: Q Mirage-ET

Groot kampioen Swellendam, Suid Kaap Kampioenskappe 2009

Produksie:

	OA	M	B	P	B%	P%	MI	BI	PI
1	2/1	7813	330	278	4.22	3.56	118	115	113
2	3/1	8944	397	330	4.44	3.69	134	127	127
3	4/1	8810	361	331	4.10	3.76	130	113	126

Leeftydsproduksie 24192kg 3lakt. 375TKP

Aangewys as die beste koei op die 2010 Wes Kaap Jersy Klub Kudde Kompetisie.

Body: 89/117 FL: 90/104 Udder: 91/111 Final: 94/113

RUBICON ZIK'S ELVIRA 3RD Vaar: Q ZIK-ET

Reserwe jong koei kampioen, Royal Skou 2010

Produksie:

	OA	M	B	P	B%	P%	MI	BI	PI
1	1/11	6426	328	249	5.10	3.87	105	113	106
2	2/11	7610	377	300	4.95	3.94	109	111	110

Leeftydsproduksie 11660kg 2lakt. 364TKP

Body: 89/111 FL: 88/101 Udder: 89/120 Final: 88/115

BAIE GELUK

OVERBERG JERSEYKLUB!

Die Overberg Jerseyklub het op 16 September 2010 by die Agri Mega week 'n uiters suksesvolle aandskou aangebied. 'n Pragtige aanbieding het die hoë gehalte Jerseys besonders goed gekomplementeer. Dr Johan Jooste was die beoordeelaar en Genimex het die Senior Kampioen wissel trofee geskenk. Op die foto oorhandig Johan Muller van Genimex die wissel trofee aan Fasie De Kock met sy koei Serene Paramount Tonia (WDA 0515) wat aangewys was as die senior kampioen koei. Baie geluk Fasie!

Grandma delivers healthy 20th

ATE AWAMUTU GRANDMA is a mum again. Last year, Grandma, aka cow 140, proved it was never to late to find romance when she surprised her owner, Te Awamutu dairy farmer Gordon Kirkham, by quietly giving birth to her 19th calf in February.

Well she's done it again – Grandma, the name she's registered on in the farm's MINDA herd records – has calved again, taking her offspring tally to a staggering 20 calves. The average New Zealand cow has around five or six lactations (calvings) in her lifetime and says Gordon Kikham, Grandma, was definitely the oldest cow he has ever milked. According to the University of Alabama at Birmingham (US), one year of bovine chronological age is the equivalent to four human years - that makes the 22-year-old Grandma, in cow terms, an amazing, 88 years old.

In 2009, unbeknown to Gordon and Farm Manager Darius Culpan, the retired reliable milker had had a brief – and secret - romance in 2008 with a much younger, albeit injured, Hereford bull. It wasn't until she calved that the pair realised that her healthy looks were not, as they had believed, due to her retirement and the "extra meal she'd been eating since being put out to pasture" - but due to pregnancy.

The calf this year was somewhat less of a surprise, says Gordon Kirkham, as when she began to blossom, he realised she'd done it again, and that the daughter of LIC sire Maniapoto AB Mustang, had indeed been successful at getting in calf again.

"At the end of AB we noticed a young Jersey bull was showing a lot of interest in Grandma, who was in with the penicillin cows. "We had retired her (for the second time), or thought we had – she earned a good retirement, she has always been a reliable, good natured, fertile cow, maintaining a high PW of (production worth) of 198, even as she got older.

"We thought she was past it – but it was this young Jersey bull who tried his best to interest her that let us know she was in oestrus (cycling), however, he didn't get her in calf, the daddy is definitely a Hereford - we really didn't expect it to be possible for her to get in calf."

Gordon says Grandma is "definitely not" going back into the milking herd, but is being left in a paddock close to the farm dairy to mother her white faced bull calf until weaning, at which time they will try, once again, to retire the old girl. She has also adopted a calf, which she is also rearing.

"She's not missed a year - she has had 20 lactations - and will remain here on the farm and out to pasture until the end of her days - she deserves that," says Gordon who milks 850 cows on his 220ha dairy farm near Te Awamutu.

Gail Henshaw - Communications Advisor

DIVERSE BUT YET OUSTANDING TEAM OF AYRSHIRE BULLS AVAILABLE FROM GENIMEX.

Genimex has over the years always had a great line up of Ayrshire bulls available and this still is the case. The following sires are available from Genimex.

From Livestock Improvement New Zealand

Billy, Blaze and Desmond

From Taurus Services USA

Proven bulls - Garth and Lot

Young Sires - Double Whammy and Hammer

From Cattle Services (AYR) Ltd in the United Kingdom

Proven Sires - Blackthorn, Tryst and Crown Napier

Young sires - Prodigy, Magic, Marksman and Equerry

Please contact the office regarding availability and information on this group of outstanding Ayrshire sires.

PRESS RELEASE

VIKING GENETICS INTERNATIONAL

Q Impuls has produced half a million doses!

In the first week of October 2010, Q Impuls broke three records for a Danish Jersey bull: produced 500,000 doses of semen, 300,000 doses for export and 30,000 doses of sexed female semen. All new records for a Viking Jersey bull, and at the same time it places Q Impuls among the most popular Jersey bulls world wide – both for conventional semen and for sexed semen.

Q Impuls tops national charts and Interbull charts and therefore it is no wonder that he reaches enormous popularity among the cattle breeders world wide. Currently **Q Impuls ranks#1 in Canada and #4 in USA**, with more than 15,000 daughters in his American production proof and 8,000 daughters in his type proof.

Now Q Impuls has more than 8,600 daughters in Denmark, Sweden and Finland. As he is an older bull – turned 12 years at September 12th – some daughters already passed away. He has 12,100 daughters in his Nordic production proof and 5,800 daughters in his type proof.

Q Impuls - you will be impressed!

Q Impuls breeds tall daughters with good capacity, steep foot angle, shallow udders, good temperament and udder health. Q Impuls is among the world's best for protein production – both volume of milk and high tests. Second crop daughters show that combining Q Impuls with good udder pedigrees, you get some of the best offspring ever seen!

Q Impuls – the outcross bull

With 6% NZ, 25% Canadian and 69% Danish genes Q Impuls will be an outcross bull to nearly all others than the Danish cattle breeder. The Canadian genes come from the world famous paternal grandsire J Imperial. In the other three grandparent lines, you find FYN Haug and two times SKÆ Hede, both FYN Tved sons.

Sire of sons world wide

We already see the results of Q Impuls used as sire of sons in all the leading jersey populations: five sons in top 20 in USA, sons to come in Australia, South Africa, New Zealand, Canada and Great Britain and sons as DJ Izzy dominating in Denmark.

Q Impuls celebrated at his home in England

To start production of sexed semen Q Impuls was moved to Cogent UK's facilities in England six years ago. He has been pleased with the stay near Chester, and Danish Jersey has decided not to bring him back home to Denmark, even that it has been possible to produce sexed semen in Denmark since 2006. On Tuesday, October 5th, Danish Jersey President, Anders Levring, paid Q Impuls a visit, and celebrated his new records, along with the Cogent staff.

Any questions concerning this press release should be directed to:
Peter G. Larson, Breeding Manager Jersey • Tel. +45 8795 9420, e-mail pgl@vikinggenetics.com
Anders Levring, President of Danish Jersey • Tel. +45 8631 7814, e-mail anders.levring@jubii.dk
Assentoft, 5 October 2010

- DJ BROILER -

For all those breeders in South Africa who missed out on the Danish Jersey bull JAS BUNGY.

Genimex & VikingGenetics® proudly presents a great JAS Bungy son.

Pedigrees: JAS Bungy X FYN Lemvig X JAS Hot

Highlights from this outstanding proof:

NTM	19
Udder health	111
Chest width	117
Foot angle	117
Udders	112
Yield index	116

Genimex™

Tel: 012 667 1012 • Fax: 012 667 1015
E-mail: chris@genimex.co.za

VIKING GENETICS® INTERNATIONAL