



**It would not  
feel right  
milking any  
other breed**

**MEDIUM  
Sized Cows**

**JERSEY**  
the Perfect Choice

**VikRank Symbols**



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Rhys Thompson, a 4<sup>th</sup> Generation  
Jersey Dairy Farmer from the Mitta  
Valley in Victoria, Australia.



# A perfect profitable cow for a commercial farm

**W**hat does the perfect cow look like? It is a question that has been debated heavily by breeders for more than 100 years. It is also an issue that has been answered in many different ways. There is even a massive industry in cow shows, where breeders get their cows judged just by their look.

At VikingGenetics, we love cows, and we love the look of an excellent producing medium sized healthy cow and we have chosen to invest all our efforts in breeding for the most economical cow. We base our work on scientific facts and data, and that has given us high-producing, long-living, medium-sized, healthy cows. We breed cows that put money in the pockets of the owner. Here, we want to give you some more background information about our approach to breeding, and how that affects the size of cows.

In this issue of VikingNews, we have also interviewed a district veterinary from the Swedish Agricultural Board who gives us an inside take on her work where everything contributes to forming a natural defence against diseases in an animal welfare environment.

You will also get to learn more about ProCROSS and the latest study about Feed Efficiency from the University of Minnesota, new weights in the Nordic Total Merit (NTM), essential steps about genetic information and very exciting; the launch of VikingGenetics Deutschland (VGDE) and how we are operating in a world scenario to bring the best to our clients around the globe.

**Happy reading!**

**Thank you for following us!**



*David Stenkær Ravnkilde,  
Head of Business Development,  
VikingGenetics*



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# Investment in genetics that pays off - Medium sized cows

Medium sized cows produce more fat and protein and live longer than taller or smaller cows according to a study conducted by SEGES. Our optimal size, as stated in our breeding goal for VikingHolstein, is 148 cm.

By Claus Langdahl, Breeding Manager VikingHolstein

There are definitely many opinions about the optimal size of the cow. Some would say that she should be smaller, others that she should be larger and others again that a group of animals should be uniform and medium-sized.

At VikingGenetics, our focus in the VikingHolstein breeding programme is that the cow should not become any taller – or any smaller for that matter. The optimal size as stated in the breeding goal is 148 cm and the breed average is 148.6 cm at the moment for first calvers.

TABLE 1: HEALTH TRAITS AND CORRELATION TO STATURE

Trait	Correlation to stature
Yield (Kg Milk)	+18
Female fertility	-14
Udder health	-16
Hoof health	-20
Longevity	-35

*Bigger cows might have more yield but bad performance on other important traits as Fertility, Udder Health, Hoof Health and Longevity.*

*Source: Rasmus S. Stephansen, Ulrik Sander Nielsen and Anders Fogh, SEGES – published in the magazine “Dansk Holstein” #3 – 2017.*

VikingHolstein cow on average today, is close to the economic optimum – what we indicate as a medium-sized cow.

### The medium-sized cow is the most economical

There are good arguments for breeding for a medium-sized cow, and the main one is the most economical cow. She has a longer productive lifetime, less disease cases, such as hoof problems and needs less feed to maintain. Table 1 shows the genetic correlations that confirm this.

Some people prefer a large cow that can convert much roughage into milk and with higher slaughter value. It is true that there is positive correlation between a large cow and yield, but it is also a fact that the medium-sized cow is the most profitable because of its lower costs and longer lifetime and overall a more efficient cow.

### Height influences lifetime production

Cows taller than 155 cm produce significantly less solids (-193 kg) than cows of classification optimum height (148-150 cm) , see table 2. On the other hand, very small cows (135-140 cm) have lower lifetime production (-31 kg) compared to cows of classification optimum.

### VikingHolstein compared to other Holstein

The size of the VikingHolstein cow compared with the Holstein cow in other countries has been evaluated. The comparison of the major Holstein populations in the world with Holstein cow sizes and development includes all daughter proven bulls in the countries and data from 80,000 bulls. The conclusion is crystal clear.



**TABLE 2: EFFECT OF HEIGHT ON LIFETIME PRODUCTION MEASURED IN KG FAT+PROTEIN, EXPRESSED AS DEVIATION FROM HERD AVERAGE.**

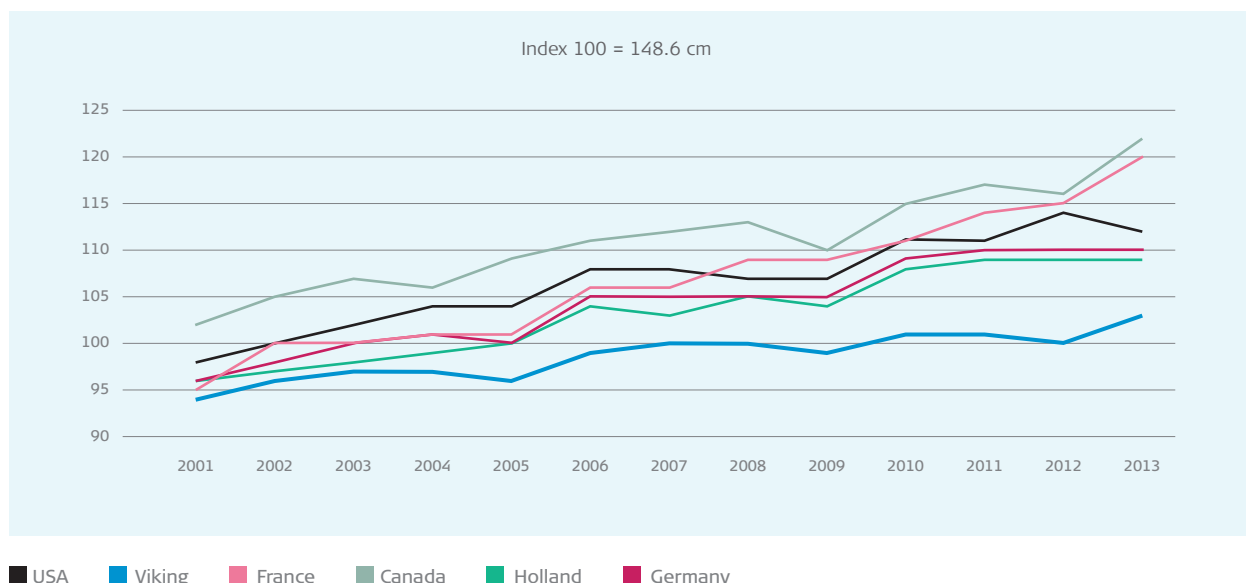
	1 (135-140 cm)	2	3 (148-150 cm)	4 (148-150 cm)	5	6	7	8 ( >155 cm)	9
Share of cows	2%	7%	13%	36%	20%	16%	4%	1%	-
Kg fat+protein	-31	+2	+32	+30	-5	-43	-99	-193	-

Source: Rasmus S. Stephansen, Ulrik Sander Nielsen and Anders Fogh, SEGES – published in the magazine “Dansk Holstein” #3 – 2017.

Figure 1 shows the figures of cows from bulls born in 2001 to 2013. The figure clearly shows that the VikingHolstein cow today is smaller than Holstein cows in other countries. She has grown over the years, but not since bulls born

in 2007. That is very satisfactory and shows that VikingHolstein, despite the influence from foreign sires, has managed to keep the medium-sized cow, the opposite of cows in North America in particular. ●

**FIGURE 1: DEVELOPMENT IN SIZE FOR HOLSTEIN COWS IN MAJOR HOLSTEIN POPULATIONS BASED ON BULL BORN 2001 TO 2013.**





# “In our barn Mastitis is 1% in average, and we are happy with this”

Erik Dolby and his wife Anne-Marie have been breeding for a medium sized cow at Fuglsøgaard farm in Denmark and as a result of this strategy, they are now increasing production while decreasing diseases in their herd.

By Uliana Langeland, Marketing Department VikingGenetics

**F**uglsøgaard farm is owned by Erik Dolby and his wife Anne-Marie and located in the Central Jutland region of Denmark, around three kilometres inland. The farm produces 12,880 kg milk on average per cow and uses the milk parlour system (side by side with fast exit). For several years, Dolby has focused on breeding for medium size Holstein cows and today he can see the results of this breeding strategy. Dolby is pleased with the performance of the herd when it comes to production and the health status of his cows.

“When choosing bulls, we go for the ones that breed medium size

cows, and this is because optimal size cows are easier to manage for our employees. We have become better at feeding the cows, so they grow bigger and through breeding, we are able to compensate for this trend and achieve the cows with the size we aim for.” This focus on size has been particularly important because of their barn system, as the pens are not suitable for cows that are too big.

Dolby explains that at his farm they consider medium cows offer a lot of advantages, including excellent health and a longer productive life. “On our farm we like to see healthy cows that look well. Mastitis fre-

quency is 1% on average, and we are happy with this,” he says.

He also reports that lifetime production has increased in recent years and explains that the reason is that cows have become stronger in the body. What is more, smaller cows mean fewer problems with hooves and stronger feet and legs in general. Another important benefit of focusing on medium size in the breeding strategy is easy calving. The herd uses 100% X-Vik in heifers and this results in excellent calves with good size. For cows, calvings are also very easy.

Regarding the breeding strategy, the herd also focuses on improving health. “We are sad when we are





» It is pleasing to walk through the barn and see all the cows are doing well and none has health problems because they are too big «

Erik Dolby,  
owner of Fuglsøgaard farm.



forced to cull cows because of health problems. This is now a very rare occurrence, cows stay in the herd and produce well, and we are very satisfied with these results.” Dolby also mentions that hoof health has improved a lot and farm employees perform hoof trimming on animals. There is no occurrence of disorders such as sole ulcer.

#### **Better profitability and easy to manage herd**

Dolby emphasises that focusing on medium size is beneficial in terms of better profitability and the cows are easy to manage. “Our cows are easy to take care of and it is pleasing to walk through the barn and see all the cows are doing well and none has health problems because they are too big.”

#### **Future breeding goal at Fuglsøgaard farm**

The future breeding goal will stay focused on breeding for a Holstein cow that is moderate in size and maintaining the heavy focus on improving udder health. “We are aiming to increase time in production by one more year and achieve 15,000 kg milk average production per cow per year with an average lifetime production of 50,000 kg milk”, he states.

Fuglsøgaard farm proves that giving medium size and health a high priority in the breeding strategy definitely yields excellent results. Most importantly, this investment in genetics pays off more and more with each generation of cows, and with the consistent focus on improving specific traits over time, the improvement in

herd performance is easy to see. What is more, genetic improvement is permanent and does not require any extra effort from dairymen. ●

#### **Fuglsøgaard farm in numbers**

- 550 VikingHolstein cows
- 12,880 kg milk, 3.97% fat, 3.42% protein
- Average daily production per cow: 45.8 kg
- SCC 140,000  
Mastitis frequency: 1%
- Hoof disorders frequency: 3%

Sofia Muñoz, district veterinary based on the Swedish west coast:

## “We always use a narrow spectrum of antibiotics”

Sofia Muñoz is employed by the Swedish Board of Agriculture (SBA) and she explains that they are not only responsible for border control and official tasks but are also active in both large and small animal practices. “To ensure that all animals have access to veterinary care even if the owner lives in a remote area and therefore we also ensure animal welfare is safeguarded,” she says while explaining about cow inspections, registration systems, low use of antibiotics and protocols for the transportation of cattle for breeding.

### **What are the main duties for the Swedish Agricultural authorities with regard to cow inspections?**

The Swedish Board of Agriculture (SBA) collects data from different sources such as calving, purchase, trading and culling. The SBA also obtains data such as treatments reported by veterinarians and farmers on an individual basis. The data include all herds that send data to the Swedish Cattle Database, that also obtains data from other sources such as on hoof-trimming, artificial insemination, milk analysis, milk production, slaughter data and conformation classification. A livestock cooperative, Växa Sverige, maintains and manages records from the Swedish Board of Agriculture.

### **What is the aim of the cow register in Sweden?**

The records are used to be able to trace animals in the event of outbreaks of animal diseases. And of

course the information is used in the evaluation of breeding values for health traits for bulls and cows in the Nordic countries.

### **What benefits do farmers get for entering data in the cow register?**

It enables them to compare their herd with national benchmarks and to see trends over time. They can also view statistics and how their herd has developed over time.

What is more, all information from the herd is held in the database including information on each individual cow regarding e.g. milk production. It also provides a basis for advisory services such as calculating feeding rations and I can use it in my daily work advising farmers that I see regularly and that enables me to implement improvement schemes. It is the best management tool on herd level.

Many farmers also feel proud to contribute and view the registers as quality measures and a tool for analysis purposes.

### **The use of antibiotics is very restrictively controlled in Sweden; can you describe how the process to get antibiotics for a farmer works? What are the most common reasons a vet prescribes antibiotics?**

In Sweden we only use antibiotics if a vet determines that the animal has a bacterial infection that its own defence system cannot overcome, or not using antibiotics would entail unnecessary suffering.

A farmer can only get antibiotics on prescription from a vet for an individual animal.

A couple of years ago, farmers that have particularly healthy animals were permitted to keep certain medications on the farm if an approved vet makes regular visits. The vet then provides preventive counselling at one to six-week intervals depending on the herd size and overall health status.

Most cases treated with antibiotics in cattle relate to mastitis in dairy cattle where the most common treatment is penicillin.



We always try to choose as narrow a spectrum of antibiotics as possible and penicillin is still effective. We make a bacteriological examination of milk from each individual cow in every case of mastitis to determine which pathogen caused the mastitis. Cows with mastitis caused by a pathogen resistant to penicillin (positive to betalactamase) are usually then culled.

Swedish animal production actually has the lowest use of antibiotics in the EU (European Union) and I am very proud to be a part of that.

#### **How important is the welfare of the animal (cattle breeding) to Swedish authorities?**

In Sweden, animal welfare is regulated by the Swedish Welfare Act that

stipulates that all animals should be treated well and must not be subjected to unnecessary suffering and disease. Animals, whether a dog or a hundred cows, must be kept in a good environment that allows them to express their natural behaviour. The concept of natural behaviour is important in Swedish legislation.

Animals should be kept so that they are motivated to express their natural behaviour.

Animals should be allowed free range and tie stalls are therefore being phased out.

#### **Can you give us examples of some of the protocols regarding cattle breeding welfare?**

One practice that makes Sweden unique is that all cattle must spend at least 2-4 months a year outside.

The length of time depends on where in Sweden the herd is located. In the further north, farmers are only required to let out their animals for two months a year but in the south, four months is a minimum.

#### **What are the main rules regarding transport of cattle?**

In Sweden, you are allowed to transport cattle for a maximum of eight hours. You are permitted to extend cattle transport up to 11 hours if you comply with special requirements such as providing water and feed in transit. You are never allowed to transport gestating animals within four weeks of calving and three weeks after calving. If the journey is to a slaughter house, the maximum is eight hours but occasionally up to 11 hours is permitted if the slaughter house is a long distance away. ●

*Sofia Muñoz is a district veterinarian based on the Swedish west coast with the fine task of ensuring that animal welfare is secured.*



# New weight in NTM to fulfill the future needs of dairy cows

By Lars Nielsen, Head of Breeding VikingGenetics

The Nordic Total Merit (NTM) index is an excellent tool to detect the most profitable bulls and cows for dairy business with respect for the balance between production, cost reducing traits and health.

The NTM platform is very stable, and smaller updates are done on regular basis to guarantee optimal work of the index. Nowadays, more updates are taking place where all conditions including financial models are reviewed with support from scientists, genetic experts, farmers and other stake-holders to ensure the best possible index for selection of genetics to the future needs. The last two years we have been in a process to define the optimal NTM based on facts - and now we are ready to explain more about it.

## What has changed?

As the NTM is very stable the changes are quite minimal even though all conditions have been reevaluated.

The main changes are:

- More focus on concentrated milk
- More focus on health and production in later lactations
- Still very big progress in all health and reproduction traits

## Concentrated milk

The production is the main income for dairy producers and there is still a focus on increased production in the future. To ensure that growth is done as efficiently as pos-

sible we have risen the weight on content in milk for all breeds and, therefore, punish bulls with low components. As there is an expected high demand on fat in the future we have increased the relative weight on fat more than on protein – but there will be a vast increase on both fat % and protein % and still genetic progress in kg milk.

## Longer lasting cows

As a combination of better genetic longevity potential and better management, the cows are staying longer in the herds and replacement rates are in general decreasing. For that reason, we have increased the relative weight on 3rd and later lactation, so now counts for 45 % compared to 20 % in the past.

## Big response on health and fertility

After the revision of the NTM, we know there is still huge genetic progress on all health and fertility traits ensuring an excellent balance between production and health. Even though we go for a higher response on kg fat and protein, we are sure that we are not damaging the progress in cost reducing and animal welfare traits.

NTM is with the updated economical weight an even stronger tool to predict the most economical bulls and cows for you. The value of NTM per unit/per year is now 8 Euro for VikingJersey, 9 Euro for VikingRed and 10 Euro for VikingHolstein. ●

**TABLE 1: CORRELATION BETWEEN PRODUCTION INDEX AND INDEX FOR % FAT AND % PROTEIN WITH OLD AND NEW INDEX.**

	Fat %		Protein %	
	Old	New	Old	New
VikingHolstein	0.20	0.39	0.22	0.33
VikingRed	0.09	0.24	0.11	0.19
VikingJersey	-0.05	0.06	0.04	0.12

Table 1 shows that the correlation between fat % and protein % to Production Index increase very much. So, a clear positive trend in components can be expected in the coming years. This fit into our strategy as it is easier and healthier for cows to produce less water and more solids.



**VIK RANK**  
Tailor-made for your breeding goal

## New categories in VikRank

For a long time, we have used VikRank, a tool that helps categorise bulls that suit your breeding goal and to make it easier for you to select the right bulls. We have now updated the categories to include all our new information and have added Hoof Health and VikingDefence as two new categories. However, you can still create your own goal in VikingCustomized. The best bulls in each group will be labelled with the icon for that group, so the VikRank tool is now more integrated in the web page.

All the bulls on the lists are top-ranked in NTM (Nordic Total Merit), meaning that all of them are profitable and ensure balance between health and production. Different weights are put on the traits and therefore the ranking differs from the NTM list. Check out our webpage at [www.vikinggenetics.com](http://www.vikinggenetics.com) or contact your distributor to learn more.



### **VikingDefence**

Ranked on the sum of three indices: Udder Health, Hoof Health and General Health. In addition, high score on production



### **VikingFertility**

Ranked on a single trait: Daughter Fertility index



### **VikingHoofHealth**

Ranked on a single trait: Hoof Health index



### **VikingGrazing**

Ranked on the calculated index: % Fat + % Protein + Daughter Fertility + Hoof health – Stature



### **VikingSolids**

Ranked on the sum of two sub-traits: % Fat & % Protein



### **VikingCalvingEase**

Ranked on a single trait: Calving direct index



### **VikingMilk**

Ranked on a single trait: Milk kg



### **VikingRobot**

Ranked on Milkability only, but good scores for rear teat placement and udder balance



### **VikingCustomized**

Customize the breeding goal based on the traits that matter the most to you.

[www.vikinggenetics.com/about-us/tools-solutions/vikrank](http://www.vikinggenetics.com/about-us/tools-solutions/vikrank)





# It would not feel right milking any other breed

Jersey Breeder, Rhys Thompson breeds Jersey cows in the upper reaches of the beautiful Mitta Valley, North East Victoria, Australia. Rhys along with his wife Laura and three children, George aged 4, Gracie aged 3 and Harriet aged 1, are the fourth generation also to own the family business and maybe young George will make it number five!

By Erik Thompson, VikingGenetics AU

Rhys farms off 325 hectares and milks his 300 Jerseys off 170 hectares of the farm. Some of the country is marginal and under bush (forest) but Rhys manages to rear his replacements and harvest all silage and hay on farm as well.

The dairy is a 20 swing over her-ringbone in which Rhys operates with the help of an extra worker for 2.5 days per week. Laura helps out with calf rearing and keeping the farm books.

Rhys is looking for a bigger framed Jersey and selecting his sires

with the advice of sales representatives from VikingGenetics and Warren Dodd from Tallangatta Farm Services.

## **VikingJersey, a perfect fit for the farm**

Rhys started including VikingJersey into his breeding programme three years ago and is very happy with the first completed lactation from VJ Husky and DJ Jante. The goal is to increase production without losing milk solids and Rhys sees the VikingJersey as a perfect fit to achieve it.

The average production for the breed is over 7000 litres at 6.0% fat and 4.2% protein and also “the extra health traits are a real bonus” says Rhys. The cows are averaging 440 kgs of solids with an average composite of 4.1% protein and 5.3% fat & 1.2 tonne grain fed per cow.

Asked if life was getting any easier after using VikingJersey, Rhys laughed and said: “if I free more time up through breeding better cows with less problems then I have more time to do other jobs on the farm. If I spent that extra time sat in the house playing with the children then Laura would hunt me outside anyway”.

## **Other challenges**

Current challenges on the farm are grain supplement costs as they have



*Rhys Thompson is the fourth generation in his family to breed Jersey cows.*



doubled with the shortage from drought throughout most of the country. “Being a mainly dryland farm we are always looking to the skies for rain, particularly in March to set us up with an autumn break to carry us into the new season. The feral Samba deer are also a challenge,

as the farm is surrounded by bush-land which provides a great habitat and the Samba love the improved pastures the farm has to offer. Samba deer are not a small animal and are capable of consuming many tonnes of quality pasture”, he says.

Generally, though Rhys and Laura love their farm life with their young family and are keen to keep building the multi-generational Thompson Farming Business well into the future for themselves and most likely the next generation of Jersey Breeders. ●



*Rhys Thompson is looking for a bigger framed Jersey and selects his own sires with the advise of VikingGenetics' Erik Thompson.*



# Identify genetic disorders at an early stage with genomic testing

Genetic data will soon be published in the Nordic national cattle databases in Finland, Denmark and Sweden, and be available on all bull profiles on the web.

By Lars Nielsen, Head of Breeding VikingGenetics

**T**he genomic information gives us an excellent tool to detect recessives, and knowing the status means we can continue to use the top bulls in our breeding programme and retain genetic variation.

Our plan is to eliminate the recessives that cause dead calves as quickly as possible. The carriers causing early abortions will also be eliminated over time, as we will always select a recessive free bull calf if two calves have an equal breeding value.

In January, genetic data including genetic disorders will be published for individual bulls on:

- National cattle databases in Denmark, Sweden and Finland.
- NAV (Nordic Cattle Genetic Evaluation)
- VikingGenetics, website, bull profiles

This is a part of a strategy to handle genetic disorders at herd level

## What is genetic information?

Genetic traits are a group of traits where the phenotype is related to a single gene, for example milk protein type, polledness and recessive disorders. Genomic selection enables easy access to this information, and a lot

of new information is emerging, which we see as a big advantage.

Recessives are a well-known phenomenon in breeding. A recessive gene is a gene that is masked by a dominant gene. In the past we were unable to detect recessives disorders until defective calves were born and we found the causal mutation. BLAD, CVM and BY are examples of this.

» It is important to control the role of inbreeding to ensure sustainable development «

LARS NIELSEN, HEAD OF BREEDING, VIKINGGENETICS.

Genomic test of females allows you to identify genetic disorders at an early stage and plan matings to avoid unsuitable matings and minimise the number of offspring with genetic disorders.

New inheritable disorders are being discovered all the time and this new information will be available for both bulls and females, and will be shown on bull profiles on the web. VG will regularly publish informa-

tion on new disorders we test for and which disorders we have zero tolerance for in the VG breeding programme, as well as the frequency of disorders in the population. At VikingGenetics, we are open and transparent and take responsibility for sustainable breeding.

## VikingGenetics manages all known recessives in its breeding programme

Mating plan programmes will manage all known disorders in the future and be able to avoid carrier x carrier matings if both parents have been genomically tested.

In the long term, it is important to control the role of inbreeding to ensure sustainable development. As such, it is important to highlight the fact that genomic selection has given us an excellent tool to detect and eliminate defective genes from the population. Together with our modern mating programmes, we can ensure that carrier x carrier matings are avoided.

By eliminating recessives step by step in a controlled way, we can continue to make superior genetic progress on important financial and ethical traits at the same time. ●





# VIKMATE

Online mating to enhance your herd

# Enhance your herd with VikMate



VikMate is an online tool to make optimal matings to create future generations, selecting the best bull for each female as easily as possible. VikMate controls inbreeding and gives you information on genetic improvement in your herd.

**Please contact your distributor**

to learn more and get a login: [www.vikinggenetics.com/contact-us/find-distributor](http://www.vikinggenetics.com/contact-us/find-distributor)



## VIKINGGENETICS<sup>®</sup>

Breeding for what truly matters



# High quality offspring by using cutting-edge tools in Rabbalshede farm in Sweden

Tomas Moberg and his brother Björn are the fourth generation with a passion for cattle breeding on Rabbalshede farm. They use all possible tools that VikingGenetics offers to increase health and production in their farm.

By Verónica Löfgren, Communicator at VikingGenetics

Rabbalshede farm is situated in the south of Sweden and is surrounded by forest and open landscape suitable for milk production. Moberg explains that they grow everything the cows eat on 330 hectares of land.

When the Moberg brothers succeeded their father in running the farm, they took over a herd with 120 cows with the ambition to improve the genetic level of the next generation of animals. Their father was already using some embryos at that time and was very interested in breeding.

Tomas Moberg inherited his father's interest in cutting-edge solutions to improve milk production. He has

intensified the use of genetics in the herd. "Breeding is so interesting because you feel you can always do something new and further develop the herd," he says.

He uses every possible advantage and tools for the breeding plan VikingGenetics has available for progressive farmers on the VG home markets.

GenVik (Genomic test of females) and ET (Embryo Transfer) combined with well-planned selection for robust cows are a perfect fit for Moberg's high-producing herd. "Faster breeding progress with genomic testing is music to my ears," he says proudly.

## Facts of the farm

- Two milking robots / 130 cows (70% VikingRed and 30% VikingHolstein)
- He started to flush embryos in 2015
- Production: 12,201 kg ECM
- Fat: 4.2%
- Protein: 3.6%



1403 (VR Faradi x VR Tuomi) is dam to a bull calf by VR Amaretto, a result from the VikingEmbryo programme.





*Tomas Moberg (in the picture) and his brother Björn from the Rabbalshede farm in Sweden are using all possible tools VikingGenetics has available to increase production and boost efficiency on their farm.*

### **A smart combination of traits**

Depending on how he selects and combines traits, he knows he will get the desired offspring. He uses innovative management solutions to make his life easier. “I am constantly aiming to get the best females. I use beef semen for cows low in NTM (Nordic Total Merit). I optimise the information from the genomic tests, which is one of the good things about using these management tools.”

He has found that his efforts pay off, much due to the robust-productive cow he is designing. “A cow that you don’t see, is the best cow, the one that never gives you any trouble”.

### **Picking up the fruits**

The work they have put in transforming the farm has given excellent results. The Moberg brothers have two of the best cows in 1402 (VikingHolstein) and 1403 (VikingRed). They were born on the same day and have been flushed at VikingGenetics in Skara at the same time.

“VR and Holstein are similar when it comes to economics even if Holstein produces a bit more. But the red cows will become a little bit older with better udder health in my herd, which I think is also the case in all countries,” he emphasises.

His farm has also given extraordinary bulls to VikingGenetics breeding plan; VR Tophat – a VR Tornado son and VH Omega, a son by D Onside. ●



*Rora 1402, (VH Sparky x VH Miracle) has been flushed in the VikingEmbryo programme.*



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» The most pleasing thing is that now we are achieving a 15% empty rate after seven weeks of Artificial Insemination and we are more than happy with that «

DENNIS LOMAX



# The relation between kg solids to bodyweight makes jersey the perfect choice

Dennis and Erin Lomax believe the Jersey cow is the perfect choice when it comes to kilograms of milk solids to kilograms of cow bodyweight. The Lomax's are achieving an average of 525 kg milk solids from a 475 average body weight cow.

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By Erik Thompson, VikingGenetics Australia

“**T**his scenario equates to a very profitable cow, lower input, higher output, I don't see the sense in feeding a big cow when I'm trying to keep my feed costs to a minimum” says Dennis Lomax. His conclusion comes from the facts: the bulk of the cows' diet is grass from the paddock and topped up with 1.5 tonne of grain (5 kg per day) per cow.

Dennis and Erin have just had their first child, Millie, and are share farming on Roger Peters' Farm in the lower reaches of the Mitta Valley. Roger is an Aussie Red enthusiast and Erin has come in with some of her own Holstein cows.

Currently the partnership is milking 595 cows through a fifty stand rotary. The herd is close to 50% Jersey cows and 50% Reds and a small number of Erin's Holsteins. The milking area is 190 hectares with 70 hectares of those under irrigation. They have another 70 hectares as a run off block and lease another 60 hectares. All silage is cut on farm and 200 tonne of cereal hay is purchased yearly.

The Lomax's have 320 yearlings and 250 rising 2-year old heifers. The reason for the large young stock numbers is that Dennis and Erin are planning to stay with the Jersey cow when they move to their own farm as they like this cow that gives them high component with lower input. Currently with the mix of breeds, the production is 6,500 litres 4.5% fat and 3.6% protein.

## **Interested in an efficient breeding plan**

Dennis and Erin are very interested in breeding. They discuss their breeding goals with VikingGenetics' sales representative each year to stay focussed on the cow they need.

In the early years, improvement was needed in udders, feet & legs and cow fertility. All of these areas have had substantial improvement over the last 10 years as very few cows are now leaving the herd with these regards. “The most pleasing thing is that now we are achieving a 15% empty rate after seven weeks of Artificial Insemination and we are more than happy with that” says Dennis.

Dennis and Erin believe Viking is providing the type of low cost cow they are looking for and they appreciate the great health profile of Viking Sires. Selecting from healthy sires has given the Lomax's a better quality of life through calving ease, cow fertility and a very hassle-free cow. “Our Jerseys walk home, get milked and return to the paddock to do it all again and again, with very little fuss”, he states.

The sire selection process is still similar each year with emphasis on udders, teat length (longer), feet, production, temperament and overall health traits.

Challenges on the farm itself are winter pugging (cows hooves sinking into the wet soil and causing damage to the pasture) which goes in hand with the expanding numbers of cows on farm over the years.

Dennis and Erin are set to take their Jerseys well into the future and they see the VikingJersey playing a major role in building their business. ●



**Excellent performance**

# **VR Tokyo**

**Bringing the future to you**



**VIKINGGENETICS<sup>®</sup>**

Breeding for what truly matters





**GENVIK<sup>®</sup>**

Genomic test for females

# Make profitable management decisions with GenVik!



GenVik testing gives you all the information about the genetic potential of your heifers and helps you make correct decisions at an affordable price. GenVik delivers a reliable and comprehensive genetic mapping on the health, fertility and production potential of your animals.

GenVik is a genomic test for females on the NTM scale.  
To order GenVik test, please contact your distributor.

Read more about GenVik on our website: [www.vikinggenetics.com/dairy/genvik-test](http://www.vikinggenetics.com/dairy/genvik-test)

# Remarkable genetic progress for VikingHolstein: 50 NTM units in 15 years

By Claus Langdahl, Breeding Manager VikingHolstein

From 2001 to 2016, the average Nordic Total Merit (NTM) of VikingHolstein bulls has increased by +50 NTM units in total, which is an amazing genetic progress. Table 1 shows this improvement in detail and where it is coming from.

Important traits such as production, udder, female fertility and udder health have improved the most.

The trait that has made the greatest progress is longevity with 33.7 units. This genetic progress has made it possible to now have a high-producing, healthy VikingHolstein cow with the potential for high lifetime production. ●

*\* Hoof health has less improvement than other traits since it was not introduced to NTM until 2011.*

**TABLE 1: AVERAGE GENETIC LEVEL OF VIKINGHOLSTEIN BULLS BORN IN 2016 AND THE GENETIC PROGRESS COMPARED TO BULLS BORN IN 2001**

Trait	VikingHolstein 2016	Genetic improvement from 2001-2016
Production	114.1	+22.0
Female fertility	107.4	+18.7
Calving ease	107.8	+15.0
Longevity	114.5	+33.7
Hoof health*	105.9	+11.8
Udder health	108.7	+19.9
General health	105.6	+16.6
Udders	114.3	+28.2

# Higher number of cows reaching 100,000 kg milk

There is an impressive development in the number of cows reaching 100,000 kg milk of lifetime production per year. In 2000, fewer than 50 cows managed this per year and today over 350 cows now do so in Denmark. The sires having most daughters surpassing this milestone are T Funkis and V Bojer with more than 225 daughters each. ●

**T Funkis and V Bojer are the two Holstein bulls that have most daughters reaching 100 000 kg milk.**



*This fantastic cow has reached the production of 100.000 kg milk, and being priced for that reason. She is bred by V Haslund x VAR Elvis and is owned by Poul Jacobsen in Thisted in Denmark.*

# Sires in focus

## VH Ramsey

VH River x Penley x Fanatic



VH Ramsey.

gNTM  
+37

**Striving to attain unique health and fertility in your cows and at the same time keep a high production? Then VH Ramsey is a bull for you.**

VH Ramsey is a bull that so clearly fulfils all needs to nominee as VikingDefence bull. Hoof health at 116, udder health at 108 and general health at 109. In addition to these amazing skills, he also provides super female fertility (112) and maternal calving (111) and production at 122.

The sire of VH Ramsey is the well-known and highly used VH River (Reflector x VH Osmus x VH Zac). The dam is a high producing Penley daughter classified VG87. Her dam has an average production of almost 14,000 kg milk.

VH Ramsey is bred in the herd of Anton Hammershoej in Denmark.

Beta Casein: A1/A2

Kappa Casein: BB

## VH Broback

Balisto x VH Mandel x VH Gotfred



VH Broback.

gNTM  
+32

**First step towards a good cow is to get a live born calf. That is what VH Broback will give you, but so much more also.**

Direct calving index at 116 based on several thousand calves born will ensure you easy calvings. VH Broback will also provide you cows with high components (fat% index 122 and protein% index 116) and a nice balanced conformation especially with good udders.

We recognize the good components when looking at his dam. She has an average of 5.20 in fat% and 3.80 in protein% - 9% in total!

VH Broback is bred at the herd of Peder Dalgas Nissen in the very south part of Denmark.

## VH Proud

Predestine x D Rom x Fibrax



VH Proud dam.

NTM  
+26

**Do you focus on high components from small and healthy cows in your breeding strategy, then have a look at VH Proud.**

VH Proud is a perfect representative for the efficient cow. He breeds high components (Fat% index 122 and protein % index 116) and small but still balanced cows with frame 82 in index. He also provides excellent udder health (116), hoof health (111) and general health (111) a true VikingDefence bull.

He has a high reliability in his proof based on almost 2,500 milking daughters and more than 800 classified.

His dam is a strong D Rom (Ramos) daughter with average production of 14,200 kg milk, 4.06 in fat% and 3.32 in protein%. She is classified VG89.

VH Proud is bred at the herd of Allan Simonsen in Denmark.



# VikingRed and Holstein are similar when it comes to the bottom line

By Auli Himanen, Breeding Manager VikingRed

**M**orten Kargo has done research in Denmark from SEGES to compare red and Holstein cows with field data used for EBV (Estimated Breeding Values) calculations. The results show that these breeds are comparable in terms of economics. The yield income is lower for red cows but on the other hand, fe-

male fertility, udder health and general health costs are lower. The strength of red cows is specially clear in organic production. The results tell the same story as Swedish research from a few years ago. In this study, the importance of focusing on the total economics rather than simply on yield data, is clearly demonstrated. ●

## Profitable decision with GenVik

**F**or you as a farmer, genomic selection means greater reliability in your selection of best females to keep in your herd.

It is a must today to have genomic values for females as well, not just in breeding programmes but also for management purposes at herd level. Having females with reliable data in the reference population gives us greater accuracy for the genomic values, meaning success for selection. The ambitious goal for Red Breeds in the Viking area is to have 95% of females genomically tested! ●

## Focus on polledness

**T**he line-up of VR sires shows two polled sires are among the very best in the breed: VR Fanof P with gNTM+30 and VR Fitbit P with gNTM +28. They are both heterozygous, Pp, meaning that 50% of their progeny will be polled. ●



# Sires in focus

## VR Wild

VR Wookie x VR Crone x VR Filip



gNTM  
+35

VR Wild.

**If your goal is to combine high yield and top components with fast milking speed (123) and excellent udder health (112), then you should use VR Wild. He also gives great longevity (115) and conformation.**

VR Wild is the best VR Wookie son and when he was bought, he was a superior bull calf in the population. He has kept his position on top. His dam has been flushed twice and VR Wild is from the first flush. The dam was recognized to be a top female when the herd started to do genomic test on all the females in the herd. They got immediately two flush contracts: the dam of VR Wild and the dam of VR Frodo. VR Wild's family has had success earlier as well because Viking has bought also a bull calf out of the grand dam. Today VR Wild's half sister has a flush contract.

The breeders are Nita and Jakob Gade, Denmark.

Beta Casein: A2/A2

Kappa Casein: AB

## VR Fanof P

VR Flake x VR Ejstrup x R Facet



gNTM  
+30

VR Fanof P.

**If you are looking for polled cows, you have now the opportunity to make them with the best polled red sire of the world. VR Fanof P is heterozygous polled and rank 8th of all VikingRed sires. He has high components (protein kg index 117, fat kg 113) and good figures in all fertility traits (Daughter fertility 110). He inherits average size with great feet and legs and udders suitable also for robot milking with fast milking speed (124).**

When you speak the name VR Fanof P out loud, you almost say "We are fan of Polled". VR Fanof P is out of a dam who just got her 4th calf and is still going strong. The previous top sire from the same herd is VR Donato who has been one of the most sold VR sires on the export market for some years.

VR Fanof P will be available also as X-Vik.

The breeder is Torben Stolshøj Pedersen, Denmark.

Beta Casein: A2/A2

Kappa Casein: AB

## VR Wiking

VR Wonder x VR Vimpula x Pellpers



gNTM  
+28

VR Wiking.

**VR Wiking is a sire with no weaknesses. He has very even proof with good production combined with good fertility, health and type.**

The dam of VR Wiking, was bought to VE-program and is now milking back at home. She has during her first lactation produced almost 13000 kg milk and is classified with body 80, F&L 86, under 83. The MGD is a fourth calver and has in average produced 11 000 kg. The cow family is characterized by very high protein content. Earlier we have bought VR Hazze and VR Bourne from the same herd.

The breeder is Ingemar Andersson, Sweden.

Beta Casein: A2/A2

Kappa Casein: AA



By Peter Larsson, Breeding manager VikingJersey



## VikingJersey bulls are pure bred and JH1 free

**B**reed definition and the influence of genes other than Jersey were discussed at the World Jersey Conference in the United States (USA), last summer. Delegates from Europe expressed their concern, as crossed (JX) bulls will be more difficult to use in Europe with the planned new herd booking rules. The risk of introducing genetic defects from breeds other than Jersey with the use of bulls that are not pure bred, was also a topic that was much discussed.

In the light of these concerns, we are pleased to say that all VikingJersey bulls are a minimum of 99.5% pure Jersey. What is more, from November 2018, all bulls marketed will be JH1 free! ●



With gNTM +31, **no one is higher than VJ Higher (VJ Hjorri x VJ Huzar)** on the VikingJersey bull line up!

## First ET calves in USA

**I**n June, the first nine ET calves from VikingJersey embryos were born in USA and more pregnancies in USA recipients have been made. The aim is to establish a small VikingJersey bull stud on our most important Jersey market, the USA. This will make it easier to supply the US market and to ensure supply in the event of biosecurity problems in Europe. ●



*First VikingJersey ET bull calf born in the USA*

# Sires in focus

## VJ Garant

VJ Gislev x VJ Janko x VJ Hilde



gNTM  
+25

VJ Garant.

**Are improved daughter fertility, udder health and components a part of your strategy? Then VJ Garant is the solution.**

VJ Garant will improve percentages, udder health (110), fertility (107), longevity (107) and the workability traits. Furthermore, his daughters are expected to be very tall with good body capacity and steep foot angles. Udder attachment will be exceptional and VJ Garant is a breed leader for shallow udders (129). Teat placement is ideal as well.

VJ Garant is bred in the Agerdal Jersey herd, owned by Palle Agerdal, in the northern part of Denmark. VJ Garant is the first bull coming from Agerdal Jerseys, and he is topping the ranking in the VJ Gislev group (Gislev being a VJ Hihl son).

The dam of VJ Garant, the VJ Janko daughter no. 937, has an average yearly production of 6,800 kg milk with 5.15% fat and 3.87% protein. The dam is scored VG88.

VJ Garant is heavily used as sire of sons. The gene distribution is 62% Danish genes, 35% US and 3% NZ genes.

Beta Casein: A2/A2

Cappa Casein: BB

JH1 Free

Triple aAa: 510

## VJ Choko

VJ Lobo x VJ Havdal x DJ Kars



gNTM  
+23

VJ Choko.

**Are you looking for outcross with high percentages and excellent type, then have a look at VJ Choko.**

**VJ Choko is bred in the Balslev Jersey herd, owned by Christian H. Olesen in Denmark. VJ Choko is the best son of VJ Lobo (VJ Lutz x DJ Hulk) and the dam is Balslev Havdal Hasta.**

VJ Choko will increase percentages, especially the protein percentage. Daughters will be tall, with very nice type and steep foot angle (115). Udders will be extremely well attached, with ideal teat size and front teat placement.

The dam, Balslev Havdal Hasta has been milking for 1.8 years, with a yearly average of 8,400 kg milk with 6.12% fat and 4.22% protein. Next dam has milked for 3½ year, with a yearly average of 7,740 kg milk with 5.60% fat and 3.97% protein.

Due to the special Danish pedigree, you will be able to use VJ Choko on nearly all other pedigrees.

Beta Casein: A2/A2

Cappa Casein: BB

JH1 Free

Triple aAa: 426315

## VJ Violent-P

VJ Quintana x Nikon P x Q Impuls



gNTM  
+13

VJ Violent-P.

**Focusing on polled genetics and outcross in your herd, you should take a closer look at VJ Violent-P.**

**VJ Violent-P is bred by TransEmbryo & Søren Ernst Madsen, Brædstrup, Denmark. The maternal line traces back to imported Q Impuls embryos, out of world famous D&E Paramount Violet, from California.**

VJ Violent-P is an improver of production, general health, hoof health and longevity. Daughters will beat all, with excellent body capacity and dairyness. Wide and high rear udders and excellent teat size & teat placement can be expected. The dam of VJ Violent P is Golden-Tirsvad Nikon Violet. She has been milking 5,000 kg milk with 6.42% fat and 4.28% protein in her first 230 days in first lactation. The Q Impuls MGD milked in 3.5 years with high percentages as well (6.08% fat and 4.24% protein).

VJ Violent-P is only 14 months old, but already a good producer of both conventional and sexed semen. VJ Violent-P is used heavily in the VikingJersey polled breeding scheme.

Beta Casein: A2/A2

Cappa Casein: BB

JH1 Free

Triple aAa: 423

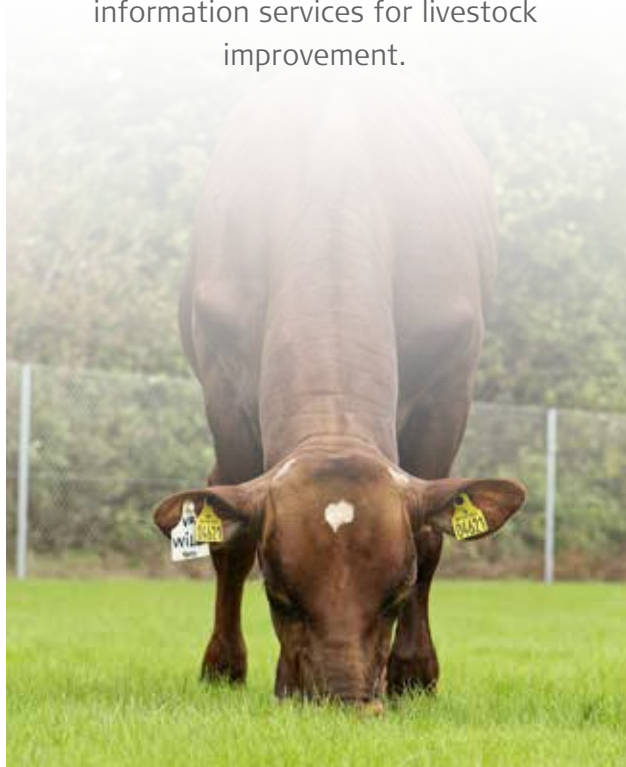




## Outstanding genetic level

Interbull confirms the outstanding genetic level for our three dairy breeds.

The International Bull Evaluation Service (Interbull) is a permanent subcommittee of the International Committee for Animal Recording (ICAR). Interbull is a worldwide network providing genetic information services for livestock improvement.



## VikingHolstein

The International Bull Evaluation Service delivers excellent performance for Holstein bulls from Denmark, Sweden and Finland in comparison with bulls from the rest of the world. VikingGenetics bulls are the top performers in Udder Health, Fertility & Yield. On top of that, VikingHolstein cows are smaller in size compared to other Holstein populations which means greater efficiency, less feed and high production.



(305 days) 10,273 kg milk 4.0% fat 3.4% protein

## VikingRed

Interbull ratifies the Nordic countries as world leaders in Yield, Udder health and Longevity for RDC bulls.

The Interbull list, based on national information about bull performance, ranks the Nordic countries at the top of the list when it comes to production yield, udder health and longevity. Data reveal that VikingRed bulls are the most profitable choice among Red Dairy Cattle (RDC) in the world, not only thanks to their superior health but also their excellent production numbers which are the top rated.



(305 days) 9,091 kg milk 4.40% fat 3.51% protein

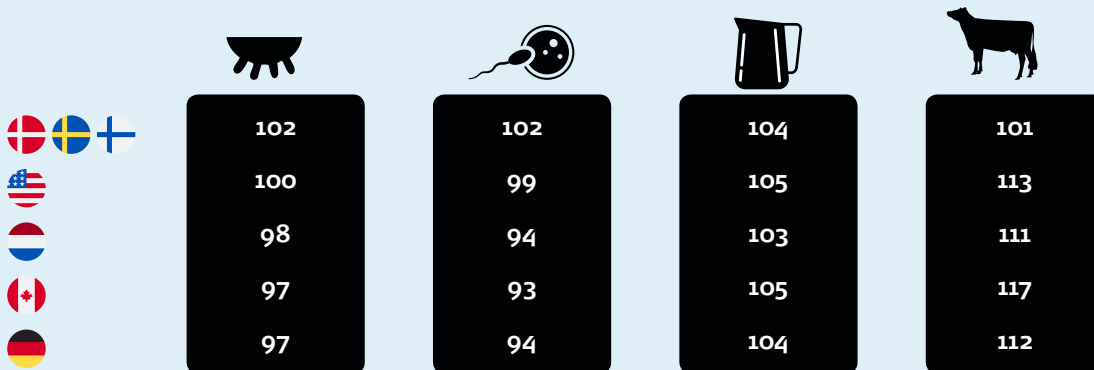
## VikingJersey

VikingJersey tops the Interbull list for Udder health, Longevity and Daughter fertility. The data compiled by Interbull show the excellent genetic level for Jersey bulls from Denmark. Udder Health, Fertility, Longevity and Yield for daughter-proven bulls born in 2011 or later, were compared with other Jersey populations. The results show that VikingJersey is the best option to breed healthy and productive Jersey cows.



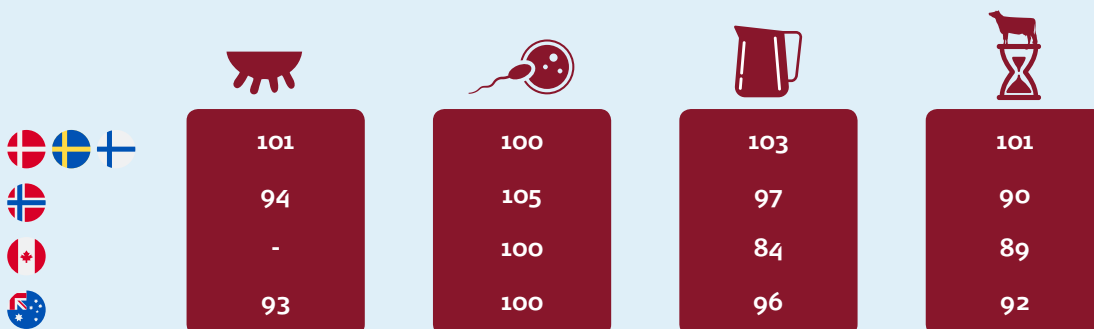
(305 days) 6,977 kg milk 5.91% fat 4.16% protein

## Interbull International Comparisons Holstein



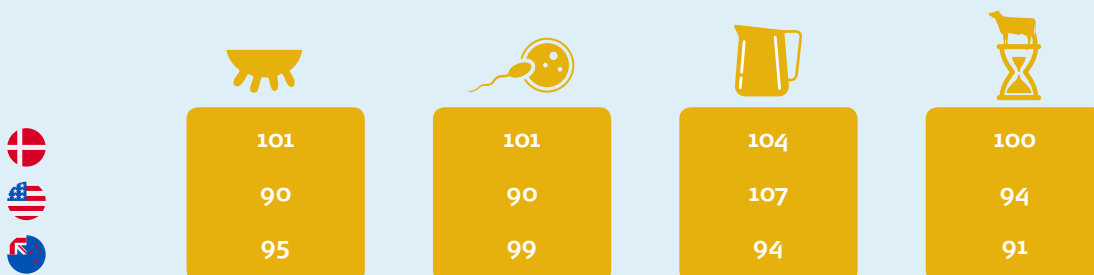
Daughter-proven bulls (born in 2011 or later).

## Interbull International Comparisons Red



Daughter-proven bulls (born in 2011 or later).

## Interbull International Comparisons Jersey



Daughter-proven bulls (born in 2011 or later).





# Quintana heifer shines

## at the show in the International Dairy Week 2019

A VJ Quintana daughter was a revelation during the International Dairy Week (IDW) for 2019. She is Kings Ville Cowslip 131 and is 12 months old. Cowslip 131 placed 3<sup>rd</sup> in the All Breeds Youth Show and 2<sup>nd</sup> in the Jersey Show at IDW 2019. Was Reserve Junior Champion at the Gippsland Dairy Youth show held in March 2019.

**R**ob Anderson, fourth-generation farmer, who established Kings Ville Jerseys, is the owner of Cowslip 131 and has three other Quintana daughters in his Jersey herd. “They look promising as heifers and we are looking forward to them entering the milking herd in 2020”, he says.

Another Quintana daughter we have high expectations for is Kings

Ville VJQ Petunia 116, which ranks at number 52 on the top female listing for BPIg (Balanced Profit Index).

The last Danish sire they used was Lemvig back in the mid 1990’s. Now they are taking more Danish bulls, among them, VJ Quintana “We decided to use Quintana because of his extreme stature and NTM, A2/A2 and was looking for an outcross bull in our breeding programme”, Anderson adds.

VJ Quintana is out of “Krogaard Zuma Zophia”, bred in the Krogaard Jersey herd in Denmark. A number of very good bulls are bred in this herd, such as OJY Mikkell, FYN Nis, SKAE Krig, DJ Lucus and VJ Primus (last two in the Quintana family).

### An outstanding sire

VJ Quintana breeds high production of fat and protein, with high percentages. He is an udder health and longevity improver. Daughters are expected to be tall, with very good type. Udders will be extremely shallow, high and wide rear udders with strong ligament. VJ Quintana will work very well in combination with pedigrees from Australia, US, Canada and NZ.

The sire of VJ Quintana is famous VJ Rodme, well-known as a type and udder improver. The dam of VJ Quintana, Krogaard Zuma Zophia, has also contributed to the exceptional breeding profile of the bull. She is an extreme producer. Yearly average is 11,240 kg milk with 5.70% fat and 4.17% protein.

He is named after the famous Colombian bike rider Nairo Alexander Quintana Rojas, who won the Vuelta a España 2016 and got the third place in Tour de France the same year. ●



JF6623 Kingsville Cowslip 131.



# UK farmers convinced of benefits of VikingGenetics solutions

To coincide with the UK Dairy Day, which the VikingGenetics UK Team attended, The Dairy Farmer magazine published an article about our genetics. In their Dairy Show edition, they featured the award-winning Jersey herd at Manor Farm, owned by Tom Dickinson.

Dickinson has had great success with his VikingJersey herd and has won the Lily Hill Cup for best Jersey herd in the Gold Cup competition in 2017 and the Yorkshire Taste Award for best beverage and best liquid milk at the Yorkshire Show.

Dickinson started off with a Holstein herd in 2001, sold 80 cows and

restocked with Jerseys from Denmark. After realising that the Jerseys had better fertility and feet & legs, he decided to switch the whole herd to VikingJerseys. His goal has been to raise protein production and the VikingJerseys have helped him achieve this.

Dickinson is happy with the breeding information from VikingGenetics, in particular the genetic indices such as hoof health and udder health. "To us it's all about breeding functional, long-life, productive cattle that meet the requirements of our milk contract," Dickinson says.



Antibiotic usage has been monitored and found to be far under the target.

The VikingJersey cows deliver the milk, health and fertility that Dickinson wants from his cows. ●

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## VikingJersey and ProCROSS cows increase in USA



In June, our Head of Sales, Sara Wiklert Petersson, visited two of our large Jersey customers in the USA; the Veldhuis family in Washington state with 15,000 cows in total and Jeff Bosma, Oregon, with 3,000 cows. She was also in two ProCROSS herds in Idaho.

On the Veldhuis farm, they have used plenty of VikingJersey in the last 12 months following a visit to Denmark last summer, and quite a lot of sexed semen since last year. The hutchers are starting to be full of Viking offspring. They are looking for the fat and protein and daughter fertility of the VikingJerseys.

This story is also very positive in Oregon where Jeff Bosma has used VikingJersey for many years. There are numerous daughters of VikingJersey bulls in the herd, from VJ Husky, VJ Lappe, DJ Zuma, VJ Luvoka, DJ Lix, VJ Lurik, VJ Hihl, VJ Hilario, and VJ Hama to VJ Livius.

"He loves the VikingJersey, as they are efficient, high yielding cows with good reproduction. He is now planning to build another dairy with

the same number of cows, but that one will have robots, so teat placement, milking speed and udder depth are important," Wiklert Petersson says.

She also explained that as they have been using VikingJersey for many years, they were very interested using a mating system that works for the NTM (Nordic Total Merit) traits, and primarily also to avoid inbreeding.

Sara introduced the VikingGenetics mating tool, VikMate, to Bosma.

Sara also visited ProCROSS herds in Idaho. First the Sewy family with 1,300 cows. This herd has been using ProCROSS for about 13 years. The second visit was to Andersen Dairy that has been doing it as long, combining 2500 ProCROSS with 500 top Holstein. This herd has bred the world famous sires, Supersire and Silver.

Both herds are high yielding with production of 41kg / cow / day average. All the farmers are happy with VikingGenetics solutions she says. ●



*VikingJersey is a more and more appreciated dairy cow in USA*



# The Real Cost Cutting Cows

Nordic countries have the lowest use of antibiotics in the world and are in top position for milk yield. Exceptional health and high production is in the genetics. An everyday solution that works.



**VIKINGGENETICS<sup>R</sup>**

breeding for what truly matters

[www.vikinggenetics.com](http://www.vikinggenetics.com)