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2020 Newsletter Number 2

Dear Red Breed Enthusiasts,

The Northern Hemisphere is nearing the end of its long balmy summer days, while the Southern Hemisphere looks forward in expectation toward the glories of spring. Yet in a quirk of nature, farmers in both hemispheres will be storing their harvests during the coming months for the long period of low (or no) growth which lie ahead.

August is the month when many countries release their updated breeding values containing data from recent months, with occasional format and base adjustments. One Australian breeder is so focused on this regular information that he has personalised his farm vehicle registration plate to read HI-INDEX! But in all seriousness these releases provide important comparisons between individual bulls, cows and groups of dairy cattle, which previous generations of breeders did not have.

On farm performance builds data sets which generate proven breeding values and in turn form the basis for genomically predicted breeding values. More and more farmers are using genomic predictions to improve the quality of their herd replacements through breeding management and culling. Australia has its home grown Balanced Performance Index (BPI) as its principal ranking value, while some prefer Net Merit and TPI from the United States. Others use the New Zealand Breeding Worth (BW), or the Scandinavian NTM system. All of these are **composites**, designed to reflect the needs of a country's national herd, although in countries like the USA a number of specific values are calculated for farmer preferences and processor milk profile requirements.

Composites by their nature are a blend of many traits (often about 40) with various weightings applied to each one. Most breeders understand the principle of this system, but seldom do they have a detailed recollection of the weight applied to each trait. There are various ways to use composite breeding values for selection and culling, but I would like your feedback about the wisest way to use them.

Is it logical to use composites as the first step in a screening process, followed by more detailed emphasis on the most critical traits for a given herd? Should genetics companies apply the same steps to bull selection? It is the same logic as humans using all of their five senses (sight, sound, smell, feel, taste) when making decisions, instead of blending all five into one composite sense. Perhaps I could add "gut feel" as the sixth sense essential for good breeding decisions!

I wonder if the best use for composite breeding values is to highlight the bottom quarter of any group, although as you rise from the bottom the decisions gradually change from being decisive to less decisive. This leaves the top 75% of a group to be sifted using all available information to make the best decisions. Perhaps this requires breeders to look behind the composites and prioritise the forty or so published traits, placing higher emphasis on those of greatest importance in their herd.

This raises another question, particularly in countries which do not have reliable genomic breeding values: Are breeders using all of the information available from herd test (milk control)? Herd management programmes can create custom reports from production, reproduction and health information which is stored in the system. Many programmes include type classification as well, making these reports very comprehensive if the information is entered in the first place and a bit of time is spent personalising the parameters.

Many commercial farmers are not inclined to extract this information themselves, instead they delegate the task to a breeding advisor. But if Red Dairy Cattle breeders as a combined group were to adopt the practise of delving more deeply into to the information we already have, then using all of our SIX senses would we make more informed breeding decisions and increase the rate of breed improvement?

The content of this newsletter is based on observations and opinions gained from a variety of sources which you may agree with, or have further information to add. You may disagree with the sentiments and hold opposing views. Either way, I would like to hear your opinions so that these newsletters can be a discussion place where ideas are shared and new opportunities fostered.

Lars Iversen was invited to share his thoughts and practises about breeding management in his herd, located at Stenggaard, Denmark. Lars and Ulla attend many red events and are well known. International bulls like FERGUS, FILIP and VIKTOR have been bred in this herd. Maybe his words below will highlight an opportunity or a thought you would like to share.

Happy breeding, wherever you are located. I hope to hear from you soon and I expect to write another newsletter in December.

Graeme Hamilton

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Thank you for the opportunity to contribute with my vision about the future cattle breeding and how we do it in our herd.

We have a herd with 260 dairy cows and produce around 2.7 million kg milk per year. Along with the milk production we also have a beef production from 150 calves per year.

Through the last 10 years, cattle breeding has changed a lot. Genomic testing has given us a lot of opportunities to get the highest genetic gain in our herd. The tools we use in our herd are:

- Genomic testing of all heifers when they are 2 months old
- Sexed semen for the best animals selected on Nordic Total Merit (NTM)
- Beef semen for cows with the lowest NTM

With these tools we can make the next generation of heifers only from the best animals in the herd. The breeding goal is healthy and strong animals with good legs and claws. A high production of fat and protein and also high on meet production. We like a medium sized cow around 140 cm tall.

We do participate in shows around the country but show cows are not our breeding goal. We find the good-looking cows in the herd and sometimes the cows are good enough to win the herd competition at the National Show like in 2016 as the picture shows.



Winner of the herd competition at the National Show 2016

When we choose a bull we only look at indices and it doesn't matter if it is a proven bull or a genomic bull. We use the best bulls from the top of the NTM list. To make the best combinations we use a breeding plan from Viking and discuss the plan with our breeding advisor from Viking occasionally.

At the moment we use sexed semen for the best 75% of the heifers and the best 25% of the cows, all selected on NTM. We use sexed beef semen for the lowest 50% of the cows. The sexed beef semen is sorted to give 85% bull calves and only 15% heifers to optimize the beef production. The beef breed we use is Danish Blue.



Crossbreed calves from Danish Blue X VikingRed

Most used bulls in 2019/2020, the last 12 months.

VR Froerup

VR Farnam

VR Vario

VR Venom

VR Fairway

VR Hosea

VR Thiago

VR Fanof P

VR Vigil P (VIKTOR son).

Lars Iversen