

How to design profitable Nordic dairy breeds for the future

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NTM is designed by and for Nordic dairy farmers to give the best economy. This is done by having the right balance between higher production and lower costs. It is your insurance for selecting bulls that fit your production system.

How do we breed for the future cow? Around the world breed organizations point out many different directions for genetic improvement, and this makes good sense, because prices and production circumstances are different. The perfect cow in a seasonal and grass based system like New Zealand is not necessarily the perfect cow for a Nordic farmer. That is also why we have our own direction for genetic improvement in the Nordic countries that fits Nordic farmers – this is what we call NTM.

Made by farmers – for farmers

Farmers from breed organizations in Denmark, Sweden and Finland have collaborated with Nordic Cattle Genetic evaluation in designing the revised NTM that is launched in November 2018. The process has been underway for nearly two years and from the start, farmers have guided the development through input about production systems and prices that would be expected in the future. In the end, it was also farmers that agreed on the revised breeding goal for Holstein, Jersey and Nordic red breeds.

Tailor made for Nordic farmers

Milk prices in the Nordic countries tend to be in the high end compared to other countries in the world. And at the same time milk production in these countries is characterized by high costs, public demand for high quality of the product and for animal welfare. Further, cows must produce under temperate or cold Nordic climate conditions. This gives very specific price relations, unique for our countries and considered in NTM. NTM is therefore tailor-made for Nordic farmers.

Most genetic progress for the economically important traits

NTM combines many traits, considering the economic benefit of improving each included trait. For instance, one extra index unit for protein yield results in approximately 2 kg additional protein produced per lactation. Dairies pay for the extra milk protein but at the same time production of the extra milk protein is associated with extra costs. The difference between the extra income and cost is the economic benefit. The same calculations are done for fertility, udder health and all the other traits included in NTM. It is important to realize that reducing costs, such as reduced veterinary assistance because of healthier cows, is equally important in improving profit as increasing milk yield is. They both influence the profit for the dairy farmer!

Give better economic results than using foreign indices

The strength of NTM is that it is based on the actual price relations, the phenotypic levels of different traits as well as the production system we have in the Nordic countries. In some other countries, for instance in New Zealand or the US, the production systems, phenotypic level and price relations are different, which is reflected in their total merit index. Examples of factors that can differ are related to feeding, housing/climate, veterinary costs or payment for milk quality by the dairies. Using sires in the Nordic countries that rank high in New Zealand total merit index or the US total merit index will still give genetic progress for important traits, such as yield, health and conformation. However, the obtained progress for different traits will be different from NTM and this will not be optimal from an economic point of view. Also compared to total merit indices from other European countries, with production circumstances more similar to the Nordic countries, NTM is preferable. This is because even small differences in economic weights will give

slightly different progress for different traits. Further, in the Nordic countries we have unique traits recorded in a large scale, such as veterinary treatments and claw trimming records, which give us an advantage to breed for profitable cows based on a balanced breeding goal. Nordic farmers should always ask for NTM when buying semen. Selection based on NTM will give farmers genetic progress in all included traits.