

# Breeding for increased profit

## NTM – a powerful tool for Nordic dairy farmers

- *Increased profit by optimal inclusion of all economically important traits.*
- *Balanced breeding goal for improved health, fertility, production and functional conformation.*
- *Based on your valuable and unique registrations and Nordic production conditions.*



Nordic  
Total  
Merit

**NTM**



## Your powerful breeding tool for increased profit

Breeding decisions based on the Nordic Total Merit Index (NTM) improve the economic profit of your dairy enterprise by weighing all economically important traits together in an optimal way.

NTM aims for a high genetic capacity for yield, health, fertility and conformation resulting in productive and long-lasting cows of the Nordic Red breeds, Holstein and Jersey in Denmark, Finland and Sweden.

Increasing the genetic capacity of your herd gives a lasting economic effect which continues year after year.

Regardless if you are a true breeding enthusiast or find management questions more interesting, NTM is a powerful and easy-to-use tool for improving your herd!

## Improves all important traits

NTM enables improvement of all traits of economic importance.

Different trait groups, reflecting several related production, health and conformation traits, are weighted together based on breed-specific economic considerations.

### Production

- Yield index
- Growth

### Health

- Female fertility
- Birth index
- Calving index
- Udder health
- Other diseases
- Claw health
- Longevity
- Milkability
- Temperament

### Conformation

- Body
- Feet and legs
- Udder



NTM is the most comprehensive breeding goal worldwide thanks to the unique cattle data bases in the Nordic countries, including recordings of diseases and artificial inseminations.

It is today well-known that selection for yield and conformation only, is detrimental for fertility and health. Therefore our Nordic breeding philosophy, with high emphasis on these traits, is today widely accepted internationally. By using NTM, all important traits can be improved simultaneously.

There is genetic progress for NTM for all breeds. This implies that the average genetic capacity of the animals is improved year by year, so that in average an offspring has an improved genetic level compared to the parent generation.

## Your breeding goal – now and in the future

NTM will benefit both your cows and you as a dairy farmer as it results in productive, fertile, healthy and long-lasting cows.

NTM relies on valuable registrations from your herd. The high degree of registrations in the Nordic countries and the large number of traits included makes NTM a reliable measure for total profit.

NTM is tailor-made for Nordic production conditions. It is created for you in close cooperation with the national breed associations.

You can trust NTM. It is adjusted when necessary to make sure that it will always be an effective tool for you to increase profitability in your dairy herd through genetics.

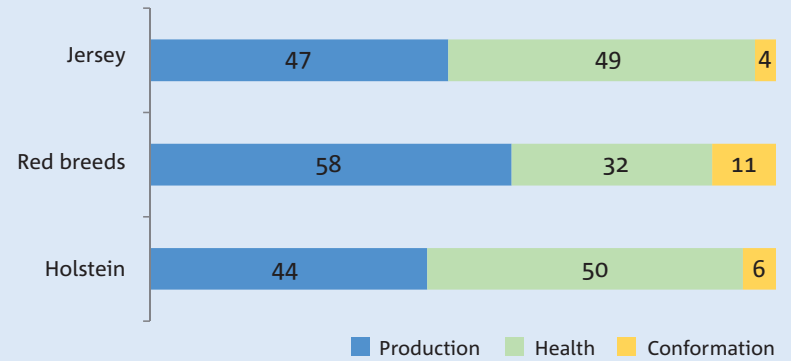
In the new era with the use of genomic breeding values, the genetic progress will go faster. This makes it even more important to move in the right direction, thus have a breeding goal that contributes to economically profitable and healthy, long-lasting cows!

PHOTO: ELLY GEVERINK



# NTM – progress and profit

Relative economic progress per breed, %



The relative weights for included traits and their correlation to NTM affect the expected economic progress in each trait. For example, by selecting for NTM in Holstein half of the total progress is achieved for health traits.

## NTM is all you need

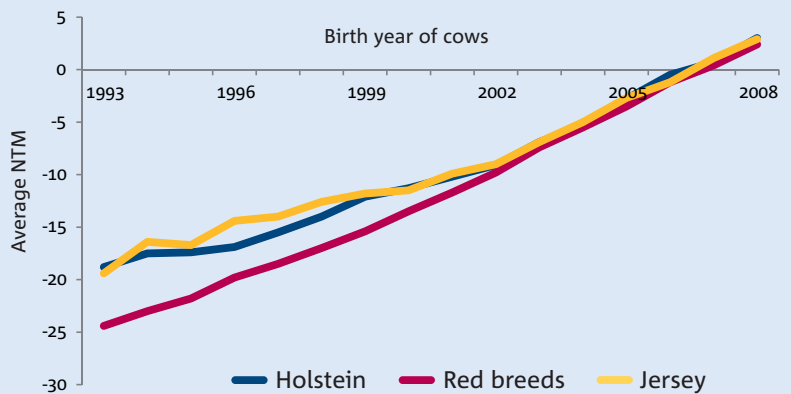
If you are aiming for increased profit always use NTM to identify the genetically best animals. It ensures a fair within-breed comparison of all bulls and cows within and across country borders. Always ask for NTM when you are buying semen or animals.

A high NTM value is always economically beneficial. A difference of 10 NTM-units between two cows corresponds to an extra yearly value of about 100 Euro for the better cow.

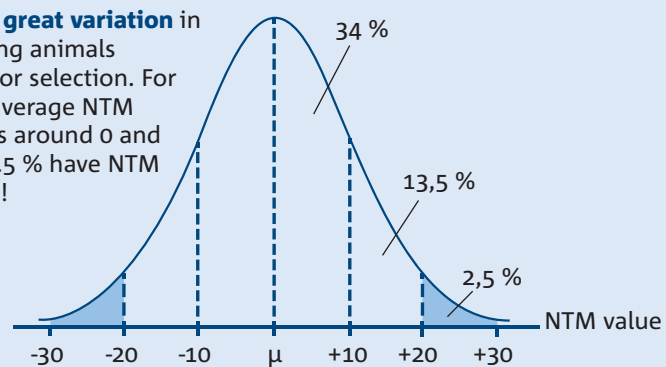
There is a great variation in NTM among both bulls and cows. The NTM values of all bulls and cows are compared against the average NTM for three to five year old cows, which is set to zero. The NTM values are normally distributed with a standard deviation of 10 index units for bulls and somewhat lower for cows. A bull with NTM +30 is 30 units (or 3 standard deviations) better than the average active cow.

Combine ranking of the animals based on NTM with a good planning of matings to optimize matching of individuals and to avoid inbreeding. Among the sires with high NTM values you can choose the one that best fit with the conditions and goals for the cows in your herd!

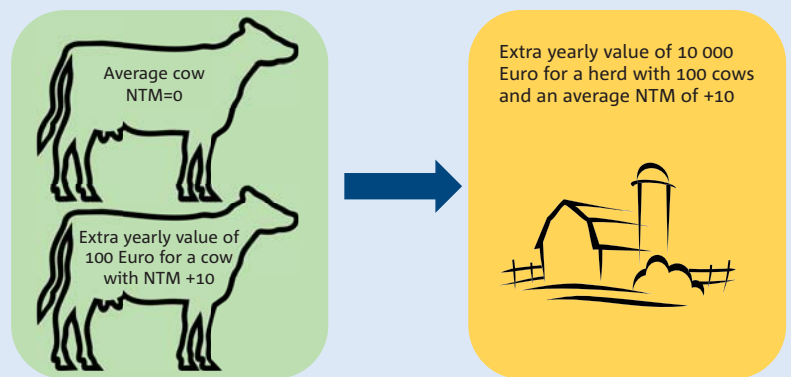
The genetic progress in NTM during 15 years corresponds to an improved genetic capacity worth up to 250 Euro per cow and year!



There is a great variation in NTM among animals available for selection. For bulls the average NTM value ( $\mu$ ) is around 0 and the best 2.5 % have NTM above +20!



Breeding is an investment – a difference of +10 NTM units makes an important contribution for the profit of your dairy farm!



## Nordic Cattle Genetic Evaluation – A successful cooperation

Nordic Cattle Genetic Evaluation is owned by Faba, Växa Sverige and Knowledge Centre for Agriculture, Cattle. The company started its activities in 2002 with the mission to perform joint Nordic genetic evaluation of dairy cattle for the benefit of Nordic farmers. NTM was published for the first time in 2008.

The cooperation contributes to an improved genetic evaluation and progress because of an increased cow population (in total about 1,2 million) and better use of resources in research and development.

### More information and contact

- Nordic cattle genetic evaluation: [www.nordicebv.info](http://www.nordicebv.info)
- Faba: [www.faba.fi](http://www.faba.fi)
- Växa Sverige: [www.vxa.se](http://www.vxa.se)
- Knowledge Centre for Agriculture, Cattle: [www.vfl.dk](http://www.vfl.dk)



**VIDENCENTRET FOR LANDBRUG**  
Kvæg