

BEEF x DAIRY

Genetic evaluation traits to consider - today and in the future

NAV Workshop, dairy

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Agenda

- **Current Nordic traits**
- **Current Danish national traits**
- **Future traits**

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Current Nordic traits

How to choose the best AI beef bulls

Since 2018
The NAV Beef
on Dairy
Evaluation

BeefxDairy calves

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The NAV Beef on Dairy Breeding values

Calving traits
Calf survival and calving ease based on cows in 1st and later lactations

Carcass traits
Daily carcass gain, carcass conformation score and carcass fat score

Youngstock survival
Early period, late period and youngstock survival

NAV Beef search

VB Messi

Trait	# Crossbreed animals	# Herds	Sex
Calf survival, 2nd and later lactations	14276	997	
Carcass conformation score	7802	453	Dam

International ID: DNV0000388201721
Herdbook number: 78375
Date: 01.11.2022

Trait	Current evaluation	70	80	90	100
NBCI, short	8				
Birth	99				
Calf survival, Lact. 2+	98				
Calving ease, Lact. 1+	100				
Breeding values not in NBCI	4				
Calf survival, Lact. 1	101				
Calving ease, Lact. 1	94				
Ground, short	111				
Daily carcass gain	108				
Carcass conformation score	116				
Carcass fat score	96				
Youngstock survival (not in NBCI)	131				
Early period	135				
Late period	135				

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The Nordic Beef on Dairy Index

Birth

Calf survival calving ease in later lactations

Growth

Daily carcass gain carcass conformation score and carcass fat score

+YSS 2023

NBDI
Since 2019

Birth index and growth index, short or long, combined with economic weights

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The newest addition: YSS

Traits

Period 1 Survival Day 1 – 30	Period 2 Survival Day 31 – 200
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YSS1
 $h^2 = 0.01$

$r_g = 0.30$

YSS2
 $h^2 = 0.015$

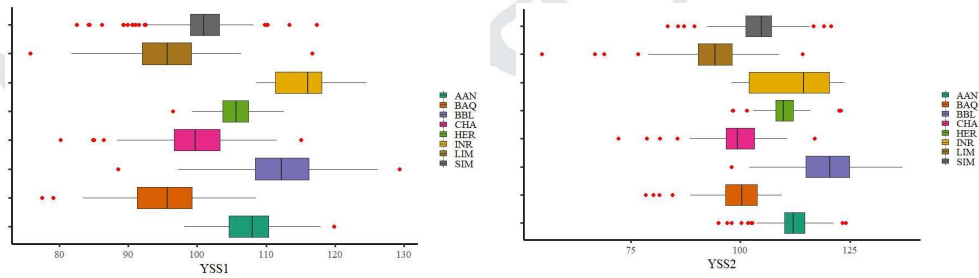
YSS index: based on equal weights
To be updated in 2023

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Young stock survival

Breeding values



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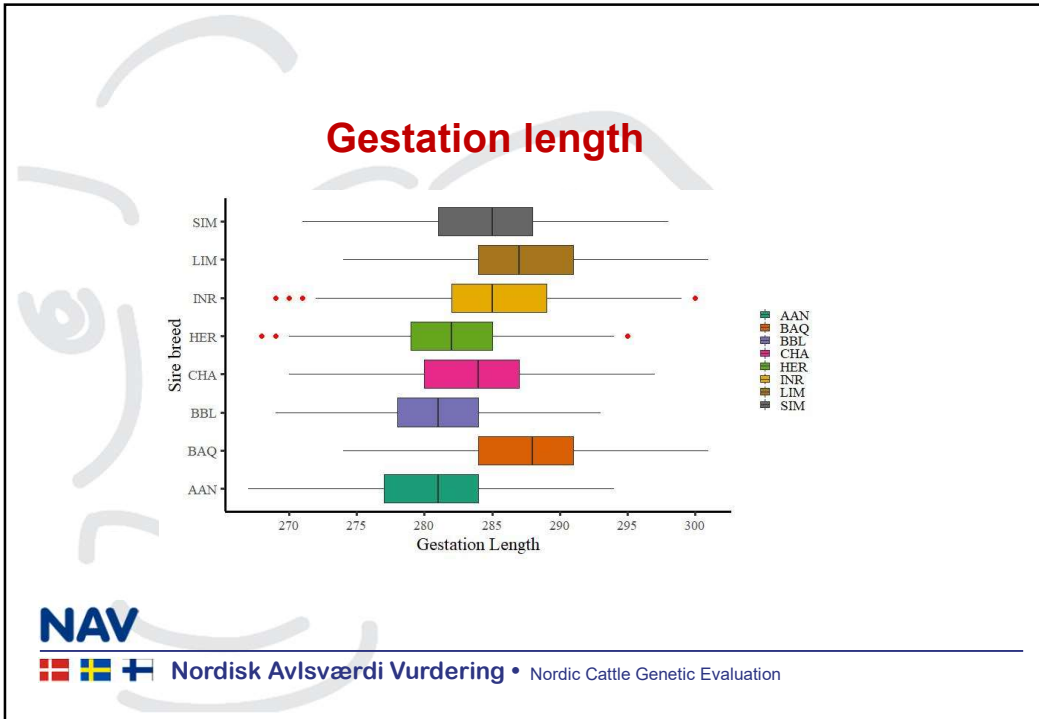
Ongoing project: Gestation length

- ✓ Defined as interval from conception to subsequent parturition
- ✓ A management tool: more accurate prediction of calving date may help dairy farmers in managing calving operations more efficiently
- ✓ It is an optimum trait: no inclusion in NBDI
- ✓ Implementation planned for 2023

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Current Danish national traits

- Health
 - Foot rot
 - Pneumonia
 - Diarrhea
- Carcass
 - Slaughter percentage


• Together with NBDI traits they are/will be included in the calf prizing module in the Danish Dairy Management System


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Future traits Climate traits





Methane emmisions






Feed efficiency



Lines for nature conservation



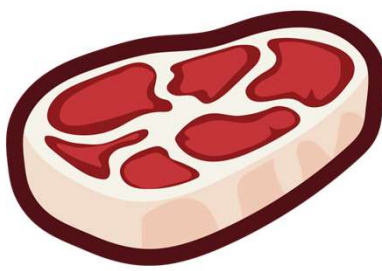





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Future traits Meat quality

- **Marbling**
 - Swedish slaughter records
 - Vision technology
 - Future Beef Cross
- **Meat color/Red meat**
- **Cut sizes**
 - More of the expensive cuts



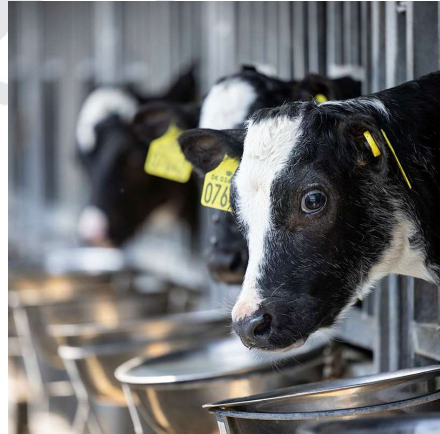



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Future traits Workability traits

- Willingness to drink
- Temperament



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Future traits Other traits

Health

- Locomotion
 - No need to create similar problems with weak legs as poultry and pig production has experienced

Maternal traits

- Pelvic measures on crossbreds
 - Proxy for maternal calving traits
 - Beef population for BxD might be small and large weight on direct traits in the breeding goal
 - Danish BBL population ~150 cows

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