

# Genetic Evaluation of Udder Health Traits for Denmark, Finland and Sweden

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# Why joint evaluation?

- Nordic countries have similar recording systems since 1990
- Sires are used in all countries
- Need better use of genetic resources

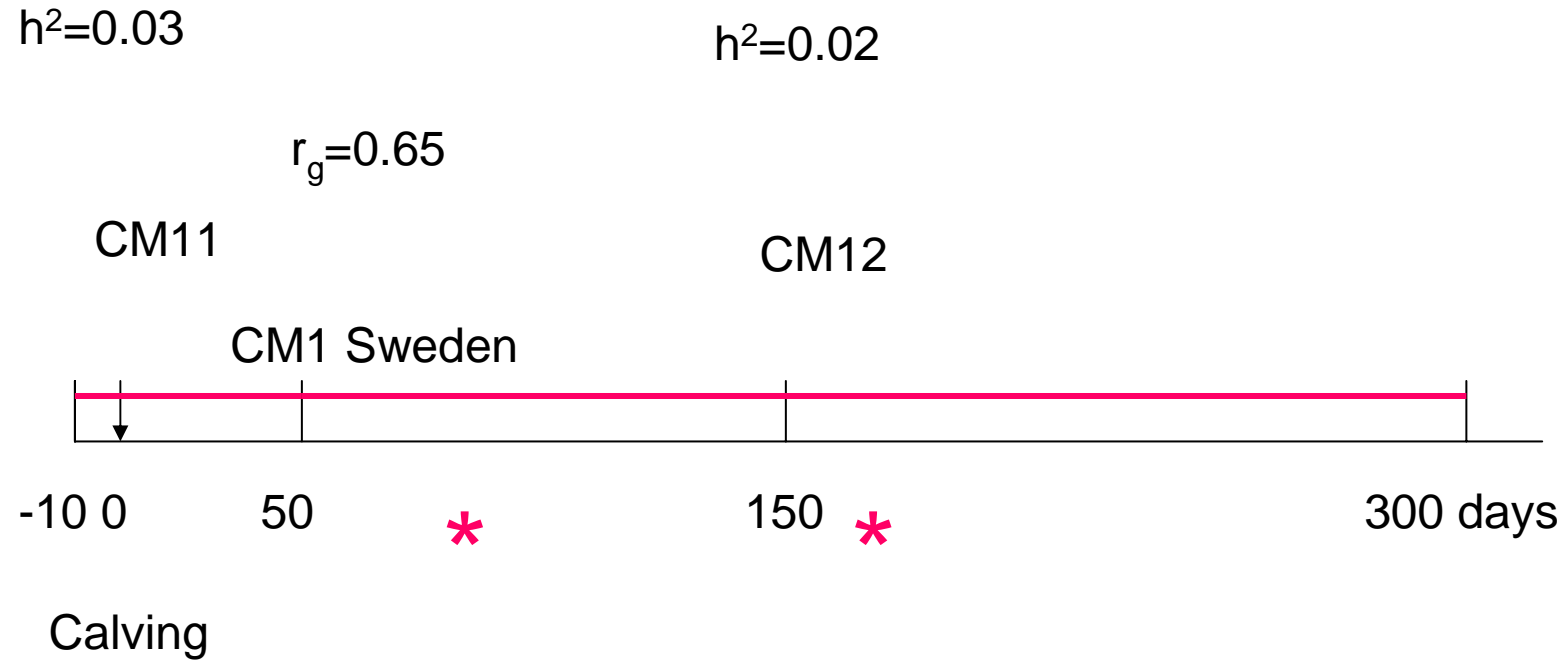


# Udder health selection. problems

- Low heritability => Large daughter groups
  - use information in all countries
  - => Use information traits
- Long recording period => breeding values late



# Selection decisions \*



# Traits

Traits	period	h <sup>2</sup>
CM11	-15 to 50	0.03
CM12	51 to 300	0.02
CM2	-15 to 150	0.03
CM3	-15 to 150	0.03
SCC1	5 to 150	0.14
SCC2	5 to 150	0.13
SCC3	5 to 150	0.11
Udder attach.	1st lactation	0.24
Udder depth	1st lactation	0.36



# Traits

- Genetic correlations
  - CM, different lactations 0.77–0.91
  - CM - SCC 0.65
  - CM – Udder conformation 0.35-0.55
  
- Precorrection for heterogenous variance
  - Year x Country



# Model

Effect	Type
Calving age x country	Fixed
Year x month x country	Fixed
Herd x period (=5ys)	Fixed
Total heterosis	Regression
Population proportions	Regression
Herd x year	R
Sire	Random



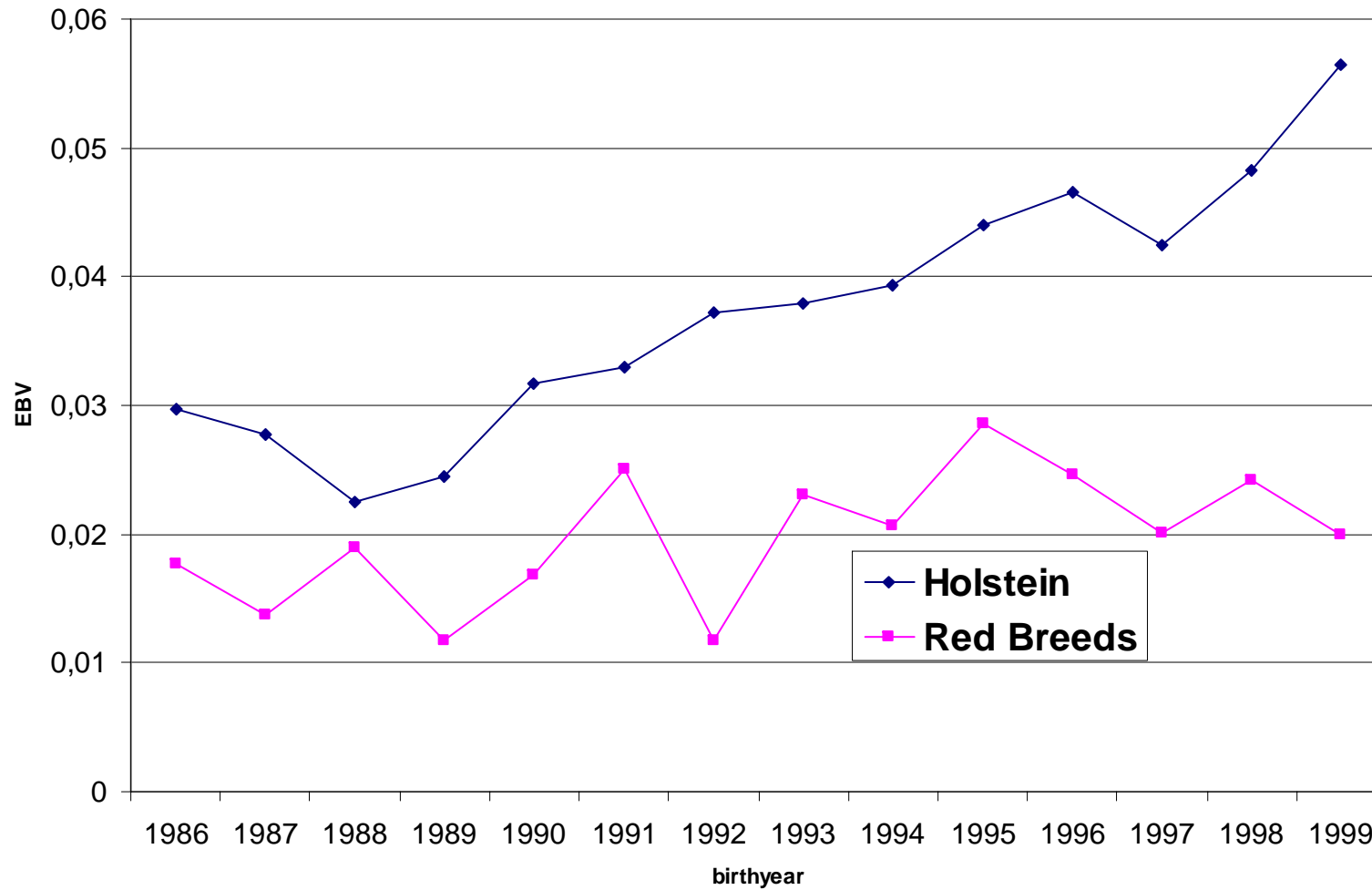
# Results

- Validation requirements fulfilled for both Holsteins and Red Breeds
- Correlations NAV and Interbull results  
(mean of the country scales)  
around 0.90





# Genetic trend for sires



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# Summing up

- Early breeding values as soon as possible
- Validation criteria met
- More efficient use of data
- A platform for further developments



**Thank  
You!**



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