

Registration on farm level. Can I trust the results from national and international listings and breeding values?

Lars-Inge Gunnarsson
Ränneslöv
Sweden





Chairman of AI Svensk Avel
Chairman of "Swedanes"
Chairman of Nordic Cattle Genetic Evaluation,
NCGE



Det lönsamma valet!



Dairy farmer in southern Sweden.
Milking 450 cows, mainly Holstein.
All bull calves are fattened at the farm
60 beef cattle and 200 sheep.
Cultivate 1150 ha and the major crops are
pasture, grass, grain, corn and potatoes.

Production

Year	2004	2005	2006
Number of cows	273	381	403
Production, kg	12 486	11 486	11 430
% fat	4,0	4,1	4,2
% protein	3,2	3,3	3,2
Production kg ECM	12 285	11 463	11 460

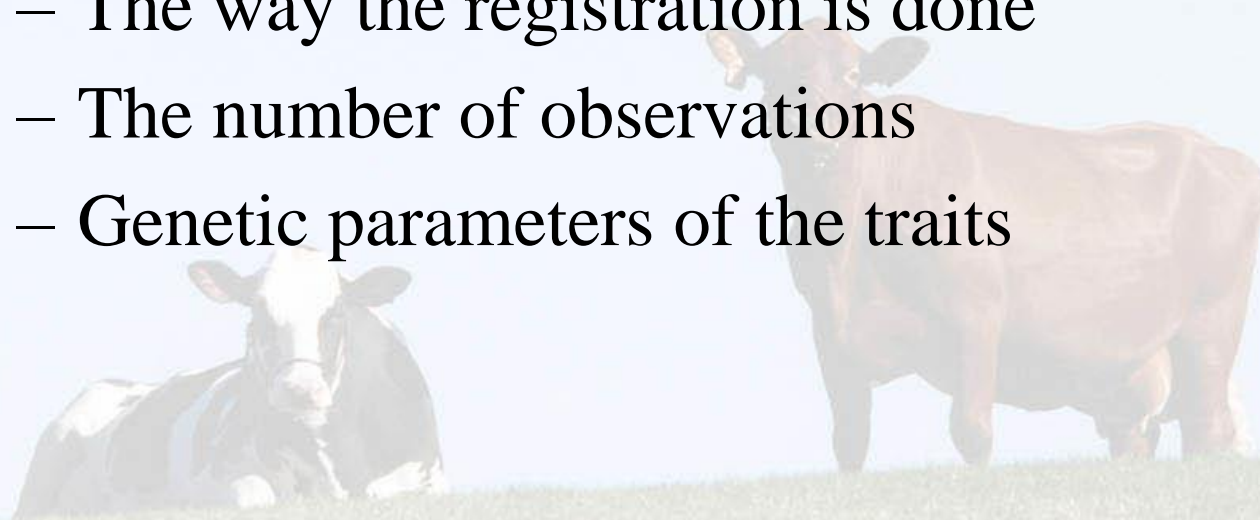


Registration on farm level

- The registrations need to be
 - Reliable
 - Accurate
 - Cheap
 - Frequently updated
 - Useful as a management tool and base for estimation of breeding values

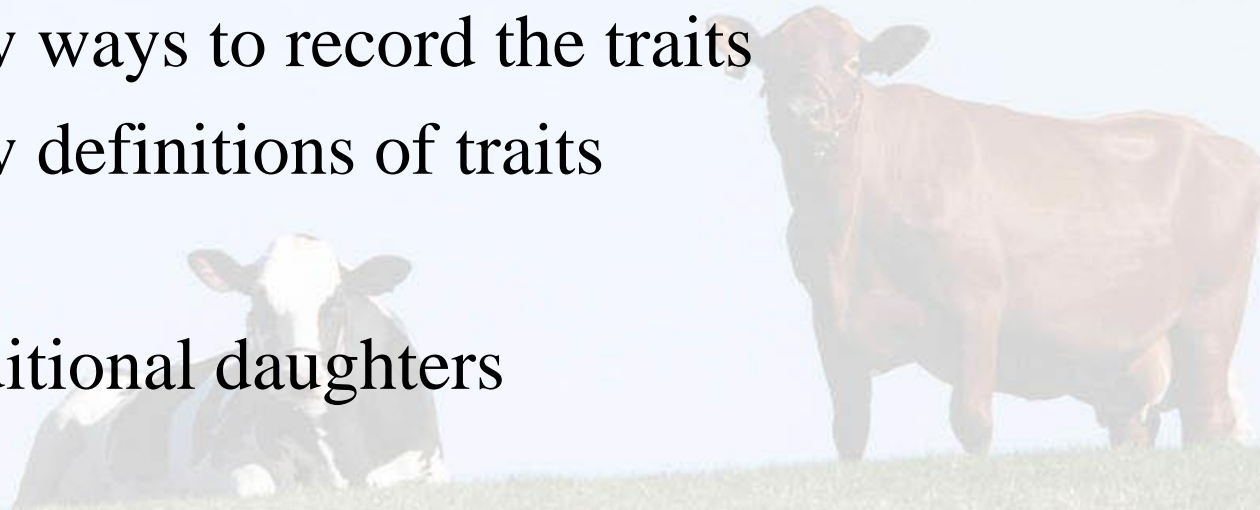
Can we trust the results from national listings and breeding evaluations

- Accuracy of proofs depends on
 - The way the registration is done
 - The number of observations
 - Genetic parameters of the traits



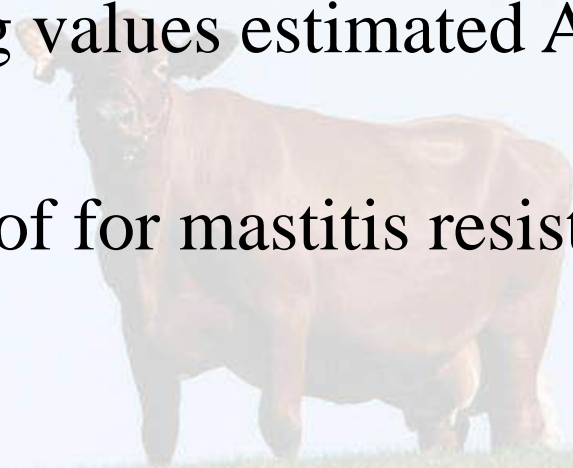
Can we trust the results from national listings and breeding evaluations

- Changes over time due to
 - Genetic trends
 - New ways to record the traits
 - New definitions of traits
 - Additional daughters



Can we trust the results from national listings and breeding evaluations

- Practical example from Sweden. The six bulls on Svensk Avel's recommended list.
- Comparison between breeding values estimated August 2001 and June 2007
- Two traits milk-index and proof for mastitis resistance



Practical example: Ranking of bulls with second crop daughters

Bull	MIN 01	MIN 07	MAS 01	MAS 07
Gubbilt	120	123	102	98
Spånstad	112	120	105	107
G Best	124	116	98	96
Gul	102	92	107	110
Atong	108	99	103	106
Ladva	106	93	103	100

Practical example: Ranking of bulls with second crop daughters

- The ranking of the bulls is reasonable consistent between 2001 and 2007 even though
 - New organization calculating the proofs (Svensk Mjolk and NCGE)
 - New definitions of the traits
 - Milk production from 1 to 1-3 lactations and higher weight on protein
 - Mastitis resistance now includes conformation

Total Merit Index

- TMI is the aggregated breeding objectives of the breeding program.
- TMI is changed over time due to new knowledge or new production conditions.
- At the Ränneslöv farm an extra attention is put on calving traits.

Practical example: Ranking of bulls with second crop daughters

- Between 2001 and 2007 the TMI in Sweden has changed in the direction towards more economical weights on functional traits and less on production. This have also had an impact on the ranking of the six bulls from the list of recommended bulls from 2001.



Practical example: Reranking of bulls with second crop daughters, TMI

Bull	TMI 01	TMI 07	Rank 01	Rank 07
Gubbilt	+22	+12	1	4
Spånstad	+18	+22	2	1
G Best	+18	+13	2	3
Gul	+18	+19	2	2
Atong	+16	+10	5	5
Ladva	+15	+3	6	6

Can we trust the results from international listings and breeding evaluations

- NCGE is a joint Nordic project between Denmark, Finland and Sweden.
- NCGE is today calculating proofs for production, fertility, temperament, conformation and udder health
- More traits will follow.



Can we trust the results from international listings and breeding evaluations

- NCGE is using raw data from the three countries in the estimations.
- The r_g between countries is assumed to be 1.
- Harmonization of traits has been an important prerequisite for the work as well as a common pedigree file.
- The NCGE proofs are now the official proofs in all three countries.

Can we trust the results from international listings and breeding evaluations

- Interbull is using deregressed proofs from the participating countries in the estimations.
- The rg between countries is not = 1.
- Harmonization of traits is important as well as a common pedigree file.
- The Interbull proofs are the official proofs in Sweden for bulls without Scandinavian daughters.

3-5683 Ränneslöv Addison x Fatal



- Very high production
- Excellent calving
- Good udder health

Breeder: Lars-Inge Gunnarsson, Ränneslöv, Laholm

**SVENSK
AVEL**

Det lönsamma valet!

1894, daughter of Ränneslöv



Thank
you
for
the
attention!

Owner: Lars-Inge Gunnarsson, Ränneslöv



Det lönsamma valet!