

Reliable breeding values for proven Nordic bulls

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Numbers of registrations behind breeding values for proven bulls have in general been constant or increasing in the last 15 years. This, in connection with better methods for genetic evaluation, means that breeding values for proven bulls are more reliable today than before.

The basis of all breeding is a recording system with a lot of reliable registrations of phenotypic measurements and pedigree. Without these registrations it is not possible to calculate breeding values, select the best sires and dams and thereby create genetic progress. For the Nordic dairy breeds we have a broad breeding goal with emphasis on both production and functional traits. A prerequisite for this is registrations of many different traits.

100 daughters or more with recordings for yield

Proven bulls used for insemination in Denmark, Finland and Sweden have 100 or more daughters with recordings of yield behind their breeding values.

RDM and Danish Jersey sires born from 1991 to 2006, have just below 100 daughters per sire, while Danish Holstein have a little more. After 2006 the number of daughters has been increasing for Danish Jersey and Danish Holstein.

In Sweden, the corresponding number of daughters has been around 150 for both SRB and Swedish Holstein. The number has been quite constant for SRB, while it has been decreasing for Swedish Holstein to 130 daughters per sire.

In Finland, the number of daughters with yield recordings has been decreasing quite rapidly from 1991 to 2006. However it has decreased from a very high level. In the early 1990s there were 250 or more daughters per bull. This has decreased and in the recent year it was around 150-175 daughters. The decrease has been most prominent for Finnish Ayrshire.

The reason why number of daughters per proven sire change across the years is partly due to the change in number of semen doses released per sire. Changes in number of herds participating in official yield recording can also have an influence.

Sires tested in the Nordic countries have a large number of daughters with yield recordings which means that reliabilities for newly proven sires are high - above 90%. This is a little higher than reliabilities of proven sires in most other countries.

Registrations for health traits on the same level as registrations for yield

In general the number of daughters with registrations for udder health and other diseases are only a little bit lower than for yield.

For udder health the average number of daughters with recordings per proven bull has been lower than the corresponding number for yield in Denmark until 2000. After 2000 the numbers are equal. This was due to the fact that not all treated cows were recorded on the central database before 2000.

In contrary to this there is the same number of daughters per sire for udder health as for yield in both Sweden and Finland. This is because it is assumed that all Swedish and Finnish herds systematically record incidence of mastitis.

For “other diseases” (reproductive-, metabolic-- and feet & leg diseases), number of daughters is on the same level as for udder health.

Boost in recording of conformation

In all countries there has been a rapid increase in number of classified daughters per proven sire from 1991-2006. For sires born from 1995-2002 the numbers were higher in Sweden and Finland compared to Denmark. However today there are in average 70-80 classified daughters per proven bull in Red breeds, Holstein and Jersey – irrespective of country.

Figure 1 Average number of daughters per sire in 2005-2006

	Denmark			Sweden		Finland	
	RDM	HOL	JER	SRB	SLB	FAY	HOL
Yield	90	115	110	150	130	165	185
Udder health	90	115	110	170	155	160	185
Other diseases	90	115	-	170	145	160	185
Conformation	70	75	80	80	65	65	75