

Common genetic base – definition

Gert Pedersen Aamand

Denmark, Finland and Sweden have a common definition of genetic base and standardization factors. The definitions are used for all traits within the dairy cattle populations both for EBV's which are estimated joint Nordic and for EBV's which still are estimated nationally. In principle all EBV's are expressed to a cow base (for sire model traits we use a sire base equivalent to the cow base).

Genetic Base

Yield traits, type traits, milk ability and temperament

The base includes all cows which are 3-5 years old at the publication date. If the publication date is 01.06.2005 it means the base include cows born 01.06.2000 to 01.06.2002. Cows mean females, which have calved at least once.

Longevity, fertility traits, calving traits, mastitis, other diseases and beef production

If the publication date is 01.06.2005 it means the base includes sires born 01.06.1996 to 01.06.1998. All sires which have an official EBV for the trait are included in the base.

The base is changed at every evaluation. The base definitions above relates to publication date 01.06.2005.

Standardization

All EBV's are expressed with a standard deviation of 10. The standardization factors are calculated in a way that sires, which have an average progeny group size (weighted average across the 3 countries), have a standard deviation of 10. For EBV's which still are calculated nationally the standardization factors are also calculated nationally. The standardization factors for all traits are calculated from two birth years of sires (1997-1998), which have all information from 1. batch of daughters. Only sires that have an accuracy/number of eff. daughters above the limits for official publication are included in the standardization. Only Finnish, Swedish or Danish owned AI-sires are included in the standardization. The standardization factors are kept constant from evaluation to evaluation.

Table 1. Example birth year and number of daughters per lactation with registrations

Year of birth	1 lactation	2 lactation	3 lactation
1995	100	70	40
1996	100	70	40
1997	100	70	40
1998	100	70	40
1999	100	70	
2000	100		
2001			
2002			
2003			