News - NAV routine evaluation
2 February 2011

The latest NAV routine evaluation for yield, fertility, type, udder health, other diseases, calving traits, milk ability, temperament, growth, longevity and NTM took place as scheduled. NAV carried out three evaluations per trait group:

Holstein evaluation, including data from: Danish Holstein, Danish Red Holstein, Swedish Holstein, Finnish Holstein, Finnish Ayrshire and Finn Cattle.

Red Dairy Cattle evaluation, including data from: Danish Red, Swedish Red, Finnish Ayrshire, Finnish Holstein and Finn Cattle.

Jersey evaluation, including data from: Danish Jersey and Swedish Jersey (only yield and type).

Extraction dates
Dates for extraction of data from national databases are given in table 1.

Table 1. Dates for extraction of data from the national databases

Trait	Denmark	Finland	Sweden
Yield	31.12.2010	20.12.2010	19.12.2010
Type, milk ability and temperament	18.12.2010	20.12.2010	13.12.2010
Fertility	03.01.2011	20.12.2010	18.12.2010
Udder health and other disease	03.01.2011	20.12.2010	18.12.2010
Calving	03.01.2011	20.12.2010	18.12.2010
Longevity	31.12.2010	20.12.2010	18.12.2010
Growth	31.12.2010	20.12.2010	15.12.2010

News in relation to NAV genetic evaluation

Milkability
Measurements from electronic milk meters are included in the Nordic genetic evaluation of milkability along with traditional records of milking time that are based on judgements.

Other traits
No changes

Genetic base
EBVs for bulls and females are expressed on the same cow base. This genetic evaluation included cows born from 02.02.2006 to 02.02.2008 in the genetic base (average 100).

Table 2. Definition of genetic base for cows and bulls

Trait	Genetic base
Yield, type, milk ability, temperament, longevity, mastitis resistance, growth*, fertility, calving and resistance against other diseases	Cows born 02.02.2006 - 02.02.2008

*Bull calves born in the same period

Milkability
Measurements from electronic milk meters are included in the Nordic genetic evaluation of milkability in February 2011 in addition to the traditional records of milkability that are based on judgements. The data from electronic milk meters are at the moment collected in Denmark

exclusively. Milkability from electronic milk meters is defined as the average flow of solids (fat and protein content) within lactations. The trait is measured in grams per minute, and data from first lactations are included in the genetic evaluation. In the genetic evaluation we include all electronic milk meter data from up to seven records per cow in 1.lactation. The milkability – measured as lactation mean of 4-7 records -from electronic milk meters has higher heritability than judged measurements (table 3).

Table 3. Heritability estimates for milking speed measured by lactation means of electronic milk meters and milking speed judged by the milk producers for Danish Red, Danish Holstein and Danish Jersey.

Methods for recording	Danish Red	Danish Holstein	Danish Jersey
Electronic milk meters	0.53	0.43	0.47
Judged by the milk producers	0.25	0.25	0.19

The use of data from electronic milk meters results in records on more cows than previously. Bulls with Danish daughters lactating in 2008 and later gets lots of new information in their EBV for milkability. Early a progeny tested bull with Danish daughters had about 40 daughters with milkability. But today such a bull has about 80 daughters with milkability data.

EBVs for bull with Danish daughters lactating after 2007 has got significant more reliable proofs due to higher heritability based on milk meter data and due to more daughters with records. An analysis shows that the correlations between estimated breeding values based on electronic measures and judgements and estimated breeding values based on judgements alone are approximately 0.95 for Danish Holstein, RDM and Jersey bulls born in the late 1990'ties. For younger bulls with many 1. lactation daughters after 2007 the correlations are lower and it is 0.7-0.8 for Danish bulls proven in the last couple of years. This indicates that some re-ranking will occur among the recently proven Danish bulls. For the Swedish and the Finnish bulls the correlations are close to unity.

Today, data from electronic milk meters are collected automatically in Denmark. In the future electronic milking speed data from different milking equipment will hopefully be collected at the national databases in all three countries. The intention is that the judgement will be phased out in the long term in all three countries, so that the milk producers and classifiers do not have to spend time on judging milking speed.

Publication of NTM for Nordic and foreign bulls

A NTM is published if the bull has official EBVs (NAV EBV or international EBV) for Yield, Mastitis and Type. By official means for NAV EBVs that the NAV thresholds are met and for international EBVs (IB EBVs) that Interbull estimates EBVs for the single bull. EBVs are used in the following priority NAV EBVs, IB EBVs and Pedigree index. For traits without a NAV EBV or an IB EBV a NAV pedigree index is calculated.

For bulls with a Nordic herd book number the pedigree index follows the principles described in the October 2008 routine information. For foreign bulls without a Nordic herd book number the pedigree index is calculated in as ½(EBVsire-100) +1/4(EBVmgs-100) +100. If EBVsire or EBVmgs is not official NAV EBVs then 100 is used.

NAV – frequency and timing of routine runs

NAV has 4 evaluations per year. In Table 4, the future NAV and INTERBULL release dates are shown.

Table 4. NAV and INTERBULL release dates in 2011. EBVs released at NAV dates in bold will be delivered to international genetic evaluation.

	2011	
Month	NAV	INTERBULL
January 2011		
February 2011	**2**	
March 2011		
April 2011		5
May 2011	2	
August 2011	**9**	9
September 2011		
October 2011		
November 2011	**2**	
December 2011		6

You can get more information about the joint Nordic evaluation:

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