News NAV evaluation 5 July 2022

Dairy Cattle

The latest Nordic Cattle Genetic Evaluation (NAV) official genomic prediction took place as scheduled. NAV carried out genomic prediction for Holstein, RDC, Jersey, and dairy crossbreds.

Data used in genomic prediction

Genotypes were extracted from the joint Nordic SNP data base 7 June 2022. INTERBULL information from April 2022 and national information from 3 May 2022 run were included in the genomic prediction.

Publication of GEBVs

GEBVs for bulls and females are published monthly. Nordic phenotypic information is updated 4 times a year (February, May, August and November), and is used in the reference population for genomic prediction. The GEBVs for pure breed animals are expressed on the same cow base as in the May evaluation; cows born from 03.05.2017 to 03.05.2019. The GEBVs for crossbreed animals are expressed on a slightly different genetic base; females born from 03.05.2014 to 03.05.2021.

Official GEBVs for bulls used for AI in Denmark, Finland or Sweden are published at the <u>NAV Bull Search</u> page.

GEBVs for dairyxdairy crossbreds

Joint Nordic GEBVs for dairyxdairy crossbreed females were published for the first time 7th December 2021. The procedures for calculating GEBVs have not been changed since the introduction, but for a few animals it has been observed that the changes in GEBVs between subsequent evaluations are significantly larger than expected. NAV is investigating what is causing these unexpected large changes.

Publication of NAV EBVs on search pages

Official NAV GEBVs for foreign AI bulls not used for AI in Denmark, Finland and Sweden are published on the <u>NAV homepage</u> in an excel sheet. The excel sheet also includes GEBVs for bulls used for AI in Denmark, Finland and Sweden. The excel sheet includes AI bulls that are from 10 months to 5 years old at the date of publication. The excel sheet is mainly useful for foreign AI-companies.

Interbull EBVs/GEBVs are published at the <u>NAV Interbull Search</u> page. The Nordic total merit index (NTM) is not calculated based on GMACE GEBVs, since Interbull regulations do not require member countries to calculate total Merit Indices based on Interbull GEBVs, and internationally it is not a common practice.

NAV – frequency and timing of official runs

NAV has 4 large dairy evaluations per year, which include updated phenotypic and genomic data, and additional eight small runs including updated genotypes. In Table 1 the NAV and INTERBULL release dates for 2022 are shown. The beef evaluation based on beef x dairy crossbreeds take place along with the large NAV dairy runs 4 times a year. The NAV pure beef evaluation has its own time schedule

Table 1. NAV and INTERBULL release dates in 2022. EBVs released at NAV dates in bold will be delivered to international genetic evaluation.

	Dairy Cattle			Beef Cattle	
Month	NAV	NAV		NAV	INTERBEEF
	Small run ¹⁾	Large runs ²⁾³⁾	INTERBULL	Pure Beef	
January 2022	5				
February 2022		1			
March 2022	1			1	4
April 2022	5		5	12	
May 2022		3			
June 2022	7			7	
July 2022	5				
August 2022		9	9		
September 2022	6				
October 2022	4				21
November 2022		1		1	
December 2022	6		6		

¹⁾ Genotypes updated; 2) Genotypes and phenotypes updated; 3) Beef x dairy evaluation

You can get more information about the joint Nordic evaluation: General about Nordic Cattle Genetic Evaluation: www.nordicebv.info

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