

## International genomic breeding values for Holstein

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Interbull has started to estimate genomic breeding values for young Holstein bulls. These breeding values were first estimated in April 2014 and published for the first time in Denmark, Finland and Sweden at end of May. In the future the international genomic breeding values will be updated at the same time as traditional international breeding values from Interbull, thus three times a year in April, August and December.

In the run in April 11 populations were included in the genomic evaluation in Interbull. Which populations participated for different trait groups are presented in table 1. About 6 500 young Holstein bulls got genomic breeding values for production, conformation, udder health and fertility traits. In longevity, calving and milkability the number of bulls is a bit smaller. The genomic breeding values are published for the same traits as traditional breeding values. The only exception is temperament where there is no genomic evaluation.

Table 1. Populations participating in the genomic evaluation in Interbull in April 2014.

	AUS	CAN	CHR	DEU	DFS	ESP	FRA	GBR	ITA	NLD	POL
Production	x	x	x	x	x	x	x	x	x	x	x
Conformation		x	x	x	x	x	x	x	x	x	x
Udder health		x	x	x	x	x	x	x	x	x	x
Longevity		x	x	x			x	x	x	x	
Calving		x		x	x			x	x	x	
Fertility		x	x	x	x		x	x	x	x	x
Workability (only Milkability)		x		x	x			x		x	

AUS = Australia, CAN = Canada, CHR = Switzerland (Red Holstein), DEU = Germany and Austria, DFS = Denmark, Finland and Sweden, ESP = Spain, FRA = France, GBR = Great Britain, ITA = Italia, NLD = Netherlands, POL = Poland.

According to the top list for bulls based on Interbull breeding values, there are 117 bulls that have NTM 30 or higher. Out of these bulls only 4 have daughter information, the rest are young bulls with only genomic breeding values. This shows that the genetically best bulls are the youngest ones. Although one should remember that the reliability of their breeding values are lower than for daughter proven bulls. From these top 117 bulls 44 are from the Nordic countries in NAV (35 from Denmark, 6 from Sweden and 3 from Finland).

The same bull can have genomic breeding values for some traits and traditional breeding values with daughter information for other traits. This is because evaluation with daughter information is available earlier for some traits, for example calving traits, than for other traits, for example longevity. When a bull has an international breeding value based on daughter information this replaces the genomic breeding value. Type of the breeding value can be seen at this point from the number of daughters on NAVs search page for Interbull breeding values.

The international genomic breeding values makes it easier to compare also the young bulls between countries, which has been possible for bulls with daughter information since the founding of Interbull.

You can find these young Holstein bulls on the same list as other Holstein bulls on NAVs search page for Interbull breeding values.