Hundyr i referencen

STØTTET AF mælkeafgiftsfonden

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	Old model	New model 2 nd July	Comments
Pedigree in genomic	Sire-Maternal	Animal Model	Effect on level for
prediction	grandsire		candidates and cows
			for traits with large
			genetic trend
Reference	Bulls	Bulls + cows	6800 Jersey cows
population			and 10000 RDC
			Cows included
Blending method	Method developed by	Revised blending	Revised method
	MTT in 2010	method developed by	better avoid double
		MTT in 2013/14	counting, which make
			it possible to include
			females in ref
			population

Reference population August 2014

	Reference population		
	Bulls	Cows	
Holstein	25700 ^{a)}	-	
RDC	7800 ^{b)}	10000	
Jersey	2400 ^{c)}	6800	

a) Including NLD, FRA, DEU, ESP ref bulls;

b) including NO ref bulls;

c) including US ref bulls

NAV

Extra reliabilities next to pedigree information for RDC using bulls or bulls+cows in the reference population – female information is included for traits market with bold

	Reference population		
	Bulls	Bulls + cows	
Milk	0.17	0.23	
Fat	0.16	0.23	
Protein	0.12	0.18	
Yield	0.13	0.18	
Fertility	0.14	0.14	
Birth index	0.18	0.18	
Calving index	0.02	0.02	
Mastitis	0.17	0.23	
Other diseases	0.14	0.14	
Frame	0.24	0.29	
Feet & Legs	0.24	0.33	
Mammary	0.23	0.30	
Milkability	0.17	0.22	
Temperament	0.18	0.21	
Longevity	0.07	0.07	

N

Extra reliabilities next to pedigree information for Jersey using bulls or bulls+cows in the reference population – female information is included for traits market with bold

	Reference pop	Reference population		
	Bulls	Bulls + cows		
Milk	0.23	0.37		
Fat	0.13	0.21		
Protein	0.18	0.32		
Yield	0.16	0.22		
Fertility	0.17	0.17		
Birth index	0.00	0.00		
Calving index	-0.02	-0.02		
Mastitis	0.09	0.16		
Other diseases	-0.11	-0.11		
Frame	0.19	0.30		
Feet & Legs	0.05	0.13		
Mammary	0.26	0.29		
Milkability	0.15	0.34		
Temperament	0.00	0.00		
Longevity	0.11	0.11 [ः]		

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Reliabilities across breeds

- Compared with Holstein the GEBV reliabilities for RDC and Jersey are still about 12-15% units lower, but significantly higher than before.
- In the near future more genotyped RDC and Jersey females will be lactating and be included in the reference population, and the GEBV reliabilities are expected to increase further.

Underestimation has been removed

- RDC the genotyped young bulls and heifers increase on average 4 index point for yield index and NTM, and between 0-2 index point for the other traits where cow information contribute to the reference population.
- Jersey the corresponding results show an increase of 2 index point for Y-index and NTM, and 0-1 index point for the other traits where cow information contribute to the reference population.

Correlations new-old

	RDC		Jersey	
	Genotyped young bulls and heifers	Genotyped cows	Genotyped young bulls and heifers	Genotyped cows
Traits without genotyped cows in reference population	0.97-0.99	0.97-0.99	0.94-0.96	0.94-0.96
Traits with genotyped cows in reference population	0.88-0.93	0.89-0.92	0.77-0.85	0.87-0.90











Status

NAV

- Results for RDC and JER positive received in practice, but wehave to more improvements
- HOL: Not yet analyzed and no change 2 July
- HOL changes has to be in Interbull test before implementation, but same procedures are later planned to be introduced for HOL
- More traits RDC and Jersey



Revised blending

New blending procedure (developed by the MTT-group) Purpose: Avoiding double counting, i.e taking into account that EBV and DGV includes identical information

- New weight on DRP for reference animals
- New weight on DGVs

NAV

New method of calculating GEBV