

**Achieve consensus on how to deal
with general aspects of NTM upgrade:**

**Weight on different lactations in EBVs
and organic production system**

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NAV



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General aspects of NTM upgrade

- **Weights according to level of conventional and organic production systems**
- **Weights on different lactations**
- **Feed efficiency**
- **Polledness**

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Weighting of organic and conventional production systems

Workshop 2017:

Current share of milk from organic NAV herds:
~15 %

Increased production in organic herds 5- 10 years ahead should be considered

Workshop 2018:

Correlations between conv. NTM and org. NTM
about 0.95

Weak arguments for two separate breeding goals

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Weighting of organic and conventional production systems

- Natural to combine economic values from organic and conventional production systems in upgraded NTM
- Weigh the NTM weights 70% conventional and 30% organic to reflect expected future production systems.
- Correlation between NTM_{conv} and $NTM_{70:30}$ is >0.99 .

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Weights on different lactations in EBV

Current weights are 0.5:0.3:0.2 for 1st, 2nd and 3rd+

- From 2005
- Progeny testing scheme
- Aim to reflect - to some extent number of lactations and time of expression in a cows life (discounting)
- Genetic correlations between lactations are high

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Weight on different lactations in EBV

New for 1st, 2nd and 3rd+

- Reflect number of lactations in future production systems with a lower replacement rate
- Progeny testing scheme substituted by genomic selection – give more equal reliability across lactations at an early stage

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Weights on different lactations in EBV

Current weights in NAV evaluations	Distribution of lactations based on 2016 data	NTM 2018 model results with 32% replacement rate
0.5	0.38	0.30
0.3	0.28	0.25
0.2	0.34	0.45

New proposed weights

0.30: 0.25: 0.45 for 1st, 2nd and 3rd+

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Weight on different lactations in EBV

- Genetic correlation between lactations are very high >0.90
- Effect on (G)EBVs by changing weights on lactations very small

Breed	HOL	RDC	JER
Number of sires	914	678	164
P-index	0.997	0.988	0.995
Number of sires	905	669	162
Total claw health	0.997	0.997	0.997

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Weight on different lactations in EBV

- NAV recommend using the weights 0.30:0.25:0.45 for 1st, 2nd and 3rd and later lactation, respectively, for estimation of breeding values, even though it has a very limited effect on the ranking of animals to send the signals that later lactations are important in the breeding goal.
- A change in the weight of the different EBV requires some preparation by NAV since the results have to be included in an Interbull test run before it can be changed.

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Saved Feed NAV routine evaluation and NTM

EBV Saved feed = EBV Maintenance eff. + EBV Metabolic eff.

Aim

(G)EBV - Maintenance eff. winter 2018/19 all breeds based on body weight and conformation traits

(G)EBV - Metabolic eff. – when we have something with a “fair” reliability – all breeds

Discuss inclusion in NTM, when we have official EBVs available

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Polledness

- Workshop January 2018
 - NAV presented economic value of polledness
 - Feedback from RDC breed organization who has asked for the analyses – RDC is not at present time prepared to introduce polledness in NTM
- Conclusion
 - Polledness will not be included in the November 18 upgrade, but can be discussed again in the future if it is a wish

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Summary

NAV recommendations:

- Weight organic:conventional – 30:70 (group work I)
- Weight 0.30:0.25:0.45 for 1st, 2nd and 3rd and later lactation
- Saved feed discuss inclusion when we have official EBVs

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Polled – discuss further if a wish