

Breeding schemes in dairy cattle

Jarmo
Louise
Jørn
Morten

State of the art

- Full scale genomic selection implemented in Adam but a few bugs exist
- Simulations on optimal reference population in progress (Christian Sørensen)
- Work on inbreeding and genetic diversity in Nordic Red in progress (Alban Bouquet)
- Work on improvement of environmental impact traits in GS breeding schemes with registration in recording herds in progress (Helen Hansen)

Overall goals

- Tuning genomic Adam
- Strategies for maintaining
 - Reliability (size of reference population etc)
 - Genetic variation
- Impact of using reproduction technologies
- Recording strategies: genetic/economic aspects
- Strategies for use of different SNP chips
- Expand ADAM to multiple populations

Resources for breeding scheme work

- Denmark:
 - 14 months/year (2012 & 13) available for breeding scheme work in the GS project in DK
 - Jørn Thomassen will work on GS breeding schemes in small breeds in the last part of his PhD
 - 2 PhD on general GS breeding programs in Foulum
- Finland:
 - Alban has one year left
 - A master student in Finland from January 2012
- Sweden:
 - Helen has nearly two years left

Next steps for reaching the goals

- More collaboration between Alban and the Foulum group
- Include a part on breeding plans for improvement of feed efficiency and reduced methane emission in the overall Nordic application for the industries on that issue
- Create an application on risk Management in livestock breeding schemes (Sweden, Finland, Denmark and Norway)