International cooperation and other NAV activities

Gert Pedersen Aamand, NAV

French Jersey – NAV cooperation

French Jersey

- **Population increases a lot – 10.000 cows**
- **VG and Evolution cooperate about the breeding scheme**
- **French Jersey**
  - **Order GEBV for French Jersey females routinely**
  - **Wish to take part in NAV routine evaluation with phenotypes**

No agreement yet

Norwegian data in traditional NAV genetic evaluation

Status Norwegian Jersey and Holstein included in NAV evaluation

- **Inclusion of Norwegian data tested for Yield, fertility, longevity, young stock survival, mastitis (ongoing), and NTM**
- **Routine evaluation takes place when we have finalized upgrading of the routine NAV pedigree file to include Norwegian data**
- **TINE will not be able to publish EBVs on database, but has agreed with VG that results can be used in VIKmate in Norway**

Harmonisation Eurogenomics

Current situation:

- DEU, FRA, NLD, ESP, POL and DFS share reference population for Holstein
- Interbull EBVs are used as input data for foreign reference bulls
- The value of foreign information depends on the correlation estimated between countries by Interbull

Harmonisation Eurogenomics

How to get more valuable information from foreign ref. bulls?

Harmonize data collection, data editing, trait definition, genetic model, published proofs

Increased genetic correlation (Interbull)

Increased GEBV reliability

Harmonisation Eurogenomics

- Based on best possible of all genetic evaluation systems - highest common denominator – it means RDC and JER models easily can follow
- Largest potential for improvement of functional traits
- It is resource demanding to harmonize

Genomic prediction

GEBV for embryos in routine

- Embryos are included in the weekly evaluations and get unofficial GEBVs
- Single embryos still have problems with low call rate (caused by poor quality DNA tissue)

Changes to be introduced in 2019

- GEBV for sub traits for (work is ongoing):
  - Fertility
  - GH
  - Claw health
  - Persistency
- New SNPs from the LD chip in operation if they add value (work ongoing)
- Use of new gene map for imputation

Mastitis – Swedish health status (Feb 19)

- Remove Swedish Herds with incomplete recording of veterinary treatments by applying the same rules as for General Health
- Implementation NAV routine Feb 2019

Generel health (May 2019)

- Improve correction for heterogeneous variance
- Update genetic parameters
- Update economic values
- Include BHB and acetone data from Finland (Swedish data not ready yet)
- Genetic groups

TMI - beef×dairy

- ***A Nordic TMI will be developed based on carcass and calving trait information – aim May 2019***

Feed saved

Aim

- EBV for maintenance efficiency (May 2019)
- EBV for metabolic efficiency (Aug/Nov 2019)

Projects in start up fase

Beef

- Aim – estimate NAV breeding values for pure-bred beef animals
- Focus on beef breeds and traits that today are evaluated in all three countries
  - Calving traits
  - Growth and slaughter traits

NAV Communication

Upgrade NAV homepage

- **NAV home page front page has been upgraded November 2018 to be more appealing**

High low NTM

- **Testing phase of Nordic file completed**
  - **NAV part of the project completed**
  - **Seges has implemented - S and F not yet**
  - **Routine run – 4 routine run/year along with update of phenotypic data**

NAV information/communication

- **Phenotypic tool milkability, and calving traits (Feb 2019) (last traits!)**
- **Publication of EBVs for beef bulls used for crossbreeding with dairy – a smarter solution will be developed**
- **Genetic traits will be added to NAV search page stepwise.**