The basis for cooperation in breeding in the ERDB member countries

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Benefits

- Increased population size
- Increased genetic gain with control of inbreeding
- Better use of resources
What is needed!

- Genetic links
- Registration system
- Genetic evaluation
- Test program of young bulls
- Breeding goal
Situation in ERDB countries

- Genetic links
- Registration system
- Genetic evaluation
- Test program of young bulls
- Breeding goal

I must admit that I have not studied it in details so in some cases I might be wrong!!
Genetic links ERDB

- Genetic links:
  - 2-way genetic ties between Sweden, Finland, Norway and Denmark
    - Proven sires /sires and sons
    - Common test of young bulls (Fin-Swe)
Genetic links ERDB

- Genetic links:
  - 1-way genetic ties between Nordic countries and Baltic countries
    - Nordic proven sires
    - Nordic young bulls
  - Angel breed - weak link to DNK
Breeding goal

- Do we have a common breeding goal for our red breeds?

- An economic cow
  - High production with excellent functional traits (longevity, diseases resistance, fertility, calving traits)
Registration

Pedigree:
- Complete pedigree (unique id)

Traits:
- Production
- SCC
- Type traits, milking speed and temperament
- Longevity
- Fertility traits
- Calving traits
- Disease treatments - mastitis
## Registrations in different ERDB countries

<table>
<thead>
<tr>
<th></th>
<th>Pedigree</th>
<th>Yield, type, SCC</th>
<th>Functional traits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nordic countries</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Baltic countries</strong></td>
<td>Yes</td>
<td>Yes?</td>
<td>No?</td>
</tr>
</tbody>
</table>

*Functional traits include Yield, type, SCC and Pedigree.*
Genetic evaluation

- Finland, Sweden and Denmark benefits from their similar registration systems in the Joint Nordic Genetic Evaluation
Genetic evaluation

- Joint Nordic Genetic Evaluation is open for cooperation with other ERDB countries about:
  - Building similar registration systems
  - Building national or joint genetic evaluation
Perspectives – joint Nordic Estimation of breeding values

- Use resources more efficient:
  - Development of new method
  - Routine evaluation

- Joint platform for practical breeding work
Short run Perspectives – ERDB

- Similar registration system all traits
  - Which traits to be registered
- Establish national evaluation
  - Trait definition
  - Statistical model
  - Sub breeding goals
  - Presentation of EBVs
Short run Perspectives – ERDB

- Benefit from Nordic experiences
- Get a better platform for practical breeding work and ERDB cooperation
Long run Perspectives – joint ERDB
Estimation of breeding values

- Use resources more efficient:
  - Development of new method
  - Routine evaluation
- Joint platform for practical breeding work
What do we have and what do we still miss within ERDB?

- Genetic links 😊😢
- Registration system 😊😢
- Genetic evaluation 😊😢
- Test program of young bulls 😢
- Breeding goal 😊
Genetic evaluation

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Nordisk Avlsværdivurdering