Interbeef: Experiences of a founding member
(\textit{Denmark, Finland & Sweden})

Interbeef webinar – 10/12/2020
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The scope of this presentation

• Short about beef breeding in Sweden

• Cooperation on Nordic and International level
  – Why and how?
  – Ongoing development
Växa: role and responsibility within breeding

• Official national breeding organization for Swedish cattle breeds
  – 7 dairy breeds and 7 beef breeds

• Responsible for:
  – Breeding goals
  – Breeding values
  – Herd book and data base
Our cattle data base is unique...

Approx. 8% of the total number of Swedish suckler cows participate in beef recording.
National genetic evaluation and prerequisites...

3x/year for 7 beef breeds for calving and growth/carcass traits

✓ Engaged breed organizations and experienced breeders
✓ Large amount of good quality data, especially weights
✓ Performance test station and Nordic breeding company
✓ Good genetic progress for most breeds and traits
Challenges for national beef breeding

- Often small beef breed populations
- Limited with resources
- Weak genetic links (herds, countries)
- Difficult to identify suitable bulls/AI for import/export
- Difficult with genomic evaluation due to few genotypes

Cooperation needed to provide Nordic beef breeders with high quality evaluations and new development
NAV cooperation: dairy and beef

• Dairy breeds – well established
  – Joint participation in Interbull

• Beef breeds – increased focus
  – Joint participation in Interbeef
  – Beef x Dairy: genetic evaluation (2018-), Nordic Beef x Dairy Index
  – Purebred beef: genetic evaluation (implementation 2021)
Nordic evaluation of AI beef sires used on dairy

• Increased used of beef semen in dairy herds
  – Dairy farmers wants to select beef bulls (across breed) giving profitable crossbred calves

• Nordic Breeding values
  – Calving and carcass traits
  – Future development: youngstock survival length of pregnancy
Nordic evaluation of purebred beef breeds

• Developed from the joint work within Interbeef

• Phase 1 – implementation 2021
  – Breeds: CHA, LIM, SIM, HER, ANG
  – Single EBVs for calving, growth and carcass traits

• Phase 2 – add more breeds and traits
  – Fertility
DFS activities in beef genomics

• No national or nordic genomic evaluation yet

• Three ongoing research projects in DFS; expected amount of genotypes to be collected
  – CHA 2000 and HER 2000
  – Major beef breeds 2000 per breed
  – Crossbred calves (Beef x dairy) 12 000

• More genotypes will be available now when pedigree verification is performed by genomic analysis
DFS participation in Interbeef

- Routine for all breeds (5) and traits (3)
  - CHA, LIM, SIM, AAN and HER
  - weaning weight, birth weight and calving
- Publication 2x/year on top list (search page to be developed)
- Delivered data for test runs and research projects

Rough number of DFS animals with records (expressed in thousands)

<table>
<thead>
<tr>
<th></th>
<th>AAN</th>
<th>CHA</th>
<th>HER</th>
<th>LIM</th>
<th>SIM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calving ease</td>
<td>140</td>
<td>324</td>
<td>296</td>
<td>313</td>
<td>198</td>
</tr>
<tr>
<td>Birth wt</td>
<td>113</td>
<td>290</td>
<td>259</td>
<td>231</td>
<td>150</td>
</tr>
<tr>
<td>200d wt</td>
<td>57</td>
<td>181</td>
<td>149</td>
<td>98</td>
<td>78</td>
</tr>
</tbody>
</table>
Main reasons for participation Interbeef

- International genomic evaluation
- Evaluation for new traits
- Benefit from shared knowledge and development
- Facilitate benchmarking, marketing and exchange of bulls
- Possibilities to improve national data and pedigree...
- ... and to integrate foreign information in our evaluations

Example from our top list of internationally official males for CHA, trait AWW

<table>
<thead>
<tr>
<th>Ranking</th>
<th>International ID</th>
<th>International name</th>
<th>Birth year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CHASWEM020923201015</td>
<td>LARGO AV SONARP</td>
<td>2015</td>
</tr>
<tr>
<td>2</td>
<td>CHAFRAM005706034572</td>
<td>ILESTLA</td>
<td>2013</td>
</tr>
<tr>
<td>3</td>
<td>CHAFRAM005815616045</td>
<td>LEADER</td>
<td>2015</td>
</tr>
<tr>
<td>4</td>
<td>CHASWEM064631190809</td>
<td>ENOK AV NYBO</td>
<td>2009</td>
</tr>
<tr>
<td>5</td>
<td>CHAFRAM007122154071</td>
<td>JOYAU</td>
<td>2013</td>
</tr>
</tbody>
</table>
Conclusions

- National beef breeding in Sweden is well-organized but genetic progress is limited by small populations and lack of resources.

- Nordic and international cooperation is needed to facilitate exchange of genetics and to increase progress by including new traits and genomics.

Read more on [www.nordicebv.info](http://www.nordicebv.info) under Beef cattle.