Traditional low producing dairy breeds used as suckler cows, a threat or a future oriented solution?

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Suckler cow production is increasing in Norway

> General trend, last decade:
  > Total dairy cow population is slightly decreasing (- 10 %)
  > Total suckler cow population is increasing (+ 152 %)
    (imported beef breeds and cross breds)

> “Traditional low producing” dairy breeds:
  > Small populations (less than 1000)
  > 30-80 % are in suckler cow production
Traditional dairy breeds

> Native

> Endangered

> National conservation programmes
  > Main goal: Increase population sizes
Sided Trønder and Nordland

Telemark

Døla

Western Red Polled

Eastern Red Polled

Western Fjord

1000 cows

650 cows

200 cows

200 cows

170 cows

850 cows
Norwegian Red (NRF)

> 98% of all dairy cows in the national dairy recording scheme in Norway are NRF

= 233 000 NRF cows
Differences in breeding goals

The six endangered breeds  NRF

>Milk production
>Avoidance of inbreeding
>Breed type
>Pure breeding

>Dual purpose breed
>Broad breeding goal
>Both production and health traits included
>Included progeny testing of 250 daughters
>Relationship index in addition to breeding index
>Ne = 173 (2008)
Annual milk yield, Norwegian cattle breeds

<table>
<thead>
<tr>
<th>Breed</th>
<th>Milk Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sided Trønder and Nordland (STN)</td>
<td>4,200</td>
</tr>
<tr>
<td>Telemark</td>
<td>3,900</td>
</tr>
<tr>
<td>Western Polled Red</td>
<td>4,000</td>
</tr>
<tr>
<td>Western Fjord</td>
<td>3,800</td>
</tr>
<tr>
<td>Døla</td>
<td>3,000</td>
</tr>
<tr>
<td>Eastern Red Polled</td>
<td>3,900</td>
</tr>
<tr>
<td>NRF</td>
<td>7,000</td>
</tr>
</tbody>
</table>

Tine Advisor & Norwegian Genetic Resource Centre (2010)
Population sizes of the endangered breeds

Norwegian Genetic Resource Centre (2010)
Population sizes and share of suckler cows

- Sided Trønder and Nordland (STN): 30%
- Telemark: 50%
- Western Red Polled: 55%
- Western Fjord: 67%
- Døla: 73%
- Eastern Red Polled: 79%
Population sizes without suckler cows…

- Sided Trønder and Nordland (STN)
- Telemark
- Western Red Polled
- Western Fjord
- Døla
- Eastern Red Polled

Legend:
- Tot pop size
- Dairy population
Stated concerns from breeders

**Against suckler cow production**

> Impossible to record milk yield
> Udder traits are destroyed
> Heifers nursed as suckler calves too wild to be milked
> Traditional knowledge is lost

**Pro suckler cow production**

> Modern times – modern usage
> Grazing animals needed
> Less labour demanding
> The breed is being utilized, not going extinct
Case study: the STN breed

> 1000 cows
> Annual milk yield: 4 200 kg
> No progeny testing
> Avoidance of inbreeding
> 70 % of the population are used as dairy cows
Number of dairy and suckler cows, STN 2007-2010
Case study: STN breeding association

> Several initiatives to reduce the share of suckler cows in the population

> Up to 2009: Requesting the agricultural authorities to differentiate the subsidies to endangered cattle breeds
Evaluation of the subsidies to the native endangered cattle breeds (Norwegian Agricultural Authorities, 2010)

Stating:
> All populations have increased since conservation programs and subsidy system started
> Important to stimulate the three smallest breeds
> Uncertainty about the effect of differentiating the subsidies between suckler and dairy cows

Conclusion:
> “Differentiation not recommendable”
Case study:
STN breeding association

> Several initiatives to reduce the share of suckler cows in the population

> Up to 2009: Requesting the agricultural authorities to differentiate the subsidies to endangered cattle breeds
Case study:
STN breeding association

> Several initiatives to reduce the share of suckler cows in the population

  > Up to 2009: Requesting the agricultural authorities to differentiate the subsidies to endangered cattle breeds

  > August 2010: Breeding bulls from suckler cows are excluded from the herd book
Case study STN:
Expected effects of excluding suckler bulls from herd book

> “Securing the breed’s dairy traits”

> Excluding “pure bred” animals from herd book

> Splitting an already small population

> Sustainable?
Concluding remarks

> Substantial parts of the endangered breeds are in suckler cow production

> Excluding suckler cow production from conservation programs will decrease the total population sizes of the endangered breeds

> Establish conservation herd books for pure bred animals that are excluded from traditional herd book!
Threat or opportunity?

The main goal in the conservation programme:

> “Increase the population size!”

> Suckler production is contributing to the increase in population sizes of endangered populations

> Suckler cow production is not a threat to the traditional low producing dairy breeds.
Thank you!