Impact of calving date and cow type in a seasonal Alpine low-input dairy system

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Aim

Investigating the impact of calving date (CD) on ration composition, productivity and body weight for two different Alpine dairy cow types (CT).

Background

Pasture-based milk production systems ideally include block-calving. This emphasizes the specific importance of optimum CD in Alpine regions with their particularly short vegetation period. When deciding on the suitability of different genotypes for pasture-based systems, the response to shifts in CD is therefore of high relevance.

Animals, material and methods

- Cow types
  - Conventional Brown Swiss (BS), primarily selected for high milk yield
  - Specific strain of Holstein Friesian (HFL), primarily selected for lifetime performance and fitness
- n = 73 lactations (BS=34; HFL=37), 4 years
- CD relative to turn out to pasture was included as a co-variable into a mixed model (SAS 9.2).

Conclusions

• The effect of calving date was more pronounced for BS than for HFL.
• Longer barn feeding supported BS to express its higher genetic merit for milk production, but did not reduce body tissue mobilisation.
• HFL seems more suitable to exploit the full economic and ecological advantage of spring calving, while autumn calving increased productivity of BS.

Results

Spring calving increased pasture proportion in diet to 60 %.

Significant interaction of CT x CD for milk yield ($P=0.008$).

Sig. interact. of CT x CD for daily weight change ($P=0.003$).

The authors gratefully acknowledge funding from the European Community financial participation under the Seventh Framework Programme FP7-KBBE.2010.1.2-02, for the Collaborative Project SOLID (Sustainable Organic Low-Input Dairying; grant agreement no. 266367).