Daily pattern of feeding activities of dairy cows in a 8-d rotational grazing system

Rémy DELAGARDE, Jean-Louis PEYRAUD, Michael H. WADE*
INRA, Agrocampus Ouest, UMR1080 Production du Lait, F-35590 Saint-Gilles, France
* Univ Nacl Ctr Prov Buenos Aires, Fac Cs Veterenarias, RA-7000 Tandil, Argentina

Introduction

Simplified rotational grazing systems (> 7 d/paddock) are characterized by large between-day variation of milk production and sward state.
Objective: To determine how the milk production decline is related to feeding behaviour modifications during an 8-d grazing down process.

Materials and methods

Grazing (perennial ryegrass)
- 4 paddocks : 8-d of residence time per paddock
- Severe grazing conditions : Low Pasture Allowance (25 kg DM/cow/d to ground level)

Herd
- 8 Holstein cows in mid-lactation
- No supplementation, day and night grazing

Daily measurements
Sward structure, milk production, pasture DM intake (Yb-faecal index), feeding behaviour (APEC portable devices)

Results

From Day 1 to Day 8 of 8-d residence time in the paddock :
- Rapid decline of sward height and strong disappearance of lamina.
- Large decline in milk production and pasture intake (-25 and -30%).
- Relative small variations of grazing and rumination times (± 1 hour/d).
- Strong reduction of pasture intake rate (-30%) and strong increase in chewing index (time spent masticating / kg DM intake).

Conclusions

- Progressive adaptation of the feeding behaviour during the grazing down process, except in the morning of last day.
- Decline of milk production (initiation of sheath defoliation) was not related to a break in the foraging strategy.

23rd General Meeting of the European Grassland Federation, Sept 2010, Kiel, Germany