

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

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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

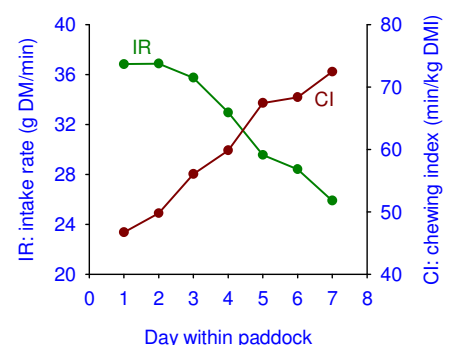
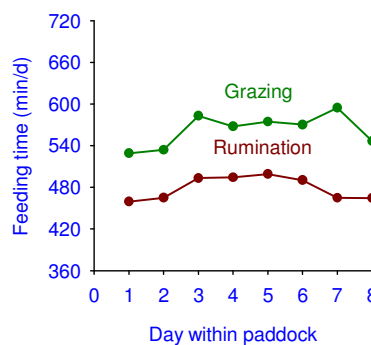
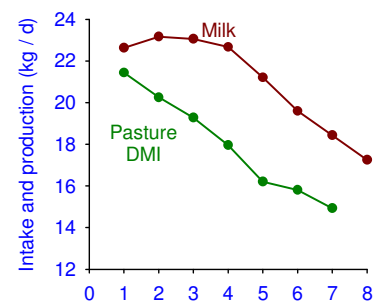
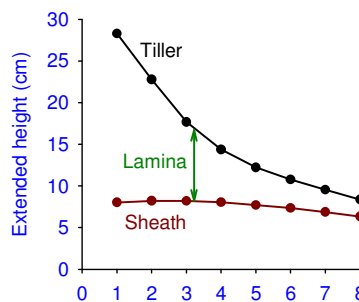
Daily measurements

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

Results

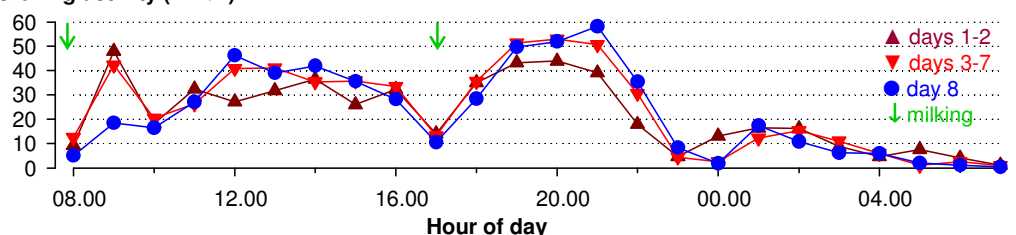
From Day 1 to Day 8 of 8-d residence time in the paddock :

- 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) .



Daily pattern of grazing activity :
Clear demotivation in the last morning (day 8)

Grazing activity (min/h)



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.