

## Grazing behaviour of lambs in different production systems

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**Introduction** Ingestive behaviour is an important component of a grazing system (Fryxell *et al.*, 2001). The understanding of lamb behaviour patterns in different production systems is crucial to management and to assess the impact of the production system on the use of resources by animals. The objective of this study was to determine the grazing behaviour of lambs in different production systems.

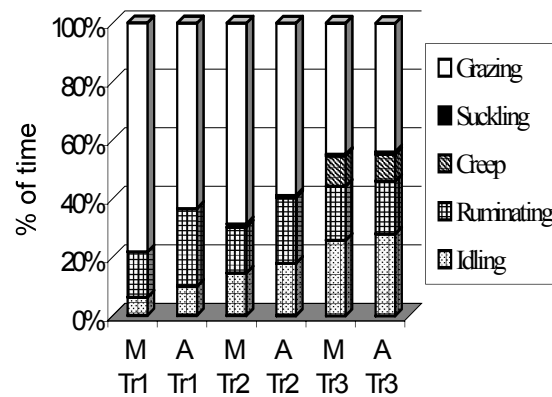
**Materials and methods** The experiment was carried out at the Experimental Research Station of UFPR, Pinhais, PR, Brazil, in a randomised block design with three replications. The grazing behaviour of four Suffolk lambs/plot grazing bermuda grass (*Cynodon dactylon* hybrid Tifton 85) were compared in three production systems: (1) lambs weaned at 60 days of live; (2) lambs with their mothers until sent for slaughter; (3) the same as treatment 2, but the lambs were supplemented daily (1% of live weight) with a concentrate (18% CP and 80% TDN) in creep feeding. The stocking rate was adjusted every 14 days to maintain 1.000 kg/ha of green DM. The experiment was carried out from weaning to slaughter. During this period the animals were observed for three days, using the method of Jamieson & Hodgson (1979). Individual animal activity: eating, grazing, suckling and eating concentrate, ruminating and idling were recorded from dawn to dusk at intervals of 10 minutes. Between each 10 minutes of recording, rates of biting were measured using the 20 bite method of Forbes & Hodgson (1985). The grazing behaviour assessment was carried out in three different periods 6, 13 and 17 December.

**Results** The fact that biting rate was not significantly ( $P < 0.05$ ) different between treatments indicates that the sward structure was not having a strong effect on grazing activity. The weaned lambs spent significantly ( $P < 0.05$ ) more time eating and less time idling than in the two other treatments (figure 1). In contrast, the animals that had access to a concentrate spent significantly less time eating and more time idling. This indicates, that the sward allowance did not restrict intake and the animals were substituting grass for concentrate, and the presence of the ewe affected the grazing behaviour of the animals. Although the time spent suckling was relatively low ( $6.7 \pm 1.054$  vs.  $5.8 \pm 1.863$  min/period), demonstrating that the ewe's milk was not important for the lamb's diet, the presence of the ewe might have had an important effect on a social ewe-lamb interaction. The animals spent more time eating in the morning than in the afternoon. Therefore, the most important meal for growing animals is in the morning. The time spent ruminating was not different ( $P < 0.05$ ) between treatments, but in treatment 1 and 2 the ruminating time was greater in the afternoon. It means that the amount of concentrate offered to the animals was not enough to reduce the ruminating time, but altered the way the ruminating time was distributed during the day. The production system altered mainly the grazing and idling times of lambs. Ruminating time was not different between production systems.

**Conclusions** The presence of the ewe and the supplementation in different production system has an important effect on lamb grazing behaviour.

### References

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**Figure 1** Effect of different lamb production systems (T1, T2 and T3) on the proportion of time spent grazing, suckling, eating in the creep feeding system, ruminating and idling in the morning (M) and afternoon (A)