

## FEEDING BEHAVIOUR AND GROWTH RESPONSE OF LAMBS AT A STATIONARY SELF-FEEDER

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A procedure that uses lithium chloride as a marker is now available that enables the estimation of individual intake of pelleted rations when lambs are group fed (Suharyono *et al.* 1991). We tested this procedure in the experiment described by Hopkins *et al.* (1996) where 72 six month-old cryptorchid lambs of four genotypes (Texel x Merino (M); Poll Dorset x M; Texel x Border Leicester - Merino (BL-M); Poll Dorset x BL-M) were fed a high quality grain based pelleted ration from a stationary self-feeder. The self-feeder in each of the three replicated groups was exposed to a 24 hour video camera and infra red lights for night illumination. On two occasions the estimates of intake were planned to coincide with a 72 hour video record of behaviour so that feeding behaviour could be compared against estimated intake of pellets and liveweight gain of individual lambs.

Lambs ate at the feeder 8.5 times in the four hours associated with intake estimation and remained for an average 2.4 minutes/visit. These four hour observation periods were representative of the full 72 hour observation period ( $P < 0.004$ ) because the lambs ate throughout the day and night. There were small differences between genotypes in the total time at the feeder (Table 1). However time spent feeding was not related to intake of pellets nor to growth rates suggesting that rate of ingestion may be more important than ingestion time. Intake of the first cross lambs was significantly ( $P < 0.05$ ) less than the second cross lambs and this affected lamb growth rates. We conclude that since there was no detectable difference between first and second cross lambs in feeding time, ingestion rates may explain the differences in pellet intakes and subsequent growth rates.

**Table 1. Initial liveweight (kg), growth rate (g/day), intake (g/4 hours) and feeding time (hours/3 days) of four genotypes of cryptorchid lambs**

	Texel x Merino	Poll Dorset x Merino	Texel x BL-M	Poll Dorset x BL-M
Liveweight	50.0	47.8	49.8	48.7
Growth rate	256 <sup>b</sup>	278 <sup>b</sup>	301 <sup>ab</sup>	349 <sup>a</sup>
Intake	130 <sup>b</sup>	120 <sup>b</sup>	169 <sup>a</sup>	144 <sup>ab</sup>
Feeding time	1.8 <sup>a</sup>	2.1 <sup>ab</sup>	1.7 <sup>a</sup>	2.6 <sup>b</sup>

Significant differences ( $P < 0.05$ ) between genotypes are indicated by different superscripts

HOPKINS, D.L., HOLST, P.J., FOGARTY, N.M. and STANLEY, D.F. (1996). *Proc. Aust. Soc. Anim. Prod.* **21**, 181-4.

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