FEED REQUIREMENTS AND GROWTH OF CONCENTRATE-FED AND PASTURE-FED CHITAL DEER STAGS (AXIS AXIS)

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Chital deer are 1 of 5 species of deer being farmed in Australia to produce venison. Daily feed intake and energy requirements for maintenance and production in this species have not been reported. This experiment was performed to provide information on feed requirements for stags between weaning and slaughter age so that efficient feed management on farms can be achieved, and to allow production of venison of consistent quality.

Sixteen chital deer stags, 10 months old, were purchased from a commercial deer farm in September 1992. Six stags were selected at random and allocated to individual indoor pens (group 1), while the remainder were randomly divided into 2 groups of 5 and placed in 1/4 ha paddocks (groups 2 and 3). All animals were then habituated to regular movement through handling yards for 4 weeks. The stags in group 1 were fed to appetite a pelleted oats/lucerne mixture (60:40 w/w) which supplied 10.5 MJ metabolisable energy (ME)/kg dry matter (DM), while the stags in groups 2 and 3 were grazed on oats/ryegrass/clover pastures which ranged from 9-11.5 MJ ME/kg DM over the 362 days of the trial.

Daily food intake was recorded for animals in group 1, and all animals were weighed regularly. Data for 5 animals (2 from group 1 and 3 from groups 2 and 3) were discarded from the analysis due to injuries sustained during yarding, or euthanasia following acute infection during the trial period. Eleven animals were slaughtered at 21 months of age and samples of muscle from M. longissimus dorsi and M. glutaeus medius were collected for intramuscular fat analysis using a standard soxhlet extraction.

At 11 months of age (October 1992) group 1 stags averaged 37.5 kg and ate about 5.5 kg DM/week, which was equivalent to 0.65 MJ ME/kg0.75/day. Growth rate of stags in group 1 averaged 32 g/day throughout the trial (range 21-43 g/day) compared with 59 g/day (range 17-79 g/day) for stags in groups 2 and 3. At 21 months of age (August 1993) group 1 stags averaged 49 kg and ate about 9.4 kg DM/week, which was equivalent to 0.56 MJ ME/kg0.75/day. The unfasted dressing proportion for both concentrate-fed and pasture-fed stags was between 0.61 and 0.63, and all carcasses were very lean at the time of slaughter. The M. longissimus dorsi in group 1 stags contained 0.35% chemical fat, compared with 0.53% in groups 2 and 3, while the M. glutaeus medius in group 1 stags contained 0.42% chemical fat, compared with 0.34% in group 2 and 3 stags.

Chital deer are known to be difficult to handle (English 1991), but tolerated being housed in individual pens surprisingly well. The results indicate that Chital deer stags require a high energy intake to sustain growth, when compared with traditional domestic species such as sheep and cattle (Oftedal 1984; 0.56-0.64 MJME/kg0.75/day). However, the energy intakes for stags in this trial were similar to estimates for wild ungulates such as white-tailed deer (Silver et al. 1969). Energy budgets should therefore be adjusted accordingly. Furthermore, dressing proportion and intra-muscular fat levels for pasture-fed and concentrate-fed stags were similar despite the long period of concentrate feeding for group 1 stags. This suggests that producers can finish Chital deer stags on concentrate feeds prior to slaughter without affecting carcass leanness.

