

BACKGROUNDING GROWTH OF STEERS IN NORTHERN NEW SOUTH WALES

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Backgrounding is the management of post-weaning growth and nutrition to produce young cattle meeting feedlot entry specifications. To supply an increasing demand for feeder cattle and to maintain profitability, backgrounders need strategies that improve growth of young cattle. We report here the seasonal liveweight gains from 3 pasture systems at Glen Innes on the Northern Tablelands of NSW.

Pastures were typical of the summer rainfall Temperate Perennial Pasture Zone. The feed year comprised: winter dormancy with low green herbage mass but high nutritive value; spring primary growth with high green herbage mass and very high nutritive value; and summer-autumn secondary regrowth with high green herbage mass but only moderate nutritive value (Ayres *et al.* 2001). Limitations imposed were a winter feed gap of low herbage mass associated with low pasture growth and a summer feed gap of declining nutritive value associated with onset of maturity.

Cattle were 8-month old 'Beef CRC' steers. *Bos taurus* autumn weaners (cohorts A94, A95 and A96, average liveweight 265 kg) were grown out in 1994, 1995/96 and 1996. *B. indicus*-cross autumn weaners (cohort T94, average 224 kg) were grown out in 1994/95. *B. taurus* summer weaners (average 313 kg) were grown out in 1995 and 1996. Target feedlot entry liveweights were 300 kg and 400 kg.

Pasture systems were improved pasture only (P1), improved pasture plus high protein pellets (P2) or improved pasture plus Concord ryegrass forage crop (P3). Weaners were allocated across systems on breed, herd, sire, age and weight. Supplements were provided to autumn weaners in late winter-early spring. Pellets were fed at 1.0-2.0 kg/head.day. Forage crop was grazed at 3250-1500 kg total DM/ha. No supplements were given to summer weaners. Pastures were grazed at 3000-1500 kg total DM/ha.

Table 1. Seasonal liveweight gain (kg/head/day) for each cohort of autumn weaners on pasture (P1), pasture plus pellets (P2) and pasture plus forage crop (P3)

Period	Cohort	P1	P2	P3
Late Winter	A94 ^A	0.60	0.64	0.96
	T94 ^A	0.54	0.44	0.74
	A95	-0.08	0.48	0.14 ^B
	A96	0.48	0.53	0.37
Early Spring	A94	0.48	0.70	0.95
	T94	0.41	0.80	0.94
	A95	1.05	1.28	1.03
	A96	0.63	0.98	1.31
Late Spring	A94	0.71	0.86	0.74
	T94	0.84	0.85	0.92
	A95	0.97	0.80	0.76
	A96	0.96	0.87	1.35
Summer	T94	0.83	0.55	0.53
	A95	0.47	0.39	0.77

^A High total herbage mass of pasture ^B Low green herbage mass of forage crop

Liveweight gain (kg/head/day) of autumn weaners on P1, P2 and P3 in critical periods of the feed year (Dicker *et al.* 2001) is shown in Table 1. Gain on P1 was generally much lower in late winter and early spring than in late spring. Gain on P2 was high in early spring. On P3 it was generally high in both late winter and spring. Weaners on P2 and P3 overcame the effects of the winter feed gap. Low gain in summer was associated with the summer feed gap. Summer weaners did not reach 400 kg before winter. The most effective backgrounding system was P3 with autumn weaners.

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