PASTURE BASED SYSTEMS TO FINISH JAPANESE OX STEERS IN WESTERN VICTORIA

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Continuity of supply is a major industry problem for the grass fed Japanese Ox market in Victoria. To finish steers out of season some form of supplementation is required. Cummins *et al.* (1996) reported on a number of systems to finish suitable steers, and this paper reports further investigation of these systems.

In 1996, the systems examined were (i) Pasture only (perennial ryegrass/phalaris/subclover); (ii) Concord + N (Concord ryegrass plus urea fertilizer), with the steers being withdrawn from the paddock and fed *ad lib.* silage from the autumn break until the pasture reached approximately 2,000 kgDM/ha; (iii) Pasture + N, using a pasture similar to (i). In 1997 two additional treatments were: pasture plus whole (iv) or rolled (v) grain (triticale) fed three times per week at 1% of liveweight. Pasture hay (4 kg/head) was fed daily for five weeks, during introduction to the grain. Each treatment was stocked with six two-year old Hereford steers at 1.5 steers/ha. There were two replicates of each treatment. In both years the commencing liveweight was approximately 460 kg. In 1996, treatments (ii) and (iii) were slaughtered on 28 October; treatment (i) was slaughtered when they reached a similar liveweight on 23 December. Only liveweight data are reported for 1997 treatments.

Table 1. Average daily gain (ADG, kg/day), sale price in 1996 (SP, $/head), carcass weight (CW, kg), dressing percentage (DP, %), number of carcasses meeting specifications (CSP), and final live and carcass P8 fat depth (P8, mm) for the various treatments

	Treatment	ADG to slaughter	SP	ADG 25.3.97 to 24.9.97	CW	DP	Carcass P8	Live P8 (mm) 24.9.97	CSP
i	Pasture 1996	0.55 (0.39)*	504		318	50.2	15.0		11/12
i	Pasture 1997			0.06				5.8	
ii	Concord + N 1996	0.66	582		336	53.4	18.3		12/12
ii	Concord + N 1997			0.52				13.8	
iii	Pasture + N 199	0.63	566		328	52.5		18.0	10/12
iii	Pasture + N 1997			0.67				16.4	
iv	Whole grain 1997			0.67				15.1	
v	Rolled grain 1997			0.80				16.0	
	l.s.d	0.12	34.9	0.26	19.8	1.74	4.35	3.14	

* Figure in brackets is the growth rate to the time of slaughter of the other two groups

In 1996, treatments (ii) and (iii) had a higher ADG and DP than treatment (i). The liveweight gain of cattle fed Concord with N fertilizer declined over the 3 year period (Cummins 1996 and treatment ii) due to the deterioration of the pasture, which was partly due to poor seasonal conditions. The poor seasonal conditions in 1997 also contributed to the poor growth in treatment (i). Steers on treatments (ii) and (iii) consumed around 8.6 kg DM silage/head/day in 1996 and 1997 during the eight week deferment, costing approximately $42/head. The N fertilizer applied in April and July 1996 and April 1997 cost $40 and $20/head respectively.

Over three years 1% whole grain at pasture (0.9 tonne/head) resulted in an average daily gain of 0.7 kg/day (range 0.67 to 0.80). In 1997 the rolled grain gave a 16% increase in growth rate compared to whole grain, in contrast to results reported by Cummins (1996).

The price per head received from the processor in 1996 was $504, $566 and $582 for treatments (i), (ii) and (iii) respectively. The pasture plus N with an autumn deferment or pasture with grain enables Japanese-ox steers to be finished earlier. Profitability depends upon the purchase and sale price and other inputs. Earlier sales allow additional surplus pasture to be harvested.

CUMMINS, L.J. (1996). *Proc. Aust. Soc. Anim. Prod.* **21**, 82-91.