

IMPROVING THE PRODUCTION OF YEARLING BEEF IN A MEDITERRANEAN ENVIRONMENT ON ANNUAL PASTURES

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Steers that are not suitable for slaughter at weaning in December can be finished on pasture in the following year. However these animals are generally not ready for slaughter until late in the year because they either only maintain weight or lose 20 - 40 kg liveweight (LW) during autumn and winter before they gain > 1 kg/d during spring. As castration removes the normal hormone production of testosterone and oestrogen in male animals, lean growth is consequently reduced. Replacement therapy with hormonal growth promotants (HGP's) that combine these hormones may enhance the growth of the animals as well as reducing the deposition of fat to a greater extent than implants based only on oestrogen. A trial was conducted to compare the performance of yearling steers implanted with either an HGP based on one active ingredient (Compudose 200 (Registered trade mark: Elanco Products Co., NSW); 24 mg oestradiol) with one based on two (Revalor S (Registered trade mark: Roussel UCLAF, Paris); 140 mg trenbolone acetate plus 28 mg oestradiol 17-b) under the environmental conditions of the SW of WA.

Seventy-five Angus and Angus x Friesian steers about 15 months old and weighing 305 kg were fattened on annual pastures. On day one of the experiment (7 August 1991), animals were weighed directly off pasture and, after stratifying on LW, were randomly allocated to one of three treatments, each with 25 animals. Steers in one group were implanted subcutaneously on the upper surface of the ear with Revalor S whereas a second group were implanted with Compudose 200. The third group were not implanted and served as Controls. The steers rotationally grazed paddocks that, with the exception of the first month, were never limiting in feed on offer. The steers were weighed monthly and slaughtered at an accredited abattoir when the estimated carcass weight and fat depth satisfied trade specifications. Hot carcass weight and fat depth at P-8 site were measured. Treatment groups were tested for significance using analysis of variance (GENSTAT). Results are shown below.

Items	Control	Compudose	Revalor	SEM
		<u>% change over control</u>		
1 (7 Aug-6 Sept)	0.44 kg/d	+ 95	+ 102	0.236
2 (6 Sept-4 Oct)	1.18	+ 11	+ 22	0.105
3 (4 Oct-8 Nov)	1.46	+ 1	+ 11	0.980
4 (8 Nov-12 Dec)	1.36	+ 16	+ 26	0.127
5 (12 Dec-30 Dec)	0.77	- 23	+ 32	0.198
Ave growth rate (kg/d)	1.16	1.31	1.47	0.03
Final LW (kg)	465	481	510	7.4
Carcass (kg)	242.0	259.2	269.4	4.17
Fat P-8 (mm)	11	11	11	0.7
Value (\$)	532.2	570.2	592.7	9.18

The data shows the steers implanted with Revalor and Compudose gained 102 and 95%, respectively, faster than the unimplanted Controls in the first month after implantation but then the differences between the treatments became less with the unimplanted Controls actually gaining faster than the Compudose steers over the last 19 days. Revalor promoted growth more, and was sustained for a longer period than was Compudose. These results show that a combination of hormones is better than a single hormone, that HGP's have a positive effect on improving animal production off temperate spring pastures and that they are an attractive financial strategy for beef producers.