

PROMONE IMPLANTS FOR HEIFERS IN THE FEEDLOT

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Limited trials with Promone, a progesterone-like hormone, showed considerable promise for increasing weight gains and feed efficiency of heifers in the feedlot. The trial reported here tested the feedlot performance of heifers when implanted with 200 and 400 mg of Promone, as compared with stilbestrol implants and with a control group.

FEEBLOT OPERATORS consider the performance of heifers to be inferior to that of steers, even when under the same

feed and management practices. The use of stilbestrol or other hormones (as an implant or feed additive) for heifers has not resulted in weight gains comparable with those of steers.

High-good to choice

The 146 heifers used in this trial were from a herd of high-good to choice-quality heifers raised on the Roney Brothers ranch in Butte County. After weaning, they had been on irrigated pasture and were in good fleshy condition going into the feedlot for a short finishing period. The heifers were number ear-tagged and randomly selected into four groups:

Group 1: Control (received no hormone)
Group 2: Implanted with 24 mg stilbestrol
Group 3: Implanted with 200 mg Promone
Group 4: Implanted with 400 mg Promone

All of the cattle were fed together on irrigated pasture plus a self-fed ration of one-third each of almond hulls, barley, and milo. About two weeks before slaughter (except for the first group marketed), the cattle were confined in drylot and full-fed this same almond-hull, barley, and milo ration.

Topped out

The heifers were topped out for slaughter as they reached top-good and low-choice grades. The first group was



Heifers on pasture during tests with hormone implants at Roney Brothers Ranch, Butte County.



Excellent condition of hormone-implanted heifers is seen in photo above, and cover, of the oak-shaded corral area with feed bunks used during tests at the Roney Brothers Ranch, Butte County.

topped off of pasture at 54 days. Thereafter, market loads were selected from pasture at one- to two-week intervals and placed in drylot. The entire lot of heifers were slaughtered in seven groups over a period of nine weeks.

Slaughter data obtained included hot carcass weight, final grade, rib eye area, fat thickness, kidney and pelvic fat, yield grade, and carcass index. The slaughter data were subjected to analysis of variance at the University of California Davis Computer Center (see table).

Results

The average daily gain of each Promone-treated group was significantly greater than that of the control group. The gains for the Promone-treated animals were also more than those for the stilbestrol-treated animals, though this difference was not significant. Carcass grade, fat thickness, yield grade, and carcass index were practically the same in all groups. Kidney and pelvic fat percentage in the stilbestrol-treated animals was significantly smaller than that of either the control or Promone-treated groups. The 400 mg Promone group showed a significantly smaller rib eye area per 100 lbs of carcass weight.

Progress report

This is a progress report of research and the preliminary results included should not be considered as recommendations for the use of Promone in cattle at this time.

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SUMMARY OF GAINS AND CARCASS DATA WITH HORMONE IMPLANTS FOR HEIFERS IN THE FEEDLOT

(Control animals in group 1 were fed for an average of 88 days; the stilbestrol and Promone (200 mg) groups averaged 86 days on feed; and Promone (400 mg) lot was fed for an average of 82 days).

	Implant Groups			
	1 Control	2 Stil- bestrol 24 mg	3 Promone 200 mg	4 Promone 400 mg
Number of head	41	36	33	36
Days on feed	88	86	86	82
Net weight, in (lb)	573	581	578	599
Net weight, out (lb)	773	792	802	814
Gain per head (lb)	200	211	224	215
Average daily gain (lb)	2.32 ^a	2.45	2.64 ^b	2.68 ^b
Marketing data:				
Dressing percentage	56.27	56.81	56.20	56.47
Hot carcass weight (lb)	435	450	451	461
Final grade ¹	14.24	14.17	14.18	14.50
Rib eye area (sq. in.)	10.69	10.91	10.89	10.50
Fat thickness (1/16 in.)	0.32	0.32	0.33	0.34
Kidney & pelvic fat (%)	2.57 ^a	2.18 ^b	2.41 ^a	2.46 ^a
Yield grade	2.35	2.26 ^a	2.34	2.54 ^b
Carcass index, actual ²	52.29	52.51 ^a	52.32	51.87 ^b
Carcass index, adjusted ³	50.88	51.04	50.86	50.66
Rib eye/100# hot carcass wt. (sq. in.)	2.46 ^a	2.44 ^a	2.43 ^a	2.29 ^b

^a ^b Means in the same line bearing different superscripts are significantly different (P < 0.05 or 0.01).

¹ 16 = low choice; 15 = top good; 14 = average good.

² Percentage of boneless, closely trimmed round, loin, rib, and chuck.

³ Carcass index adjusted to low choice.

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