

## RALGRO - SUCKLING CALVES TO SLAUGHTER

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With the uncertainty of Stilbestrol as a growth promotant, livestock producers have to look to other growth promotants to stimulate gains in cattle. Ralgro has been shown to be an effective stimulant in both growing and finishing cattle. Questions have been raised about repeated implantation with a single product and if continued stimulation would result. Reimplantation with Ralgro is recommended at 90 day intervals. However, additional responses have been obtained from reimplantations at shorter intervals. It is possible that much of the difference in response is due to the loss of effectiveness of the implant which might be attributed to improper implant technique.

These studies were undertaken to determine if continued stimulation could be achieved with the same product and if reimplantation time would affect performance in the feedlot.

EXPERIMENTAL PROCEDURE

Suckling calves. Thirty head of fall-born steer calves were assigned to one of four treatments on the basis of calf weight, and dam's age, weight, and nutritional treatment. The treatments of creep or no creep and implants or no implants were assigned in a factorial trial. The creep feeding of the calves began shortly after birth and continued to weaning.

The calves were implanted with 36 mg of Ralgro, April 5, 1972, as they were turned out on native range with their dams. The calves were grazed on approximately 2,000 acre pasture with the cows. Creep feeding was continued to those calves initially on creep feed, by locating feeders near the single watering point in the pasture. Loose salt and a salt-bonemeal mix were provided at all times. The calves were not reimplanted during this summer grazing period, since it would be impractical for most ranchers to handle the livestock while on the range. The study was concluded at weaning time, July 20, 1972.

Growing-finishing phase. When the calves were weaned 53 steers (30 of which were in the suckling study) were put in the feedlot for a 112 day growing phase before going on the finishing ration. Previous creep treatments were stratified throughout implant groups. The trial was designed to determine if early implantation would be advantageous and if frequency of implant would influence gain. Steers that had received implants continued to receive implants. Implant treatments for this phase of the study were, none (no implants during the lifetime of the calf), implanting 3 times (initially, at 56 days and at 142 days) and implanting 2 times (initially and at 84 days). This gave one group with no implants, a second group with 3 implants and a third group with 2 implants during the growing-finishing period.

The growing ration was fed uniformly to all animals for 112 days. The hay was fed free choice with about one half being chopped and fed with the grain in the morning and the remainder fed as long hay in the afternoon. The steers were weighed initially and at 28 day intervals following an overnight restriction from water.

After the 112 day growing period the steers were gradually brought up to the finishing ration. This was done by gradually decreasing the hay level and increasing the barley level. This adjustment period was about 30 days by which time the animals were on a finishing ration consisting of 2 pounds hay, 2 pounds beet pulp pellets, 2 pounds of liquid protein supplement and 17 pounds of barley per head per day. The ration was mixed in a feeder-mixer wagon and fed twice daily.

### RESULTS AND DISCUSSION

Suckling calves. Creep feeding increased total gain to weaning by 6.3% (217 vs 204 pounds) over the controls, and implanting with Ralgro increased total gain to weaning about 4% over controls (215 vs 206 pounds). (Table 1). There was an interaction effect, however, with the greatest response being in the implanted creep fed animals. This group gained 7.1% greater than the nonimplanted creep fed steers and 9.3% greater than the nonimplanted, non-creep fed steers. This would indicate that creep feeding and implanting give the best results when done together.

Table 1. Performance of implanted suckling calves

	Ralgro			Control		
	Creep	No creep	Total	Creep	No creep	Total
Number of head	8	7	15	7	8	15
Initial wt. (lbs)	257	265	261	276	274	275
Weaning wt. (lbs)	481	469	476	485	479	482
Gain (lbs)	224	209	215	209	205	206
A.D.G.	2.11	1.92	2.03	1.97	1.93	1.95

Growing-feeding phase. The results from the 106 day growing phase are presented in Table 2. The performance as measured by average daily gain indicated that reimplanting after 56 days was more effective in promoting gain than reimplanting after 84 days. Both implant treatments were superior to the controls. Feed efficiency data could not be determined since animals were fed together.

The performance of the steers in the finishing phase indicates a slight advantage from the extra implant (2.16 vs 2.09 lbs/day) with both implant treatments providing gains significantly greater than the controls (19 and 15%, respectively, Table 3). The trial period was ended after the steers had been on the finishing phase for 88 days although the steers remained on

feed until they were slaughtered. The early termination of the study was due to the variation of steer weights with some individual steers reaching slaughter weights soon after the 88 days.

Table 2. Weight changes during growing phase from different implant treatments

	Treatment		
	Control	56 day	84 day
Number of head	17	18	18
Initial wt. (lbs)	506	520	494
Final wt. (lbs)	688	739	691
A.D.G. (lbs)	1.63	1.96	1.76
Percent over controls <sup>1/</sup>		20	8

<sup>1/</sup> Increased gains as compared to control group.

Table 3. Weight changes during finishing phase from different implant treatments

	Treatment		
	Control	56 day	84 day
Number of head	17	18	18
Initial wt. (lbs)	741	789	745
Final wt. (lbs)	900	979	929
A.D.G. (lbs)	1.81	2.16	2.09
Percent over controls <sup>1/</sup>		19	15

<sup>1/</sup> Increased gain as compared to control group.

These data indicated that a response can generally be obtained by implanting with Ralgro from suckling calves to slaughter. This response appears to be greater in the growing-finishing phases than as suckling calves. The work also indicated that implanting at one stage did not inhibit the growth promoting ability of the product at a later stage.

An additional response can be expected if cattle are reimplanted with Ralgro every 56 days rather than the recommended 90 days. However, it is possible that some of the observed differences could be attributed to implant technique. If implants are placed too close to the base of the ear or imbedded in cartilage, it is possible that this would cause interference with release of the growth promotant. This may result in loss of effectiveness early, thus the increased stimulation in growth by reimplanting oftener.