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## Reproduction and production of heifers implanted with Ralgro before weaning

### Abstract

Over a 3-year period (1976-1978), heifer calves either were not implanted or were implanted between 2 and 5 months of age. In 1977, the study also included heifers implanted at birth. Implanting at birth increased the percentage of heifers open as yearlings. More implanted heifers tended to be open as 2- to 5-year-olds than control heifers, but the differences were not statistically significant. Implanting of the heifers had no effect on weight gains of their calves.

### Keywords

Cattlemen's Day, 1982; Report of progress (Kansas State University. Agricultural Experiment Station); 413; Beef; Implant; Weaning; Production

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## Reproduction and Production of Heifers Implanted with Ralgro Before Weaning

Danny D. Simms, Frank L. Schwarz, and Larry R. Corah<sup>1</sup>

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### Summary

Over a 3-year period (1976-1978), heifer calves either were not implanted or were implanted between 2 and 5 months of age. In 1977, the study also included heifers implanted at birth. Implanting at birth increased the percentage of heifers open as yearlings. More implanted heifers tended to be open as 2- to 5-year-olds than control heifers, but the differences were not statistically significant. Implanting of the heifers had no effect on weight gains of their calves.

### Introduction

Implanting heifer calves with Ralgro when weaned (or later) subsequently can have some detrimental effect on their reproduction performance, particularly if they have been implanted more than once. Information is limited, however, on how implanting calves at birth or before they are weaned subsequently can affect their reproduction and the performance of their offspring.

### Experimental Procedure

One hundred and sixty-four heifer calves born over a 3-year period on the Ruthven, Inc. Ranch in Russell County were randomly assigned to one of three treatments: 1) left unimplanted, 2) implanted at birth (1 year only), 3) implanted at 2 to 5 months of age. Replacement heifers were selected at weaning without respect to treatment. From weaning through the first breeding season, all heifers were handled similarly. Yearling heifers were bred for 45 days, starting about 20 days before the main cowherd was bred. During subsequent reproductive seasons, cows were randomly assigned to breeding pastures and bulls. Open heifers or cows were culled based on fall rectal palpation.

### Results and Discussion

Table 27.1 shows the reproductive performance of each group for each year and for all 3 years combined. Implanting at birth markedly increased ( $P < .05$ ) the number of heifers open as yearlings. Females open during subsequent seasons also tended to be higher for heifers implanted at birth or when 2 to 5 months old than for those not implanted, although this difference was not statistically significant. The average calving date was essentially the same for all treatments.

Implanting replacement heifers during the suckling period did not affect the weaning weights of their offspring.

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<sup>1</sup>The IMC Chemical Co. supplied implants and provided partial funding support.

Table 27.1. Reproductive Performance of Heifers Implanted With Ralgro As Calves

Treatment of heifers as calves	Number retained as replacements	Number open as yearlings	% Open as yearlings	Total no. open in later years	% of heifers calving as 2-yr-olds open in later years	Avg. calving date
<u>Heifers born 1976</u>						
Control	10	0	0	0	0	March 5
Ralgro (6/17)	27	0	0	5	18.5	March 9
<u>Heifers born 1977</u>						
Control	15	1	6.7	1	7.1	March 3
Ralgro (birth)	41	18	43.9	2	8.7	March 3
Ralgro (7/26)	18	2	11.1	1	12.5	March 6
<u>Heifers born 1978</u>						
Control	17	0	0	0	0	March 7
Ralgro (5/13)	21	0	0	0	0	March 4
Ralgro (8/2)	15	0	0	1	6.7	March 3
<u>Combined data</u>						
Control	42	1	2.4 <sup>a</sup>	1	2.4	March 5
Ralgro (birth)	41	18	43.9 <sup>b</sup>	2	8.7	March 3
Ralgro (between 2 and 5 months of age)	81	2	2.5 <sup>a</sup>	8	10.1	March 6

<sup>a,b</sup> Values in the same column with different superscripts differ significantly (P<.05).