

FORAGE AND BEEF CATTLE RESEARCH - 1982

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IMPROVEMENT OF POSTPARTUM INTERVAL TO FIRST ESTRUS  
BY FEEDING MONENSIN (RUMENSIN ®)

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SUMMARY

Two independent experiments were conducted with 27 fall calving and 48 spring calving Brangus cows. At calving, the cow-calf pairs were divided into two groups. One group received a control diet while the second group received the same amount of feed with 200 mg monensin added. The cows in the first experiment calved in excellent body condition (average condition score 7 on 1-9 scale) and were fed a minimum level of supplement (4 lb/hd/day). The average postpartum interval to first estrus (PPI) for the control cows was 139 days. Addition of monensin (200 mg/hd/day) to the ration reduced the PPI from 139 to 92 days with 57% of the monensin cows showing estrus by 90 days postpartum. In the second trial, the cows were calving in marginal body condition (average condition score 5 on 1-9 scale). The amount of supplement was increased to 6 lb/hd/day. At this level of feeding, the control cows had a PPI of 86 days and the use of monensin reduced the PPI to 65 days. Feeding monensin increased the percentage of cows in heat by 95 days postpartum from 58% in the control cows to 88% in the monensin fed cows.

INTRODUCTION

The primary cause of the problem with rebreeding cows has been inadequate energy in the diet. Extremely high levels of concentrate concentrate supplementation have not proved to be a cost effective alternative. However, strategic supplementation to make up for the deficiencies in available forages has been shown to improve efficiency of production and reproductive performance. In order to harvest a respectable calf crop annually, supplemental energy must be provided during the calving season when pastures become inadequate. It has been shown that monensin reduces maintenance costs by reducing hay consumption. The following research was designed to determine the usefulness in feeding monensin to increase energy availability to the cow.

#### EXPERIMENTAL PROCEDURE

Twenty-seven fall calving and 48 spring calving cows were divided into two groups (Table 1). The fall calving cows were given 4 lb of a milo:cottonseed meal (4:1) mixture either with or without monensin. The spring calving cows received 6 lb of a milo:cottonseed (5:1) mixture either with or without monensin. All cows were allowed ad libitum access to Coastal bermudagrass hay and water in small dry lots. All cows were observed for estrus twice daily. Sterile bulls equipped with chin-ball marking harnesses were kept with the cows at all times. PPI was calculated as the number of days from calving to first estrus.

#### RESULTS AND DISCUSSION

The fall calving cows that were fed the mixture containing monensin had a shorter PPI than control cows (Table 1). The hay consumption in the group receiving monensin was 10% less than the control group. The improved PPI coupled with the savings in hay cost should provide enough incentive for many ranchers to include monensin in their supplement programs.

The spring calving cows were fed more total supplement due to their lower body condition at calving. The increased supplementation in the spring calving group resulted in a shorter PPI in the controls as compared to the fall calving controls (86 vs 139 days). The addition of monensin to the ration further reduced the PPI in the spring calving herd from 86 to 65 days (Table 1).

This research shows that adding monensin to the supplement mixture or increasing the amount of supplement fed will improve reproductive performance in postpartum beef cows.

Table 1. Effect of monensin on postpartum interval.

<u>Calving group</u>	<u>Supplement</u>	<u>Number/ group</u>	<u>Average PPI</u>	<u>Proportion (%) with PPI 90 days</u>
Fall	4 lb	13	139 days	0/13 (0)
	4 lb with monensin	14	92	8/14 (57)
Spring	6 lb	24	86	14/24 (58)
	6 lb with monensin	24	65	21/24 (88)