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EFFECTS OF FEEDING BOVATEC® BEFORE AND AFTER CALVING ON CHANGES IN BODY WEIGHT AND CONDITION, AND REPRODUCTIVE PERFORMANCE IN BRAHMAN COWS

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Background. Many studies have shown the positive effects of feeding ionophore antibiotics (Rumensin® or Bovatec®) to the beef cow herd to improve feed efficiency and some reproductive responses. The objective of this study was to evaluate the effects of feeding Bovatec® during the precalving and postcalving periods on changes in body weight, body condition score, and on reproductive performance after calving.

Research Findings. Seventy-five mature late pregnant (260 ± 7 days) Brahman cows bred to Angus bulls were randomly assigned within age and body condition score to consume a control (n=36), or Bovatec-containing concentrate (n=39). The Bovatec concentrate was identical to the control concentrate except for the addition of 200 mg of Bovatec per head per day. Cows were fed daily from four weeks before expected calving through day 90 or when the first corpus luteum was detected. Body weight and body condition scores were recorded on day 28 before calving and then every two weeks through the first estrous cycle after calving. Postcalving reproductive activity was monitored by direct observation of estrus and by ultrasonography of the ovaries. Precalving and postcalving changes in body weight and condition scores were similar ($P > .10$) between treatments (Table 1). The number of medium (4.0 to 7.9 mm) follicles were greater ($P < .05$) in Bovatec fed cows compared with control-fed cows during the early postcalving period. The intervals from calving to: behavioral estrus, formation of a first corpus luteum, and estrus with a subsequent corpus luteum were not affected by precalving treatments, but were shorter ($P < .01$) and less than 50 days in cows that received Bovatec following calving compared with controls. Feeding Bovatec increased ($P < .05$) the proportion of cows in estrus by day 55 after calving (80% vs 45% for Bovatec and control cows, respectively). Pregnancy rates were similar ($P > .05$) between dietary treatments.

Application. Results of this study demonstrated that including Bovatec in the diet of late pregnant cows did not improve reproductive efficiency. The greatest improvement in reproductive performance was observed when the cows received Bovatec in the diet following calving.

Table 1. Effects of feeding Bovatec before and after calving on body weight and body condition score in Brahman cows.

Parameter	Period			
	Pecalving ¹		Postcalving ²	
	Control	Bovatec	Control	Bovatec
Body weight, lb: 14 day change ^{1a}	-.95±.11	-1.51±.19	.97±.24	1.36±.24
Total change ^{1b}	-97.02±6.38	-109.42±6.23		
Body condition score: 14 day change ^{1a}	-.26±0.1	-.19±.13	.20±.10	.15±.10
Total change ^{1b}	-.19±0.1	-.12±.04		

^{1a} = During the first 14 days on feed, ^{1b} = From day 1 on feed to parturition.

² = From calving to weaning.

Table 2. Effects of feeding Bovatec on postpartum interval (days) in Brahman cows¹.

Parameter	Treatment		
	Control	Bovatec	SEM
Parturition to behavioral estrus	52.7 ^a	42.7 ^b	2.2
Parturition to formation of a corpus luteum	60.1 ^a	50.5 ^b	2.3
Parturition to estrus with subsequent corpus luteum	54.1 ^a	44.5 ^b	2.3
Pregnancy rate, %	94.0	92.0	

¹Least square means.

^{ab}Means with different superscripts within rows differ (P < .01).