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## Effect of 48-hour Calf Removal

**S**Danny D. Simms, Ken Odde, and Larry R. Corah<sup>1</sup>**U**

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Summary

In three field trials, we removed calves from 187 beef cows for 48 hours at the beginning of the breeding season to determine the effect on the cows' cycling activity, conception rate, and pregnancy rate. When calves were removed, the cows were injected with Lutalyse. Removing calves for 48 hours did not change weight gain or sickness incidence of calves, but neither did it facilitate the cows' rebreeding.

Introduction

Nursing stimulus is one factor that prevents a cow from cycling after calving. Research has shown that limiting suckling intensity will initiate cycling. The following field trials were conducted to determine if removing a calf from a cow for 48 hours could increase the cow's cycling activity under field conditions and if the removal would influence the calf weight gain or susceptibility to sickness.

Experimental Procedure

In each trial, the spring-calving cows were left with their calves (control) or their calves were removed for 48 hours at the start of the breeding season. Treatments were equalized for days postpartum, sex of calf, and cow age. All cows were at least 45 days postpartum. In trials 1 and 2, all cows were injected with Lutalyse (25 mg) when calves were removed (May 20 in Trial 1 and May 13 in Trial 2). Then cows exhibiting heat were artificially inseminated. All cows that failed to exhibit heat after the first injection were re-injected 11 days later, and those cows exhibiting heat also were bred artificially. About 11 days after the 2nd injection, clean-up bulls were turned in. In trial 3, both treatments, bulls were turned in when calves were removed (May 11).

All calves were weighed at removal and at weaning. "Removed" calves were given access to high-quality roughage, grain, and water. Following separation, an attempt was made to "mother up" the calves in a corral before turning the pairs out to pasture.

Pregnancy rates and estimated fetal age were determined by rectal palpation on August 21.

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### Results and Discussion

The results of trials 1 and 2 (Table 26.1) indicated there was no advantage to calf removal. However, because the percentage of cows exhibiting heat was very high in the control group, few cows could have responded to treatment, so perhaps the trials were a poor test of the merit of 48-hour calf removal.

Table 26.2 shows the average days that cows in each herd were pregnant at time of palpation. Through cows in the treated group tended to be "farther along" (75.6 days to 73.8), the difference was not significant.

Calf weight gains were not affected by 48-hour separation in any of the trials (Table 26.2). Additionally, none of the calves became sick when separated from their mothers.

Table 26.1. Effect of 48-hour Calf Removal on Pregnancy Rates in a Synchronization Program -- trials 1 and 2

Treatment	No. injected	No. exhibiting heat	% exhibiting heat	No. pregnant, 1st service	% conception, 1st service of those bred	% pregnant 1st service (all cows)
Control	41	34	82.9	27	79.4	65.9
Removal	40	30	75.0	20	66.7	50.0

Table 26.2. Effect of 48-hour Calf Removal on Average Days Cows Were Pregnant at Time of Palpation, on No. of Open Cows, and on Calf Weight Gains

Trial	Treatment	No. cows	Estimated days pregnant	No. open cows	% pregnant at time of palpation	Calf average daily gain, lbs
1	Control	22	72.2	5	87.3	1.79
	Removal	23	72.5	5	88.3	1.79
2	Control	19	77.1	1	94.7	1.49
	Removal	17	74.2	0	100.0	1.49
3	Control	60	73.4	7	88.3	1.57
	Removal	46	77.7	1	97.8	1.61
Total	Control	101	73.8	13	87.1	1.60
	Removal	86	75.6	6	93.0	1.63