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Effect of early weaning on subsequent reproduction and calf production by replacement heifers

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Abstract

Analysis of breeding records for 128 percentage Simmental females either weaned early (average age 63 days) or conventionally (average age 194 days) showed no statistically significant difference between early-weaned and nursed heifer calves for subsequent conception rate, calving date, ease of calving, calf birth weight, or 205-day adjusted calf weaning weight.

Keywords

Cattlemen's Day, 1980; Report of progress (Kansas State University. Agricultural Experiment Station); 377; Beef; Reproduction; Early weaning; Calf production; Replacement heifers

Effect of Early Weaning on Subsequent Reproduction and Calf Production by Replacement Heifers

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Summary

Analysis of breeding records for 128 percentage Simmental females either weaned early (average age 63 days) or conventionally (average age 194 days) showed no statistically significant difference between early-weaned and nursed heifer calves for subsequent conception rate, calving date, ease of calving, calf birth weight, or 205-day adjusted calf weaning weight.

Introduction

The 205-day weights of early weaned calves and of nursed calves do not differ (1977 and 1978 Cattlemen's Day). No data have been reported on reproduction or calf production by heifer calves weaned early.

Experimental Procedure

Breeding records for 128 percentage Simmental females were analyzed to determine if weaning heifer calves early had any effect on their subsequent reproductive performance or production ability. Fifty-nine of the females had been weaned early (21 to 136 days of age), and 69 had nursed their mothers to an average age of 194 days at weaning. All were maintained in drylot after the birth of first calves. The study involved 5 calf crops (1975 to 1979). During the 5 years, females were equally distributed in various nutrition and breeding studies. Calving-ease scores used were: 1) no assistance, 2) assisted, easy, 3) assisted, difficult, 4) Caesarean delivery, 5) abnormal presentation, and 6) dead at delivery. All calves were weighed at birth, at early weaning (adjusted to 55 days of age) and at normal weaning time (adjusted to 205 days). Each yearly breeding period was approximately 60 days, 35 days AI then 25 days clean-up.

Results and Discussion

Five-year conception rates for females (table 5.1) previously weaned early were similar to those that nursed as calves. No measures of calf production differed significantly (table 5.2). The 205-day adjusted weights reported in table 5.2 are only for calves that nursed their dams for approximately 205 days (39 head from early-weaned dams and 47 head from conventional dams). All other calves were weaned early. Thus, early weaning of heifers had no effect on subsequent reproduction or calf production.

Table 5.1. Effect of suckling on subsequent reproductive performance of replacement heifers.

Item	Early wean	Conventional
No. heifers	59	69
Age at weaning, days	63	194
Conceived as heifers, %	79.7	85.5
No. possible exposure periods*	160	177
Conception rate, % for 5 years	80.0	79.7

*One exposure period = 1 60-day breeding season per cow.

Table 5.2. Effect of suckling treatment on subsequent calf production by replacement heifers.

Item	Treatment of dam	
	Early wean	Conventional
Live calves born	98	95
% death loss in calves		
at birth	5.1	5.3
birth to weaning	4.1	8.4
Average calving date	March 19	March 23
Average birth weight	90.6	88.5
Calving ease	1.57	1.75
55-day adjusted weight	196.0	180.3
205-day adjusted weight		
no. of calves	39	47
adjusted weight	528.6	524.0