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## Incidence of Short Estrous Cycles After Weaning in Beef Cows

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### Summary

Weaning calves from cows that had not cycled after calving caused a higher percentage of cows to show estrus in the next 25 days than cows suckling calves. However, 78.3% of the nonsuckling cows had short cycles (7-10 days) compared with 16.6% of the cows suckling calves. A short cycle does not appear to be clinically abnormal when estrus occurs with the first ovulation after calving. The percentage of cows having an estrus with the first ovulation, and thus a short cycle, increases drastically when calves are weaned.

Although anestrous cows can be induced to cycle by weaning their calves, the first estrus after weaning is relatively infertile.

### Introduction

Increased use of artificial insemination has increased attention to estrous cycles. Cycles of 18 to 24 days are considered "normal." Cycles of 7 to 12 days (short cycles) have been observed in both heifers and cows, but most have been in postpartum cows. Whether that is clinically abnormal has not been determined. It is not known if an ovulation occurs at the first, second, or both estrus periods or if cows conceive at the expected rate after a short cycle.

Other researchers have reported that weaning calves within 24 hrs. after birth increased the proportion of cows with abnormal estrous cycles. They reported 7 of 14 weaned cows had short cycles while only 2 of 14 lactating cows had short cycles. Last year we noted that weaning postpartum anestrous cows increased the number with short cycles; 77.8% of the cows in estrus within 10 days after early weaning had short cycles (average 8 days); however, we did not study details of the short cycles.

Lack of understanding and interest in short cycles prompted us to see if we could determine if short cycles are increased by weaning calves from early postpartum anestrous cows.

### Materials and Methods

Eighty-eight crossbred Simmental cows were checked for estrus three times daily from calving until the end of the experiment. Thirty-three (19 to 68 days postpartum) that had not been detected in estrus and did not have a palpable corpus luteum by May 10, 1978, were selected for the experiment. Twenty-five had their calves weaned May 10; the remaining 8 continued suckling their calves. All cows were artificially inseminated about 12 to 18 hrs. after estrus was detected.

### Results and Discussion

Early weaning (average of 44 days after calving) increased the percentage of anestrus cows exhibiting estrus the first 10 days or the first 25 days after weaning (Table 2.1).

Weaning calves early from postpartum anestrus cows also increased the percentage of cows exhibiting short estrous cycles (78.3% vs. 25% for controls).

Sixteen of nineteen cows (84%) that had calves weaned and showed either standing estrus or signs of estrus (hyperactivity) in the first 10 days after weaning had estrous cycles of 7 to 10 days. During the same period only 1 of 3 lactating cows had a short cycle.

Weaning calves stimulates noncycling cows to begin cycling; however, the high percentage of short cycles may extremely lower fertility at the first estrus. Although we could not confirm conception dates, our percentages of inseminated cows returning to estrus was 91.3 for nonsuckled cows and 50.0 for suckled cows. Short cycles are not clinically abnormal for the first postpartum estrus. Suckling may inhibit estrus at the first postpartum ovulation; if so, removing suckling calves may allow estrus to be exhibited. The corpus luteum from the first ovulation apparently has a short life span, which results in a short cycle. In cows suckling a calf, estrus does not usually accompany the first ovulation; thus a short cycle is not observed. Weaning calves before the first estrus after calving drastically increased short cycles.

Table 2.1. Postpartum intervals and effects of weaning on occurrence of estrus in beef cows.

Treatment group	No.	Average days postpartum <sup>a</sup>	No. (& %) <sup>b</sup> of cows exhibiting estrus		No. (& %) <sup>b</sup> of cows with short cycle
			10 days	25 days	
Cows with calves weaned	25	43.9	19(76.0)	23(92.0)	18(78.3) <sup>c</sup>
Lactating control cows	8	44.5	3(37.5)	6(75.0)	1(16.6) <sup>c</sup>

<sup>a</sup>Average number of days from calving to May 10 (date of weaning).

<sup>b</sup>Percentage in ( ).

<sup>c</sup>Percentage calculated on basis of cows that exhibited estrus in 25 days.