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A comparison of estrus synchronization with Syncro-Mate-B® to natural service

Abstract

Conception rates and subsequent calving dates were compared between cows synchronized with Syncro-Mate-B® and inseminated by appointment and nonsynchronized cows bred by natural service. Average conception date was seven days earlier in the synchronized cows.

Keywords

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A Comparison of Estrus Synchronization with Syncro-Mate-B® to Natural Service[1]

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Summary

Conception rates and subsequent calving dates were compared between cows synchronized with Syncro-Mate-B® and inseminated by appointment and nonsynchronized cows bred by natural service. Average conception date was seven days earlier in the synchronized cows.

Introduction

Artificial insemination in beef cows remains unused by many cattlemen due to the intensive labor requirement. This experiment was designed to determine if artificial insemination can be used without heat checking after synchronization with Syncro-Mate-B® (SMB). Natural service (unsynchronized) was compared to timed insemination following estrus synchronization. Synchronizing estrus allows more opportunities for conception during the breeding season. The likelihood of earlier conception translates into an older, heavier calf at a set weaning date.

Experimental Procedures

Sixty-seven fall calving cows at the Fort Hays Branch Experiment Station were divided into two groups by age, postpartum interval, and cycling status. Treatment was timed so that cows synchronized with Syncro-Mate-B® were artificially inseminated on the same day the bull was turned with the unsynchronized control group.

The standard Syncro-Mate-B® treatment regime was followed: implant and inject, remove the implant and remove the calves nine days later, inseminate 48 hours after implant removal, then return the calves.

A cleanup bull was turned in with the cows in the treatment group three days after artificial insemination. A Simbrah bull (cows) and a Hereford bull (heifers) were used for artificial insemination. Using bulls of different breeds helped ascertain the sire of calves born before or after the expected calving date.

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[1] Syncro-Mate-B® is not approved currently for use in cows. The use of this product in our experiment was for investigational purposes only.

[2] Fort Hays Branch Experiment Station.

Results and Discussion

There was no difference in overall conception rate between the synchronized and control groups (Table 7.1). However, synchronized cows conceived seven days earlier. Under these circumstances, synchronization appears economical due to earlier, heavier calves.

Another use of this program would be to decrease calving interval in cows that are going over one year between calvings, thus reducing feed costs per calf weaned. Syncro-Mate-B® has been FDA approved for heifers but not cows. Results with Syncro-Mate-B® on heifers have been quite variable, and this may hold true with cows. Additional data are being collected to ascertain the source of these variable results.

Table 7.1. Camparison of Unsynchronized Cows with Cows Synchronized with Syncro-Mate-B®

Item	Synchronized		Control	
	Number	Percent	Number	Percent
Number of Cows	34	—	33	—
Noncycling	6[a]	17.6	5	15.2
Pregnant:				
1st 10 Days of Breeding Season	18	52.9	7	21.2
1st 20 Days of Breeding Season	22	64.7	17	51.5
End of 60 Day Breeding Season	33	97.1	32	96.9
Number of AI Calves	18		—	
Average Number of Days from Start of Breeding to Conception	24		31	

[a]Three conceived to artificial insemination.