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Effect of Post-Partum Breeding Interval on Conception Rates in Beef Cows

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Summary

We analyzed data on 1536 fall calving Angus cows to determine the effect of post-partum breeding interval on conception rates in beef cows. Normal fertility was observed for cows showing heat 40 or more days post-partum.

Introduction

Calving interval is an important economic consideration in a cow-calf operation. To maintain a yearly calving interval, management pressure must be placed on getting cows bred as early as possible after calving.

Beef cows have an indefinite non-cycling period after calving. In addition, fertility is low with heats expressed shortly after calving. A minimum post-partum interval is required for uterine involution and for recovery of the uterine mucosa. Many factors, including nutrition level before and after calving, calf suckling, and milk production influence the length of time from calving to conception. We studied the specific relationship between post-partum breeding interval and conception rate in beef cows.

Experimental Procedure

Breeding and calving records for 1970-1972 were provided by Ramsey Ranch, El Dorado, Kansas. Data were analyzed for 1536 fall calving Angus cows that were bred artificially or by a clean-up bull. Breeding dates were verified by subsequent calving dates. Conception rate was defined as number of cows conceived/number of services.

Results and Discussion

Conception rate was highest for cows bred 100-109 days post-partum; next were those bred 90-99 days. Conception rates were lowest and the fewest cows showed heat 10-30 days post-partum. This would be expected, as uterine involution occurs then. Conception rate was unexpectedly high, 63%, 40-49 days post-partum. A possible reason for this observation is that a number of the highly fertile cows may have shown their first heat and conceived during this period. The number of cows showing heat 40-49 days was not high compared with 60-100 days. The conception rate declined 110-140 days post-partum, probably because of a number of problem breeders.

These data indicate that, under good management, normal fertility can be expected when cows in heat are bred 40 or more days post-partum.

Table 3.1 . Effect of post-partum interval on conception rate in beef cows.

Days post-partum	Number of services	Number conceived	Conception rate (%)
10-19	4	1	25.0
20-29	22	8	36.4
30-39	45	23	51.1
40-49	92	58	63.0
50-59	175	97	55.4
60-69	253	148	58.5
70-79	436	251	57.6
80-89	419	255	60.9
90-99	351	231	65.8
100-109	181	125	69.1
110-119	127	75	59.1
120-129	72	35	48.6
130-139	39	17	43.6
Total	2216	1324	59.7 (average)