K-STATE Research and Extension | Meadowlark District

April 3, 2026

Ross Mosteller
District Extension Agent, Livestock & Natural Resources

Rebreeding Two-Year-Olds

Trying to find a day when the wind isn't howling cold out of the north or blasting hot out of the south has been a challenge lately, but this past weekend was fall calving cow pregnancy checking day at the farm. There is always a small sense of apprehension when the two-year-old, first-time momma walks into the chute. This is a time in the female's life where they are still growing themselves, in addition to raising their first calf. If energy is limited, reproductive success can be the first thing to suffer. Let's check into this issue today.

Every operation has a different take on managing heifers for their first calf. Research shows that finding females that calve around 24 months of age and who maintain a 365-day calving interval, over at least 6 calves are the herd profit makers. Some operations choose to breed heifers at 18 months, some wait until 24 months, others buy bred heifers or heifer pairs. Whatever the model, it must fit the operations production system.

What can be a frequent problem seen in reviewing herd records is a difficulty getting nursing, two-year-old heifers bred back for their second calf. Excellent research over the past decade shows that improving body condition score (BCS) in these heifers before their first calf is the most important factor in getting them bred back. The biological priority of nutrients goes from vital functions/maintenance, growth, milk production and finally reproduction. That said, reproduction is the first thing to suffer, and this age class can often be open at preg check.

While calf birth weight may increase slightly when pre-calving BCS is improved in heifers, calving difficulty remains the same. A study of 240 first-calf heifers in three states not only showed the "non-issue" of dystocia, but points out how important pre-calving BCS is to the re-breeding rate. Only 56% of heifers calving in a BCS 4 were rebred after a 60-day breeding season, while 96% of heifers in a BCS 6 were rebred in the same time frame.

Another way to improve total herd fertility is to breed heifers for a shorter period of time than breeding the cow herd. When heifers are bred for only 30-42 days, as opposed to 65 days for cows, the possibility of late-calving heifers is eliminated. Generally, a late-calving heifer has a couple fates in the herd -- she continues to be a later-calving cow, or she becomes an open cow. Neither option is desirable, so removing these females from the breeding herd early in their life can lead to long-term improvement of cowherd fertility. Another consideration is that those long-yearling, open heifers generally have good value as feeders.

Here are some additional measures to improve heifer fertility. Have your herd health veterinarian perform reproductive tract scoring on heifers 30-60 days pre-breeding. Vaccinate heifers with a modified-live IBR-BVD-Lepto vaccine at least 30 days prebreeding. This should be part of a comprehensive vaccination program in which this is not their first exposure to this vaccine. Choose high-fertility lines of heifers for replacements. Use a synchronization program to get more heifers bred the first few days of the breeding season. Breed heifers 14-21 days before breeding cows so heifers have more recovery time between calving and rebreeding.

K-State has a good publication discussing everything ruminant nutrition in C735 Beef Cow Nutrition Guide if additional information is needed. To summarize, heifers need additional attention nutritionally, particularly as it relates to re-breeding. Keeping cattle in good body condition throughout life is a decent management goal.