



Leading Up to

Breeding

Guidelines for getting cows and heifers ready for breeding season.

by *Kindra Gordon*



Though breeding season can be a frenzied few weeks in early spring and summer for most cattle operations, the key to a successful breeding season really begins much earlier. In fact, producers should plan for it year-round, say beef production specialists.

“Cow reproduction is a continuum; it is not a single event,” says Robert Larson, Kansas State University College of Veterinary Medicine professor of production medicine. He points out that management and vaccination strategies go hand in hand for a herd’s breeding success, and says, “Producers need to look at their efforts to get cows and heifers bred as an overall program with every year building on what has been done in the past.”

Likewise, John Maas, Extension veterinarian at the University of California-Davis, suggests producers continually implement herd health strategies to improve their herd’s pregnancy rate, birth rate and weaning rate, which in turn can boost profitability. Maas says, “If a producer can increase the number of weaned calves from his herd by 5% that gives about the same benefit in one year as using the top EPD (expected progeny difference) bulls for 15 years.”

That said, we look at advice for herd health strategies that can help boost cow and heifer reproduction.

Start with nutrition

As a starting point, Larson says nutrition is especially important for overall herd health and reproduction. “Nutrition both pre- and postcalving is critical to make breeding season successful,” he says, and suggests body condition score (BCS) is a good indicator of proper nutrition.

A common denominator in breeding failure is often cows that are too thin. Thus, Larson recommends mature cows be at least a BCS 5 and heifers a BCS 6 prior to calving. He explains that this will help cows and heifers through the stress of calving and lactation and yet maintain enough

PHOTO BY ANGIE STUMP DENTON

body condition to start cycling for faster breed back and better conception rates after calving.

If forage quality isn't adequate to maintain those body condition scores, supplementation of feeds high in energy and/or protein, such as grains or byproduct feeds, may be necessary.

Travis Maddock, a beef consultant based in Fargo, N.D., also emphasizes the importance of body condition scores — especially on timely breed back after calving. Based on research reports, he says cows that are thin (BCS 4 or less) will have 20-40% lower conception rates than those cows that are adequate (BCS 5) or greater.

He also shares results from a 2005 U.S. Department of Agriculture (USDA)-Agricultural Research Service (ARS) study looking at the effect of precalving energy intake on postcalving breeding interval. Cows were put on diets that either maintained body weight (1,210 lb.), increased body weight by approximately 110 lb. or increased body weight by 155 lb. during the last five months of gestation. Body condition scores of those cows at calving were 4.4, 4.7 and 5.3 for each treatment, respectively.

Maddock reports those cows that were fed to maintain condition took longer to exhibit signs of estrus than the cows fed to gain weight precalving. There was significant advantage for the cows that were on a higher plane of nutrition, at times up to four weeks difference. This was reinforced by blood hormone levels, which suggested that those cows fed greater energy precalving had a more favorable nutritional status during early lactation.

Of these results, Maddock says, "So pay close attention to body condition scores and do not allow cows to start shedding condition, especially the last few weeks prior to calving. The failure to monitor condition can add tremendous costs to a ranching operation either in feed resources to return cows to optimum condition or in open cows the following breeding season."

Plan ahead for disease control

In addition to nutrition, herd health should be monitored to help minimize reproductive losses from disease. Maas and Larson say reproductive diseases of concern include infectious bovine rhinotracheitis (IBR), bovine viral diarrhea virus (BVDV), vibriosis (Campylobacter) and leptospirosis, as well as trichomonosis in some regions of the country.

"Disease control is important to minimize the risk of infertility and abortion, not only because of the effect on the current breeding season, but also because delaying viable pregnancies to later in the breeding season causes management problems for future breeding seasons," Larson says.

Regarding replacement heifers Maas adds, "Replacement heifers do need to be well-cared for and well-vaccinated. If they can go into the herd healthy and immune, they will be more productive."

For an effective herd health program that protects replacement heifers from these diseases, Maas and Larson suggest heifers be vaccinated two to three times before breeding season.

"You want to vaccinate fairly aggressively prior to the first breeding," says Larson of the multidose approach. He explains that not all of the heifers will respond adequately to any single vaccination. Thus, he says repeating the dose provides a better chance of getting as many heifers as possible to have a good immune response to the vaccine.

Larson also prefers to use a modified live virus (MLV) vaccine on replacement heifers. "Research has shown it to provide a more complete immune stimulus with MLV, and it tends to have longer duration of protection," he says.

To protect cows from these reproductive diseases, they should be given booster vaccinations annually — usually prior to breeding. Larson says either a MLV or killed vaccine can be used, but says vaccinating about 30-60 days before breeding season is the ideal time to get the most effective protection against diseases that affect cows during early gestation.

Don't overlook parasites

A good herd health program should also include controls for internal and external parasites. However, because parasites can

vary in different parts of the country due to exposure and environmental factors, timing to control them can also vary.

Larson suggests working with your local veterinarian to design a deworming and external parasite control program for your operation, and says, "A good program would be one where parasites are not affecting the ability

of cows to maintain body condition and get bred."

Include your veterinarian

Most importantly in planning for the upcoming breeding season and designing a herd health program, Maas and Larson encourage producers to work with their local veterinarian. Maas says, "The best sources of herd health advice are local veterinarians, who will know your area's level of disease exposure and the proper timing for herd vaccinations and parasite control."

He adds, "Each individual program will really be determined by how often you handle your herd, the facilities available and special diseases of concern in your area." **HW**

"Producers need to look at their efforts to get cows and heifers bred as an overall program with every year building on what has been done in the past."

— Robert Larson
