Vet Call

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Managing herd reproduction

As late summer and early fall rolls around, many producers are checking their spring-calving herds for pregnancy status, and some are not happy with what they are finding.

Focus on the outcome

As a veterinarian, one of my primary roles is to help producers get a lot of cows and heifers pregnant in a controlled breeding season, and to get as many pregnant in the first 30 days as possible. I have spent a lot of time talking to producers about some of the specific tools that are available to improve or monitor reproductive performance, including breeding soundness examinations of bulls, heifer development, vaccinations against pregnancy-wasting diseases and cow herd nutrition. But I often find that attention gets diverted away from the outcome and gets focused on the tool.

When I am asked to speak about cow herd reproduction, I make a point to repeat as many times as possible that "my goal is to get a lot of cows and heifers pregnant in a controlled (i.e. 60- to 75-day) breeding season and to get as many pregnant in the first 30 days as possible." Any tools or procedures that I mention are only that — tools to accomplish my goal.

I have found that if I spend too much time talking about specific tools — such as prebreeding reproductive tract examinations of heifers or vaccination protocols for cow herds — the audience walks away thinking that implementing a recommended tool will ensure reproductive success.

I hope I can improve my communication skills so that whenever anyone walks away from a talk or an article that I have presented, they know that my first priority is not to simply implement a particular reproductive tool, but that "I want to get a lot of cows and heifers pregnant in a controlled breeding season, and I want to get as many pregnant in the first 30 days as possible."

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Why some cows fail

To accomplish my cow herd reproductive goal, it is important to remember the primary reasons that cows fail to give birth to a calf following a controlled breeding season. First, the female did not start cycling early enough in the breeding season to allow at least two (and preferably three) opportunities to be bred by a bull. Second, the bull was not able to deliver fertile semen to the reproductive tract of the cow at a time that would result in conception. Finally, a disease or toxin prevented the establishment of a pregnancy or caused the loss of an embryo or fetus.

To make sure cows and heifers have at least two opportunities to be bred during a breeding season, I like to examine all or a significant representative portion of the heifers for evidence of appropriate weight and the attainment of puberty before the start of the breeding season (for example, through a prebreeding reproductive tract examination).

For the mature cows, I like to confirm that cows have acceptable body condition, and I like to examine all or a representative portion of the cows for evidence of cycling at least two weeks prior to the start of the breeding season.

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A corpus luteum (CL) is generally palpable from about Day 6 or Day 7 to Day 17 of a 21-day cycle (or 55% of the days of a 21-day cycle). So, from a single reproductive tract evaluation, percent cycling can be estimated by dividing the percentage of examined cows with a palpable CL by 0.55 (55%). Therefore, if 40% of a herd subset has a palpable CL, one can estimate that approximately 73% (40% ÷ 55% = 73%) of the herd is cycling.

If the percent cycling is lower than desired, interventions such as increased energy intake for underweight heifers or cows, or a 48-hour weaning of calves for nursing cows may be implemented prior to the start of the breeding season.

A bullish problem

To ensure that bulls can deliver fertile semen to the reproductive tract of cows, a thorough breeding soundness examination (sometimes referred to as a BSE) to evaluate semen quality, structural soundness, and health of all breeding bulls should be done a few weeks prior to the start of the breeding season.

Once the breeding season begins, producers should spend time observing activity in the breeding pasture to make sure that bulls are searching out cows that are in heat, and that they are able to mount and complete the act of breeding. It is particularly important the first 20 days of the breeding season to visually evaluate bull performance and estimate the percentage of cows being bred each day. Chin ball markers on bulls can be valuable tools to evaluate the number of acts of mating per day or per week in a breeding pasture, depending on frequency of observation.

If 80%-100% of the heifers and cows are cycling at the start of the breeding season, on average 4%-5% should be bred each day. If the number is below this level, either the females are not cycling or the bulls are not detecting cows in heat.

It is also important to monitor the breeding pasture from about Day 20 to Day 30 or 40, as females that fail to conceive to the first mating return to heat. If 65% of the herd became pregnant during the first 20 days of the breeding season, then, on

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average, less than 2% of the herd should be bred each day of the second 20 days of the breeding season.

If, on average, 4%-5% of the cows were bred each day of the first 20 days of the breeding season, but 2% or more are being bred the second 20 days, it is likely that the bulls are not successfully causing conception and the cause needs to be investigated immediately.

Use available tools

To make sure that a high percentage of early embryos survive to be delivered as a full-term calf, tools to minimize the risk of diseases that can cause early embryonic death or abortion should be implemented. Vaccines and biosecurity against infectious bovine rhinotracheitis (IBR), bovine viral diarrhea (BVD), vibriosis, and leptospirosis, as well as control programs for trichomoniasis, should be directed at heifers, cows and bulls.

I hope that as you determine the percentage of your heifers and cows exposed to bulls that became pregnant this year you are pleased with the outcome. Whether you are or are not happy with your herd's reproductive performance, I hope that for next year's breeding season, you focus on the goal "to get a lot of cows and heifers pregnant in a controlled breeding season, and to get as many pregnant in the first 30 days as possible."

Tools such as body condition scoring, breeding soundness examination of bulls, prebreeding reproductive tract examination of heifers, prebreeding palpation for CL presence in cows, chin ball markers on bulls, and a herd vaccination and biosecurity program should be considered to help you reach your goal.

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