

# More Than a Pass/Fail

## You might learn more than you think at preg-check.

by Troy Smith, field editor

There is a nearly true tale about two neighboring ranchers. The first is Jake, considered by most folks to be mighty close with a dollar. More than once he has declared the easiest money he could make was money he never spent in the first place.

Probably because of his tightfisted ways, it took ol' Jake a long time to adopt the practice of pregnancy diagnosis for his cow herd. He still puts it off as long as possible, and he still flinches when the veterinarian's bill arrives. But Jake feels really good after figuring up the feed costs saved by identifying and eliminating nonpregnant cows.

Jake's neighbor, Otis, has long taken a disciplined approach to pregnancy diagnosis. He schedules the veterinarian's visit earlier rather than later, and he asks for more information than which cows are pregnant and which cows are not. He wants estimates of when the pregnant cows should calve, which allows Otis to adapt his management and marketing. Preg-check results can reveal reproductive problems and perhaps offer clues to the causes. Otis believes he can learn a lot from pregnancy diagnosis.

### A tough year

In the real world, fall 2023 pregnancy

diagnosis brought bad news to many cow-calf outfits. The percentage of cows found open was higher in plenty of herds located across cow country. According to Ky Pohler, a Texas A&M University reproductive physiologist, seasonal stressors are likely to blame.

"We certainly saw an uptick in pregnancy loss across the South and Southwest because of the prolonged heat," says Pohler. "Seasonal stressors, including long periods of extreme heat or cold, can cause it."

Scott Reynolds, veterinarian at Broken Bow, Neb., agrees, noting that weather-related stress can have seemingly delayed effects on reproduction. Reynolds and his partners have seen higher rates of open cows — 50% higher in some cases — in central Nebraska herds because of winter stress experienced in early 2023.

"We've seen it in some well-managed herds, so it's not about neglect or anything like that. I think the winter was just harder on cows than we might have thought," explains Reynolds. "It was rough for a while. It got really cold, and there was a lot of snow, and I think tromping through it for 45 or 50 days just took its toll."

### When they add up

Whenever the number of open cows is markedly higher than normal, producers

ought to look for reasons. They can't manage the weather, but other causes of higher-than-normal pregnancy loss may be mitigated through management.

Of course, producers should pay attention to the male contribution to reproduction. Consider whether a high incidence of open females is a result of poor-quality semen used for artificial insemination (AI), or lack of fertility or libido in bulls used for natural service.

Assuming the sire contribution is good, it's still normal to see a certain amount of pregnancy loss.

According to Pohler, research suggests fertilization will occur in 95 of 100 cows following a single mating by natural service or AI. However, only 50-60 of those cows will actually deliver a calf.

Most failed pregnancies, he says, end during either of two normal periods of early loss. Early embryo loss occurs by Day 28 following fertilization. Early fetal loss occurs between Day 28 and Day 60.

### Early pregnancy losses

Causes of early pregnancy loss may be related to genetics, nutrition, disease, toxins or stress resulting from handling, transportation or weather extremes. Abrupt changes to diet or environment can cause enough stress to interfere with pregnancy.



[PHOTO BY SHAUNA HERMEL]

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The observed female's return to estrus occurring 30 days or more after first breeding is a likely indication of early embryo loss, as is an observed increase in bull activity at a time when a decrease might be expected. Most cases of early embryo loss go unrecognized, with affected cows showing up as late-bred or open females, depending on the length of breeding season.

"When we get to Day 60 following fertilization, expectations for pregnancy loss decline," says Pohler. "If there is high loss after Day 60, it's cause for concern."

### Additive information

Pohler advises producers to keep good records, and save pregnancy diagnosis results for future reference. Make comparisons when the current year's pregnancy losses seem higher.

"I advise producers to use pregnancy diagnosis results from the last three years. If this year's results are within 5% of the three-year average, there's probably no cause for alarm," says Pohler. "If the current year's results differ more than that, I'd want to get with the vet very quickly. That needs to be investigated."

But how does a producer determine the time that pregnancy loss occurred? Late-term abortions are easy enough, because they will have occurred among cows already diagnosed as pregnant. For pregnancy losses occurring prior to preg-check, determining the timing of loss can be difficult, especially if pregnancy diagnosis is performed well after the end of a long breeding season.

A veterinarian may be able to tell if a cow suffered a recent loss, using palpation to evaluate the size, shape and feel of the reproductive tract. It depends on how advanced the pregnancy was and how soon diagnosis was performed following abortion.

According to Reynolds, an ultrasound image also may show some evidence of a recent pregnancy loss.

"But the evidence doesn't last long. When preg-checking at weaning time, which is most common, most open cows will look the same — just open, like they never were pregnant," says Reynolds.

Producers who maintain a relatively short breeding season might consider scheduling pregnancy diagnosis earlier. If bulls are pulled after a 60-day breeding season and cows are preg-checked soon afterward, for example, the cows found open would have suffered early pregnancy loss. Cows that were diagnosed pregnant but failed to deliver a calf would have aborted.

Pohler says producers wanting to know more about when pregnancy loss has occurred would have to check for pregnancy more often — scheduling it early and again later. That's not such a far-fetched notion, considering the options available. Pregnancy can be detected earlier than many people realize.

Depending on the skill of the veterinarian or technician, traditional rectal palpation can diagnose pregnancy any time after 30-40 days postbreeding. Ultrasound can provide accurate results starting at 28 days. Chemical testing of cows' blood for the presence of proteins associated with pregnancy can be used by Day 28. Also,

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**Ky Pohler**



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some blood tests can be processed chuteside, eliminating the long wait associated with laboratory processing.

Reynolds says many of his clients have breeding seasons longer than 60 days, but more producers are asking for earlier pregnancy diagnosis. Typically, it's those who manage both spring- and fall-calving herds. Cows in the spring herd that bred too late to deliver by a spring cut-off date are shifted to the fall herd. Alternatively to maintaining two herds, late-bred cows could be packaged into marketable groups and sold to operations whose choice of calving season matches the cows' delivery dates.

"We also have more clients asking us to stage pregnancies. We can usually estimate calving date to within five days," offers Reynolds. "With that information, producers can sort their cows into calving groups, with cows in each group calving within a window of, say, 20 days. By managing the groups separately, producers can simulate the Sandhills Calving System, keeping newborns separate from older calves."

Reynolds says producers also can brand and vaccinate each group separately, when the timing is right. If producers wait to process calves all at once, after the last calves born are old enough, the oldest calves may be long overdue.

"For years, if producers used pregnancy diagnosis, it was just to determine opens versus pregnant cows, and then get rid of the opens," says Reynolds. "But, there's more value to be claimed for the time and money invested in pregnancy diagnosis."

Pohler agrees, recommending pregnancy diagnosis be used to the fullest extent possible to help monitor and improve the reproductive performance of a breeding herd.

"Reproduction is five times more important than any other trait we select for," emphasizes Pohler. "Reproductive inefficiency is costly, and I wonder if producers realize how costly it is. But what if improvement could result in having five more calves? At today's prices, how much more money could we have made?" **ABB**

Editor's note: Troy Smith is a freelance writer and cattleman from Sargent, Neb.