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## We Don't Have a Shot for That

By Randall Spare, DVM

The fall herd work for us at Ashland Veterinary Center is coming to a close. As the calendar turns to 2020, one might think the next task on our minds is calving season, then evaluating bulls for the upcoming breeding season. Yes, this is true. However, now is when we gather data from the fall work of pregnancy evaluation and assessing body condition. These two data points are heavily correlated. The nutritional status of the cow herd the next few months through calving will affect your 2020 pregnancy rate and breeding distribution.

Our clients often asked, "How is the pregnancy rate this fall?" Or, "How are heifers breeding?" Many producers want to know how they compare with others, or what they can expect when their herds are palpated. In other words, the real question being asked is, what is the *chance* I will have an acceptable percent of cows bred in the breeding season? The question I then ask myself is, "Why do we leave so much to chance when it comes to conception and reproduction?" Reproduction is a lowly heritable trait compared to other traits such as gain, marbling, ribeye area or even temperament within beef cattle. Another way to state this is that management, such as feeding and health, have a much greater effect on fertility in the cow herd than heritability.

Data collected at the time of palpating indicates the *number one* factor that affects pregnancy rate is the body condition score (BCS) of the cows. Many of the herds we serve utilize similar health management systems. In our practice setting, BVD status continues to be the cornerstone of health management. BVD is controlled through testing, biosecurity and vaccination using industry standards.

As calving season begins or is on the horizon, the most important management tool we have is nutrition.

As BVD is controlled, the vaccination tools are much more effective in mitigating other disease pressures.

Age of a group, or individuals within a herd, is also a confounding factor. As cows age and the teeth wear, fertility declines. Or, the very young coming three-year-olds are more frequently open. Ultimately, even as age varies, those cows that have a lower BCS are more likely to be open. The range of pregnancy rates in cows this fall ranged from 75 percent up to 98 percent for a 60-day breeding season. Those with the highest pregnancy rates had a body condition score of 5.5 or greater. The herd with the lowest pregnancy rate of 75 percent, had an average BCS of 4. This suggests that as BCS scores go up, so does the pregnancy rate.

As calving season begins or is on the horizon, the most important management tool we have is nutrition. Finding the nutritional requirements for each stage of production is available in many sources. These requirements will increase as the temperature

drops and wet muddy conditions increase. Those cows that start into winter with a BCS of 5 or greater have more margin when the temperature drops and the wind and weather stress increases. The University of Nebraska reports the lower critical temperature (LCT) of cattle occurs when the temperature falls below a threshold and the cow needs use energy to maintain body temperature. Therefore, body condition becomes a risk management tool. A thin cow, with a BCS of 4 has a higher LCT than a cow in BCS of 5. A BCS of 4 has a LCT of 27 degrees compared to a cow in BCS of 5 with a LCT of 19 degrees. Cows energy needs increase as the temperature goes down. Lactation also increases the energy needs of the cow. Astute cowmen adjust for adverse weather conditions each year.

Because forage is the major source of nutrients for the cowherd, it is important to have the forage analyzed each year. The variability of some nutrients can be as great as 50 percent from year to year. This analysis will allow the supplement program to be tailored to the forage nutrient content and the environment.

During those times of the year when there is increased moisture, wind and decreased temperature, it is virtually impossible to feed enough

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### Farmers & Ranchers Upcoming Sales and Events

#### Horse Sales

Rope Horse Preview..... 12 Noon, May 15  
Ranch Horse Competition .....6 p.m., May 15  
Spring Classic Catalog Horse Sale..... 10 a.m., May 16

**Cow Sales**..... Jan. 21, Feb. 18, March 17, April 21, May 5

**Hog Sales**..... 2nd & 4th Monday every month

**Weaned/Vaccinated Sales**.....January 7, February 4

**Don Johnson Angus Bull Sale** ..... March 9

**New Frontier Bucking Bull Sale**..... March 21

### F&R Advertisers / Page / Sale Date

Apex Cattle	6	January 27
Bar S Ranch	28	March 14
Bieber Red Angus	22	March 5
BJ Angus	27	March 12
Cattlemen's Cut	30	March 12
Cow Camp Ranch	13	February 7
44 Farms	21	February 22
Gardiner Angus Ranch	9	January 27
Gold Bullion Group	26	March 1
Green Garden Angus	30	April 6
J&N Black Herefords	10	February 8
Jamison Herefords	17	February 28
Jensen Bros	20	March 5
Don Johnson	32	March 9
KSU Cattleman's Day	5	March 6
Lafin Angus Ranch	23	March 7
Lazy H Ranch	18	March 1
Leachman Cattle of Colorado	26	January 24, March 22-23
Loving Farms	20	March 7
Mushrush Red Angus	24	March 20
Nichols Farms	4	January 25
Ohlde Cattle Co.	32	April 20
Overmiller Red Angus & Gelbvieh	26	February 15
Post Rock Cattle	14	February 29
Rock Creek Ranch	16	February 13
Schiefelbein Farms	15	February 15
Seedstock Plus	19	February 22
Swanson Cattle Co.	12	February 22

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program. Depending on the year (cow condition and forage conditions), they might be able to get by with supplementing 1 lb. of high-protein (38-40%) cake in November, 2 lbs. in December, and bump the cattle to 3 lbs. per head per day in January and February. Assuming cows consistently come through the winter in good body condition as calving approaches, these systems can be highly successful. There are years where more winter energy supplement is required. A good example would be this last winter where we had day after day of cold, wet weather. In years like that, these folks would switch to a moderate-protein supplement (20-30%) and feed more to get the energy to maintain body condition."

A number of free online tools are available to help balance rations and explore alternatives, such as OSU's Cowculator ([Beef.OKState.edu](http://Beef.OKState.edu)) and KSU's spreadsheet that evaluates total costs of various protein supplementation programs ([AgManager.info/KSU-Cattle-Supplementation-Cost](http://AgManager.info/KSU-Cattle-Supplementation-Cost)).

"If a producer is unfamiliar with the forage base or the cattle, we encourage them to get some forage quality data and run the numbers through a ration evaluation program. This will give them a great place to start," Lalman says. After that, he explains it comes down to being able to see how cows are responding and what adjustments need to be made.

"You've got to know what's going into your cows," Blasi says. "Take care of calorie and protein requirements and you take care of 95% of the winter nutrition challenges and then add a solid mineral program."

With minerals in mind, Blasi cautions that consumption is not equivalent to quality.

"Most minerals are formulated to meet 50% of the cow's requirements. Make sure you're approximating what their needs are," Blasi says.

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high-quality forage and supplement to maintain or gain BCS. When the nutritional margin has been created by maintaining a BCS of 5 or greater by the beginning of the third trimester, a cow will more likely be able to maintain that condition to the beginning of the breeding season. An astute manager will not risk an unacceptable conception rate during breeding season. He or she will make certain the nutritional management and supplementation is accurate and scientific to meet the cows dietary needs throughout the year.

## Other Management Considerations

### Supplementation Frequency

"Smaller packages of protein supplement can be delivered three times or twice per week without reducing cow performance," Lalman says. "So if the target is the equivalent of 3 lbs. per day and feeding interval is three times per week, then 7 lbs. could be delivered to the cows on Monday, Wednesday and Friday, for example."

"In the fall, when the weather is friendlier and the cows' nutritional needs aren't as high, I'm comfortable with supplementing them every two or three days because it saves a lot of indirect costs," Blasi says. "By the third trimester, though, I think you need to be delivering supplement and looking at them every day."

### Ionophores

Ionophores approved for cows have been shown to influence reproductive performance during the postpartum period, according to Funston. He explains cows and first-calf heifers fed an ionophore exhibit a shorter postpartum interval, provided adequate energy is supplied in the diet. The effect appears to be more evident in less intensely managed herds that generally have moderate (60 to 85 days) or longer postpartum intervals.

### Estrus Synchronization with Progestins

It can bring cows into heat but will not solve fertility problems, Funston says. These products may shorten the postpartum interval, provided all other management practices are optimum, such as nutrition and body condition.

"While these management practices can assist in shortening the postpartum interval, none will take the place of good overall management, beginning with a sound herd health program and proper nutrition," Funston explains.

And, as Blasi says, "A little animal husbandry goes a long way."

Often, we learn from past experiences. We remember the extended cold, wet and harsh winter that affected much of the upper Midwest in 2019. We fielded more calls about weak and stillborn calves. Many of these conversations began with, "Doc what shot can I give my cows to stop them from having premature or weak calves? I have been feeding them just like last year."

Poor conception cannot be solved with a "shot." The first response to resolving pregnancy wastage is to analyze the feeding program.