

Beef Cattle Mythbuster

Dr. Don Llewellyn

Livestock Extension Specialist

WSU Extension and WSU Department of Animal Sciences, Pullman, WA

Sarah Dreger

(Graduate student and editor of this month's column)

WSU Department of Animal Sciences, Pullman, WA

Myth: Sophisticated reproductive technologies will solve my cows' reproductive problems.

Answer: Certainly not.

First, let's get a little reflective: Spring calving has been underway for a good while now, and what a spring it has been. I've been watching the weather in eastern Washington for more than 50 years. I can never remember a time with more extremes than we've had lately—sun, dry, warm, wind, rain, cold, and snow. Through all this, the reproductive year for our cows is about complete. There's a lot of hard work and management represented in those calves. The next priority, get those cows bred back.

In terms of cow/calf enterprises, if nutrition costs can be controlled and reproductive failure can be prevented, we are moving in the right direction toward economic viability. Proactively working toward setting beef cow reproduction up for success should be a top priority, geared toward maximizing the number of calves weaned per cows exposed to bulls (natural service, artificial insemination [AI], or whatever combination you use in your operations). Reproduction is the first step to producing a profitable calf crop.

The United States Department of Agriculture (USDA) NAHMS (2020) reported that only about 7.3% and 11.6% of the beef cattle operations in the United States employ estrous synchronization or AI, respectively. We regularly hear stories of successes and challenges in managing beef cattle reproduction. Many of these stories are compelling or frustrating where reproductive technologies (AI, estrous synchronization, etc.) are concerned. However, the bottom line of this discussion is: If the cow is not bred, she's costing you money.

Realistically we know that the more sophisticated reproductive technologies work in some herds and in others they may not. What sets the operations apart that can successfully adopt such reproductive technologies, compared with those that find them more unviable? It could be the availability of facilities, labor, and time just to name a few. If you have the capabilities on your operations to implement sophisticated reproductive technologies, that's great. If you don't have the capability, that's fine too, there are plenty of reproductive options that can be matched to your herd and facilities.

It's certainly not the intent of this article to say that reproductive technologies are a necessity for operations to be profitable. Common-sense management can facilitate successful estrous synchronization and AI programs in herds currently using natural service. Clearly, much room for the adoption of estrous synchronization and AI is present in the beef cow world, and when producers feel ready, *then* they can reap significant genetic benefits (i.e. growth, maternal, calving ease, and carcass characteristics [marbling, ribeye area, carcass weight, etc.]).

Whether using natural service or reproductive technologies, my years of observations have shown several key components that successful producers have in common that set reproduction and the operation up for success. These practices would be essential to achieve for an operation looking to adopt reproductive technologies:

1) Provide sufficient pre- and post-calving nutrition to the herd (protein, energy, minerals, and vitamins). Research tells us that a timely return to estrous is associated with the body condition score (BCS) of beef cows. Targeting a BCS of 5 (on a 1 to 9) scale at calving is generally about ideal. Likewise, it is essential to be conscious that young cows (i.e., first and second calvers) are at the greatest risk for reproductive failure due to the demands for growth, in addition to lactation. When practical, a little extra care and nutrition for young cows is worth consideration.

2) Many successful programs have worked toward short breeding seasons and therefore short calving seasons. If all the calves arrive in a 60-day window (with a goal of 45 days!), you are setting your cows up for success by allowing plenty of time to breed back so each cow can produce her next calf within 365 days. Short calving seasons also have the added advantage of promoting uniformity of the calf crop, surely that's good at marketing time.

3) Successful producers also have well-thought-out herd health protocols designed in consultation with their veterinarians to support reproduction in their herds. Also, they consider their cows' reproductive state when they are being handled to reduce embryonic loss and other stresses on the cow and calf during gestation. Minimizing stress means healthy cows and calves.

4) Many measures of success exist but maximizing the proportion of calves weaned per cow exposed during the breeding season is essential. Management strategies to improve this can include pregnancy checking and strict criteria for culling to eliminate cows with a propensity for reproductive problems.

5) Successful producers also know that all the technology in the world cannot fix deficient management practices. Effective cowherd reproductive management must be in place **before** adopting sophisticated reproductive technologies. Each operation has its limitations in facilities and resources and several barriers to adoption exist. If a beef producer deems an AI protocol feasible for their operation, they need to get their house in order first, (good pregnancy rates, short breeding and calving seasons, the facilities, equipment, know-how, and personnel) only then will they be able to achieve the genetic benefits of the reproductive technologies that are available.

There you have it, the myth is busted! With all that's going on in the world right now producers have challenges. In the big picture, life on the farm and ranch is good and a great place to be in these difficult times. I wrote the following sentence in 2012 and I still believe it is true today: "Be *optimistic!* It makes life a lot more fun when times are good and makes the challenges much more bearable."

Literature Cited

USDA. 2020. Beef 2017, "Beef Cow-calf Management Practices in the United States, 2017, report 1." USDA-APHIS-VS-CEAH-NAHMS. Fort Collins, CO. #.782.0520