Smart Steps *for* Synchronization

What does it take to have a successful synchronization program? These specialists lend their advice.

Story & photo by **Kindra Gordon**

If implemented properly, an estrus synchronization program can deliver genetic and production gains, as well as management efficiency, to the cow herd. But the investment can have a disappointing outcome if herd health or nutrition is subpar prior to breeding.

As one experienced cattleman puts it, "Every detail has to be in order to have a strong synchronization and artificial insemination (AI) program."

Nutrition is necessary

Most agree that breeding success begins with nutrition.

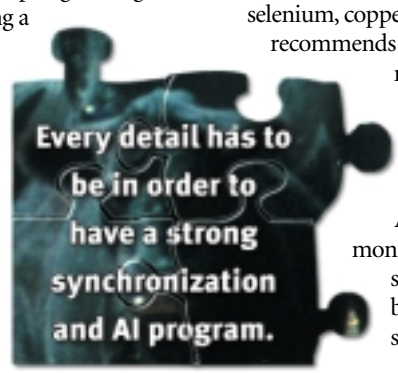
"Nutrition and cow body condition score (BCS) are the foundation of reproduction with or without synchronization or any other reproductive technology," says Mel DeJarnette, a cattle reproductive specialist with Select Sires.

Oregon nutritionist Mike Mehren agrees and stresses that body condition at calving can affect breeding. "We want a minimum body condition of 5 for mature cows and 6 for heifers when they calve. And then producers should strive to maintain that condition from calving to breeding," he says.

He adds, "There's good evidence that if we wait longer than 60 days prior to calving to put that condition on, it can affect conception rates at breeding." Mehren has worked with several Angus breeders in developing their nutrition programs in the Northwest.

He says energy in the feed — most often referred to as total digestible nutrients (TDN) — is the key to managing an animal's body condition.

If cows and heifers need a boost to their body condition prior to spring calving, Mehren suggests feeding a high-quality hay, like alfalfa, along with a little straw in the fall and winter until calving time. "Feeding fat can also do wonders. There's good information that shows it helps cows gain and improves conception," he says.



Because forages are often deficient in vitamins A and E, selenium, copper, and energy, Mehren recommends feeding a vitamin-and-mineral supplement. But, he says, "First test your feedstuffs, then base a supplement program on that."

Another tip: Mehren suggests monitoring the herd's water source to ensure that it is not bringing in contaminants such as nitrates.

What about problem cows?

Most herds have a few late calvers and a handful of cows that lack condition. How should they be handled? DeJarnette says those are common questions.

"I'm often asked, 'How many days postpartum should my cows be before I include them in the synchronization program?'" he says. "Or, 'What is the minimum body condition score a cow should have before being included in the treatment?'"

DeJarnette says the late calvers and poor BCS cows probably need to be included in the program more than the early calvers or the cows in good body condition. Here's why.

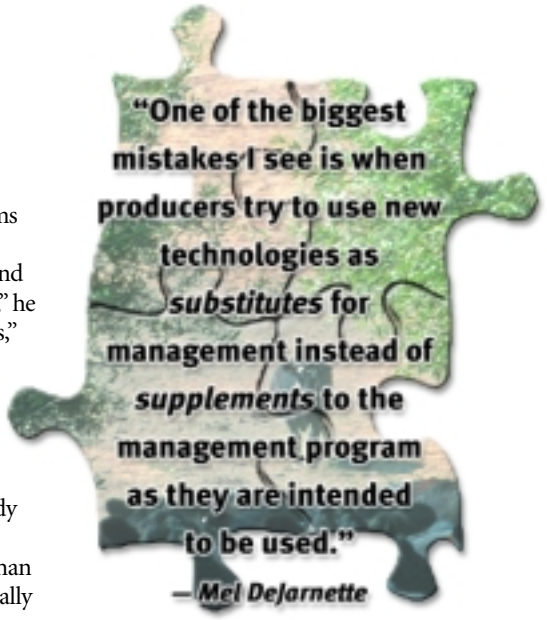
CONTINUED ON PAGE 36

Smart Steps CONTINUED FROM PAGE 35

"Most of the synchronization programs we use today are actually therapeutic treatments that help to induce cyclicity and more fertile heats in these problem cows," he says. "We must have realistic expectations," he cautions.

"Late-calving cows and those in poor body condition cannot be expected to achieve the same level of reproductive performance as their more fertile counterparts — early calvers in good body condition," he continues. "However, anything we get pregnant will be better than doing nothing, resulting in cows continually conceiving later and later in the breeding season until they must eventually be culled from the herd."

DeJarnette adds, "I'd seldom recommend a dose of semen to a beef cow at less than 30 days postpartum, but that's not to say we shouldn't synchronize her before then to get her cycling and perhaps help 'catch her up' with the rest of the herd."



Be proactive with herd health

In addition to nutrition, herd health must be monitored. The best breeding programs will be unsuccessful if they have to compete with infertility or abortion-causing diseases. Thus, vaccinating cows (for vibriosis and leptospirosis) and calves [for protection against clostridial diseases, bovine viral diarrhea (BVD) and infectious bovine rhinotracheitis (IBR)] is essential. Despite the obvious benefits from vaccination, the National Animal Health Monitoring System (NAHMS) Beef '97 Study states that only 18% or fewer U.S. cattle operations vaccinate cows and heifers for IBR and BVD.

Glenn Rogers of Aledo, Texas, is a senior cattle veterinarian with Pfizer Animal Health. He says the most common mistake he sees in herds that do vaccinate is that vaccinations for reproductive diseases are often not given to females at the proper time.

"Thirty to 60 days prior to breeding is the key time to vaccinate for major reproductive diseases in the herd," Rogers says. He adds that providing protection against BVD and IBR reproductive losses is best achieved by using a modified-live virus (MLV) product with proven fetal protection from BVD types 1 and 2, and IBR.

Mehren also advocates a deworming program as a good herd management strategy to achieve better breeding results.

Management makes it work

Most importantly, synchronization and AI require superior management. "One of the biggest mistakes I see is when producers try to use new technologies (estrus synchronization, heat detection, magic potion No. 9, etc.) as *substitutes* for management instead of *supplements* to the management program as they are intended to be used," DeJarnette says. "This invariably leads to unrealistic expectations and eventual disappointment."

In addition to the herd management points outlined above, Joel Delzer, reproductive training manager with Genex/CRI, says the people involved in the program must do their part as well. This includes:

- having a willingness to learn how to use the products and program;
- having a working facility to handle cattle effectively;
- providing and preparing for extra labor needs, including experienced AI technicians;
- having the ability to accurately detect estrus; and
- maintaining individual identification (ID) of females by keeping thorough records.

Practical advice when using the CIDR®

Since being approved for use in the United States last year, the CIDR® (controlled internal drug release) progesterone insert has quickly gained popularity among beef producers seeking a simplified synchronization protocol.

"The biggest advantage of progesterone is that it will jump-start anestrus cows. The CIDRs are an easy way to administer progesterone if cattle are on grass and not in an MGA-feeding situation," says Tim Olson, who has worked as a Select Sires field representative and artificial insemination (AI) technician for nine years.

Olson is based in Spearfish, S.D., and has already bred nearly 2,000 head following the CIDR protocols, including conducting field research for Select Sires and Pharmacia, the company that produces the CIDR insert.

That said, Olson cautions that the CIDR is not a silver bullet. "Some producers may have too high of expectations for this new reproductive tool, especially with regard to timed breeding," Olson says.

He reports that the CIDR will produce tight synchronization among the herd. "With the CIDR, I often see 85% to 90% of the cows consistently come into heat," Olson says. But, he adds, "There's no magic hour."

He explains, "With every synchronization program there is a variation with response time due to the cows and their environment. It could be 48 hours at one ranch and 60 hours at another. That's why I don't recommend timed breeding."

Instead, Olson advocates heat detection for 60 hours. "It can increase pregnancy rates 10% to 15%, and in three breeding sessions you'll get more than 80% of the cows bred," he says. Olson then recommends mass insemination of the nonresponders at 72 hours.

For producers who insist on timed breeding, Olson says they should expect no better than a 50% pregnancy rate.

Lastly, Olson says the CIDR isn't for everyone. "If your cattle are in good condition and cycling, or if you are currently using an MGA or synchronization program with good results, there's no need to switch to the CIDR," Olson says. "The CIDR costs about $8 per head, compared to MGA, which is a cheaper source of progesterone at $3 per head. So the CIDR can be a more expensive program without necessarily increasing pregnancy rates."

The cows that benefit most from a CIDR program are high-risk females that probably aren't cycling at the start of breeding season, typically second- or third-calf heifers, or those that have calved within the last 45 days, Olson says.