Common Sense Estrus Synchronization in Beef Cattle

What do you want to achieve with an estrus synchronization program and what methods will you utilize?

So you have decided to synchronize a group of cows or heifers! That’s great but before attempting this be sure to consider a few things. What is the goal you want to achieve by synchronizing this group? What methods do you want to use to make sure you have maximum success in getting cows settled? What facilities do you need to make it easy on the cattle and those who will be doing the breeding? All of these questions must be answered before you dive into synchronization.

Many producers utilize estrus synchronization to tighten up their calving interval. Cows will calve within a few days of each other, lessening the time you need to spend watching them. Tighter calving intervals, or having cows calve in a shorter window, creates a more uniform calf group to market at weaning time. Calves born from synchronized cows are similar in age, and usually in size and weight, making them a more uniform group. That uniform group is more attractive to the feedlot and should command a better price. A more uniform group of replacement heifers is also more attractive to you, the producer, because they will be more likely to reach puberty at the same time and will be ready to breed when you want them bred, ideally at the beginning of the breeding season before you breed the mature cows.

Uniformity is not the only opportunity that synchronization affords. Some producers choose to use estrus synchronization so bulls from top breeders can be used increasing the genetic value of the offspring. If this is your goal, make sure you know what you are selecting in terms of bulls so their offspring fit the goals you have chosen for your herd. If the offspring are all terminal, meaning they will all be sold as feeder steers or fed to finish, then choose bulls that will add growth and carcass value to the offspring. However, if you are looking to improve your female base and will keep heifers as replacements, make sure you select maternal characteristics such as milk and weaning. For many producers, selecting bulls with balanced traits across the board will suffice.

Before jumping into any synchronization program, you must have a veterinary client patient relationship (VCPR) with a veterinarian. Drugs, such as GnRH and Prostaglandin (PGF2α), that are needed to synchronize your cows must be obtained from that vet and, in today’s world, unless you have a VCPR they will not be able to sell you the drugs. There are several different types of synchronization protocols that you can follow and most of these protocols can be found in reputable semen company’s herd sire books. Choose the protocol that best fits your available time to put into it and the protocols agreed upon with your veterinarian. Before you start you must understand that strictly adhering to these protocols is an absolute must or the entire process can fail. Protocols utilizing vaginal CIDR (Controlled Internal Drug Release) implants are more commonly used and typically provide more accurate results compared to protocols that simply use a single shot administration of a prostaglandin product. However, these protocols often require more advanced planning and more times through the chute for your cows; so, you and your veterinarian need to determine what protocols will work best for you.

Deciding on whether or not to use a timed breeding protocol is another decision that needs to be made. With most methods, you can simply breed based off signs of heat. However, this requires more labor as someone will need to be checking for heats during a three-day span to accurately catch the cows cycling. If you are going to invest in this method you must check heats at least two or three times a day. Cows are then bred in a time frame after standing heat is observed. Those who do not show heat can be bred on time according to the protocol you have chosen. On the other hand there are other protocols available that can allow you to breed all your
synchronized cows on a timed basis. These protocols typically require an extra round of GnRH administration, which means another trip down the chute; however, this extra injection of GnRH eliminates the need for an accurate observation of standing heat. Expected conception rates for each of these methods can vary so be sure to consult with your veterinarian before making a decision and then chose what works best for you.

One of the most detrimental factors in any synchronized breeding program is excessive stress on the cattle. Stress can come from a variety of factors including environmental factors, such as heat and cold stress, or physical stress, caused by rough or excessive handling of the cattle. In order to reduce stress and have the best chance at success you must have a practical chute system to quietly move the cows into the chute and restrain them safely to allow the breeder to properly inseminate them. With the investment in high quality semen, the drugs, and your investment of time, you must make sure you have a competent person breeding the cows. Not someone who only does a few a year but someone who breeds a large amount of cattle consistently and has the arm strength to handle breeding a large group in succession. Someone like that will not want to work in a rusty old chute that has little protection for him/her or the cows. Cows that can be moved quietly into the holding area and into the chute have a better chance of conceiving than those who have to be chased around for an hour before finally giving up and moving into the chute. An enclosed area that can confine cattle for heat checking can also save time, but you need to be able to provide feed and water during that time. Also, think about calving time and what space you may have to handle a large number of cows or heifers who will calve at the same time and may need shelter in poor weather conditions or assistance if a problem arises.

Remember that all cows may not conceive with these procedures. Many factors in and out of our control play into whether a cow will conceive. You may think you have everything from nutrition to health as perfect as it can be and she still doesn’t conceive. So you need to make a decision whether or not to turn cows out with a bull to be caught on the next heat cycle or invest your time checking for heats to AI them again. If you are interested in narrowing your calving window, putting the cows in with the bull will often assure your cows are bred in that next window. Cows that do not conceive in that second or third heat, either with a bull or through AI, should be considered for culling as they will become outliers and extend your calving window longer than it should be extended because they may not be as fertile as those who took on the first or second service.

Estrus synchronization is not for everyone, but it is an excellent tool if done in conjunction with a good reproductive veterinarian, and an experienced breeder who can breed many cows at one time. Your investment of time in selecting bulls and following protocols to the utmost degree can pay off by narrowing your calving interval thus giving you more uniform calves with added genetic merit to the offspring. This will make your calves more marketable and should add to the profitability of the operation. Consider all the options you have at hand and make a sound decision if this technique will work best for your operation.

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