Repro Tracks

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Too many estrus synchronization treatments?

When the number of estrus synchronization methods in use surpassed the number of expected progeny differences (EPDs) published in the Angus Sire Evaluation Report, it was apparent a problem existed. The number of synchronization methods, each with a name ending in "-synch," is confusing to most producers. While artificial insemination (AI) companies and state Extension services have worked to clarify the strengths and weaknesses of certain methods, sorting through and choosing an estrus synchronization and AI breeding plan can still be challenging.

Breeder's question No. 1:

Last year we used the Co-Synch method to synchronize and breed our cows. We got 46% of the cows pregnant to the single timed AI. I was satisfied, but this year I wanted to do a little better. So, I went online and looked for estrus synchronization treatments recommended for timed AI. Oh my goodness! There were so many choices, I didn't know what to do. Why are there so many synchronization treatments? Should we change how we synchronize and breed our cows?

Response: You are not the only one confused by the number of synchronization methods available to producers. Most AI companies devote two full pages in their sire

directories or online to explain the options available. If you are looking for online sources, check these out:

▶ http://genex.crinet.com/page939/
WhatSynchronizationProgramIs
RightForYou

▶ www.selectsires.com/beef/directory/
Cow_Synch_Protocol_2008.pdf

▶ www.absglobal.com/tech_serv/synch/beef/
index.phtml

The crazy thing about this is that there are only three classes of Food and Drug Administration (FDA)-approved drugs that can be used to synchronize estrus in beef cows. The huge number of treatments is created by using different combinations

of the three drugs or by differentiating the timing of administration. The synchronization plans also differ depending on whether AI breeding is to be done after heat detection or at a set time. In your case, you used a treatment, Co-Synch, that isn't necessarily recommended for use in postpartum beef cows by the AI companies any longer. The treatment you most likely used is shown in Fig. 1.

Assuming you want to stay with a short (seven-day) treatment followed by timed AI, what most AI companies and university Extension educators would probably recommend to you today is the Co-Synch + CIDR® treatment shown in Fig. 2.

The Co-Synch + CIDR method differs from the traditional Co-Synch program in that a progesterone-releasing intravaginal insert (CIDR) is used, and the cows are bred later following the end of treatment. The CIDR is an intravaginal device inserted into the cow's vagina for seven days, beginning when you administer the first injection [gonadotropin-releasing hormone (GnRH)] and ending when you give the second injection [prostaglandin (PG)] of a Co-Synch program.

Adding the CIDR to the original Co-Synch will increase the cost of the treatment by $9-$10. The purpose of the CIDR is to:

▶ get more cows in heat in a "tighter" time frame; and

▶ jump-start any cows that were not cycling prior to the estrus synchronization treatment.

The tighter synchrony and breeding later (60 ± 6 hours after CIDR removal) should improve your pregnancy rate to the timed AI by 10%-12%. Inducing estrus in some noncycling cows could also increase the pregnancy rate, but the effect depends on the body condition scores (BCSs) of cows in the herd and the number of noncycling cows at the time of treatment. Whether the extra pregnancies will be worth the added cost is a decision you will have to make.

Breeder question No. 2:

Twelve years ago my dad tried to use timed AI on our purebred cows. He remembers that we only got about one-third of the cows pregnant by AI, and we had more cows open at

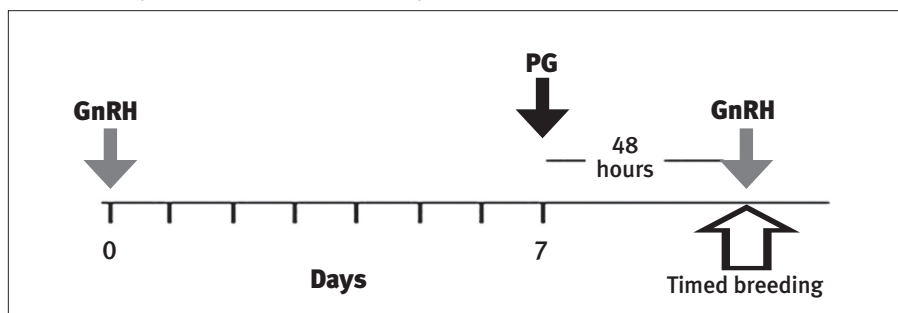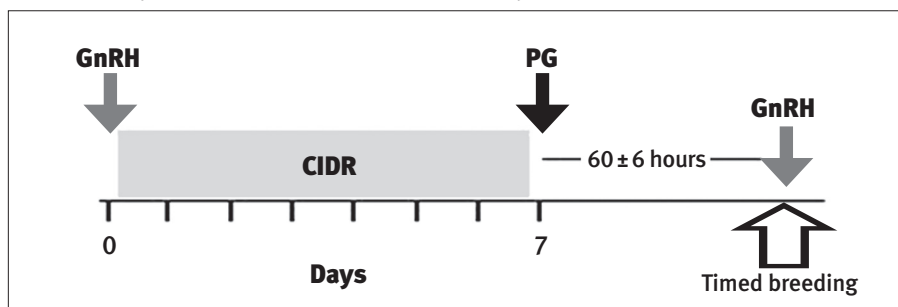### Fig. 1: Co-Synch method of estrus synchronization

Fig. 2: Co-Synch + CIDR® method of estrus synchronization

the end of the year than before. I am trying to interest him in trying timed AI again, but I am having trouble convincing him we will do better this time. What can I say to convince him?

Response: The last time I tried to answer a "My dad says" question, I nearly lost a friend. So, I should begin by telling you that your father is *a very wise man.* With that said, remind your father that things change. Remember the size of the first cell phones? I know we have better "tools" for estrus synchronization and timed AI now than we did a decade ago.

Specifically, what we know about the growth of the follicle that will ovulate and release an egg (ova) for fertilization is much greater today than it was 10 years ago. In fact, the GnRH injection that is a component of the Co-Synch and Co-Synch + CIDR treatments described in Fig. 1 and Fig. 2 is designed to force the development of a "new" ovulatory follicle during estrus synchronization treatment. Controlling the growth of the follicle, and thereby the timing of ovulation, is the key to why timed AI today should be much more successful than it was 10 years ago.

One caution: The estrus synchronization treatments recommended for use with timed AI and the timing of insemination are different for cows and heifers. If you choose to try synchronization and timed breeding, it would be an excellent idea to discuss your plans with your veterinarian, an AI professional or an Extension specialist. Each of the online sites listed above also has recommended plans for synchronization and timed AI of cows and heifers.