

Understanding CIDRs

This technology can improve AI and synchronization results.

While you may have already heard of CIDR®s (pronounced “see-durs”), you may not know the benefits they offer when it comes to improving artificial insemination (AI) and heat synchronization programs.

Recently approved by the Food and Drug Administration (FDA), the CIDR is an intravaginal progesterone insert used in conjunction with other hormones to synchronize estrus in beef cows and heifers.

Developed in New Zealand, CIDRs are a viable alternative for producers who are experiencing one or more of the following breeding challenges:

- ▶ inefficient heat detection;
- ▶ noncycling cows with poor response to breeding programs;
- ▶ cows and heifers in the wrong stage of their estrous cycles to initiate breeding; or
- ▶ heifers that aren't already cycling, even if they're old enough to do so.

The CIDR is a T-shaped device with flexible wings that collapse to form a rod that can be inserted into the vagina with an applicator. A tail is attached to facilitate easy removal.

The backbone of the CIDR is a nylon spine covered with a progesterone-impregnated silicone skin.

“The CIDR is inserted for seven days,” says Cliff Lamb, animal scientist with the University of Minnesota. “This causes the animal's blood progesterone concentrations to rise rapidly, with maximum concentrations reached within an hour after insertion. Progesterone concentrations are maintained at a relatively constant level during the next seven days. Upon removal, progesterone concentrations are quickly eliminated.”

Precautionary measures

The CIDR's retention rate can exceed 97% during the seven-day period.

“In some cases, vaginal irritation can occur, resulting in clear, cloudy or yellow mucus when the CIDR is removed. This is normal and does not have an impact on the overall effectiveness of the CIDR,” Lamb says.

But, caution should be taken when handling the inserts. Producers should always wear latex or nitrile gloves to prevent exposure to progesterone and to prevent the introduction of contaminants from the hands into the vagina of treated females.

In addition, steps should be taken to ensure the care of cows and heifers. Never use a CIDR insert more than once, Lamb says. Multiple use of a CIDR may increase the incidence of vaginal infections.

Advantages and drawbacks

The greatest advantage of the CIDR is to facilitate fixed-time AI, where no heat detection is necessary. The protocol is simple, yet subtly different for cows and heifers.

For all females, the CIDR is inserted at the same time as an injection of gonadotropin-releasing hormone (GnRH, such as Cystorelin®, Factrel®, Fertagyl® or OvaCyst®). Seven days later, the CIDR is removed, and the cow receives an injection of prostaglandin (PG, such as Lutalyse®, Estrumate®, EstroPlan®, InSynch® or ProstaMate®).

In the cows, AI should be performed at 60-66 hours after removal of the CIDR, and all cows should receive a second injection of GnRH. For heifers, an interval between CIDR removal and AI with a second injection of GnRH should occur between 54 and 60 hours.

Overall pregnancy rates should exceed 55% of all cows synchronized, which is generally

better than any heat-detection protocol.

The CIDR-based system is ideal for producers who have had difficulty feeding melengestrol acetate (MGA), an orally administered progestin feed product.

“The length of time required to feed MGA — 31 to 33 days — can be a drawback for some producers, especially during the late spring and early summer when heifers are ‘grass hungry’ and less likely to consume even amounts of MGA over the entire feeding period,” Lamb says.

The CIDR program works well with existing synchronization programs, such as Co-Synch and Select Synch.

“To achieve optimal pregnancy rates with [a] CIDR-based estrus synchronization protocol, females should be in good body condition — usually greater than a body condition score (BCS) of 5 — and treatments should be initiated only when cows are at least 45 days postcalving,” Lamb says.



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▶ The CIDR is inserted into a cow's vagina, where it releases progesterone. The T-shaped device has collapsible wings that allow it to stay in place until removed.