



DAIRY CATTLE REPRODUCTION COUNCIL

The Five Things You Just Can't Cut From Your Reproductive Program

In times when the cost of production is greater than milk income, each input cost is closely inspected for the value it provides to the dairy. While there's no easy way to determine what must be cut first, it's often easy to put reproduction on a back burner since results won't be realized for a few months.

But when milk prices cycle back again and surpass cost of production, unbred animals in late-lactation and fewer replacement heifers can cause real problems. That makes reproduction absolutely critical. Below is a list of five areas you just can't forget, regardless of economic conditions.

1. **Absolute compliance.** Keeping protocols in place is especially important to ensure the right cows are bred at the right time. Reduced reproductive performance is rarely due to physiologic responses of individual cows, but almost always can be attributed to compliance issues on the farm.

To achieve success with these hormone protocols, each farm has to develop a system to administer the correct injections to the correct cows on the correct days, then subsequently breed the correct cows at the right time. A standard PreSynch/Ovsynch™ protocol requires that each individual cow receives five hormone doses at the appropriate intervals. Failure to administer any one of these five injections dramatically or completely reduces the conception rate at first timed A.I. and will ultimately result in a delay in establishing pregnancy.¹

As the chart below illustrates, even 90 percent protocol compliance can drastically decrease the number of cows that successfully receive the correct doses prior to breeding. In this example, of the 10 cows that are part of the PreSynch/Ovsynch process, only five animals received all five administrations in the set protocol.

| 90 Percent Compliance with a PreSynch/Ovsynch Protocol | | | | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Shot | Cow 1 | Cow 2 | Cow 3 | Cow 4 | Cow 5 | Cow 6 | Cow 7 | Cow 8 | Cow 9 | Cow 10 |
| 1 | X | X | X | X | X | X | X | X | X | |
| 2 | | X | X | X | X | X | X | X | X | X |
| 3 | X | X | X | X | X | | X | X | X | X |
| 4 | X | X | | X | X | X | X | X | X | X |
| 5 | X | X | X | | X | X | X | X | X | X |
| Completed protocol? | NO | YES | NO | NO | YES | NO | YES | YES | YES | NO |

Because of its importance, nothing less than 100 percent compliance should be considered acceptable. Dairies should have standard operating procedures in place that outline a process to achieve 100 percent compliance. Dairies not able to manage these protocols to achieve near 100 percent compliance should consider focusing on other methods to boost herd reproduction, including heat detection and heat detection aids.



DAIRY CATTLE REPRODUCTION COUNCIL

2. **Transition management.** Continue to focus on the transition period as it will have a direct impact on future lactation performance. If cows are not managed or fed properly during the transition, multiple reproductive problems can result. Here are a few ways to help keep the transition smooth:
 - **Maintain dry matter intake (DMI).** The drop in DMI commonly associated with the prefresh period can lead to major problems once cows join the milking string, including a myriad of metabolic disorders. It's essential that cows continue to eat prior to calving to reduce incidence of such disorders and to prepare for the upcoming lactation.
 - **Minimize overcrowding and stress.** Adequate bunk space and number of stalls are critical during transition to maximize DMI and reduce cow stress. When possible, reduce pen moves during the transition to avoid adding stress and reducing DMI.
 - **Group cows to fit herd needs.** Grouping first lactation and older cows separately can help both groups transition properly. Heifers, for example, eat less but need more energy to meet their growth and maintenance needs, which is tough to accomplish when they are fighting more mature animals for bunk and stall space.

3. **Quality A.I. sires.** The use of A.I. has cumulative benefits, including the opportunity to choose sires that are proven to transmit superior genetics. Research shows that cows sired by proven A.I. sires produced 3,080 pounds more herd lifetime milk and were \$148 more profitable when compared to daughters of non-A.I. sires.²

While using a herd bull may seem like a cheaper alternative to purchasing semen, the indirect and direct costs of a natural service program can be more costly than an A.I. program. Using timed A.I. also allows you to immediately submit cows back into a protocol when called open to allow for more rapid rebreeding and pregnancy.

Continuing to use A.I. sires that meet your herd's objectives will produce heifers with the best genetic potential. These heifers will be the future of your operation, which makes your breeding decisions absolutely critical.

4. **Trained employees.** The training and experience of your workforce will ultimately impact how well your cows perform at breeding because they are the ones implementing the A.I. protocols, watching for heats, catching and breeding cows, or reporting uterine health problems.

Depending on your situation, you may have considered having fewer people do the same work to cut costs. Before making such a decision, make sure the remaining employees have the necessary knowledge and skills to take on these new roles, as well as the time to include these activities in their daily tasks. Remember that if you ask one person to do the work of two, many tasks are not completed as thoroughly.



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5. **Knowledgeable veterinary services.** Continue to work with a herd veterinarian who has experience in reproduction and is working on your team to optimize herd reproduction goals. While their services can be costly, their visits are absolutely necessary to keep your reproductive program on track. Veterinarians are especially important for the following:
- **Pregnancy status.** Accurate pregnancy checking is critical to get open cows rebred in a timely fashion. Your veterinarian is properly trained in pregnancy diagnosis and can accurately call cows open or pregnant.
 - **Uterine health disorders.** Routine checks allow for uterine health disorders to be identified and treated early, allowing animals to be ready for breeding in a timely manner. Your veterinarian can also make recommendations to help reduce the incidence of disease.
 - **Changes in protocols.** When you're looking for ways to improve your reproductive program, work with your veterinarian to identify changes to the protocols for improved reproductive efficiency. Your veterinarian has the knowledge of how protocols can be adjusted to best fit the cow's natural reproductive physiology.

As you make economic decisions about the management of your dairy, avoid the initial knee-jerk reaction to pull back your herd reproduction program. While it may seem as if it's on the back burner today, having a crop of genetically superior heifers and maintaining a highly efficient reproductive program can help keep your herd running optimally through all economic environments.

1 Fricke P, Stewart S, Rapnicki P, Eicker S, Overton M. Pregnant vs. Open: Getting Cows Pregnant and the Money it Makes. <http://www.uwex.edu/ces/dairyrepro/documents/ConfPregnantvsOpen.pdf>. Accessed February 4, 2009.

2 Direct Comparison of Natural Service vs. Timed Artificial Insemination. <http://www.thecattlesite.com/articles/1541/direct-comparison-of-natural-service-vs-timed-artificial-insemination>. Accessed February 4, 2009.