

System to Reduce Interval between First Service and Repeat Service

In most successful dairy herds a priority is placed on increasing the heat detection rate so first services occur on a timely basis. Many herds are now using an estrous synchronization program on a routine basis to “program” the herd to accomplish this objective and achieve high 21-day pregnancy rates in early lactation. The second challenge for herd managers is to efficiently detect open cows before scheduled pregnancy examinations so fewer days are lost before rebreeding. If your post breeding heat detection rate and palpated pregnancy rates are consistently high at 70% you are doing a good job. However, in many cases, post breeding heat detection rate is generally low.

One system to decrease the interval between first service and reinsemination of open cows is termed *Resynchronization*. There are several *Resynch* programs available. The basic program involves initiating the *Ovsynch* program by administering gonadotropin releasing hormone (GnRH) seven days prior to scheduled pregnancy exam day to all cows not detected in heat after first service. Those cows diagnosed not pregnant receive prostaglandin (PG) that day followed by another GnRH injection 48 hours later and they are time inseminated 10 – 18 hours after second GnRH. There are modifications of this program. This system significantly reduces interval to reinsemination. Even though pregnant cows receive a GnRH injection, research has shown this does not cause embryonic mortality.

More recent research using ultrasound to determine pregnancy status around 33 days post breeding has shown that implementation of a *Resynch* program to be very effective in reducing days between first service timed insemination and second insemination as well as days from calving to conception compared to conventional heat detection to detect returns to estrus.

There are some important factors to consider when implementing these programs.

1. Pregnancy examinations must be timely and accurate.
2. An accurate and current record system must be established so palpations and hormonal injections follow the prescribed schedule and pregnant cows are not mistakenly injected with PG. Do not take shortcuts.
3. Synchronization and resynchronization programs reduce or concentrate time spent detecting heats but these programs do not completely eliminate heat detection. Remember that many cows that don't conceive maintain a certain degree of synchrony following the initial synchronization. This group should be watched intensely 18 –24 days later. This time period presents a great opportunity to identify open cows and submit them for rebreeding. Considerable time is saved.
4. All employees working with the cattle should understand the protocol.
5. If your heat detection program is intense and you consistently achieve greater than a 20% 21- day pregnancy rate (heat detection rate X conception rate) then a *Resynch* program may not be apply. However, as herd size increase a systematic approach to reproductive management becomes more critical to successful performance.

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