Resynchronization strategies in Lactating Dairy cows

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A review of 30 studies on the past decade's work on Ovsynch focuses on three general principles that have been learned.

The biggest challenge to success of these programs is labor compliance (Practice tip was to send untrusted personnel to the barn with only Fertagyl or Estrumate and make them come back for the other hormone, later.).

Another complication is over 20% of cows become anovular after first AI.

Also GnRH only works 85% of the time.

And accuracy of pregnancy diagnosis is critical for a Resynch program.

Optimal timing of AI:

The time of the GnRH injection, that starts the LH surge during Ovsynch, can be thought to correspond to the first standing event of estrus, which occurs close to the start of the LH surge during natural estrus.

The poorest success occurred if time of AI was after the time of ovulation. Time of ovulation occurs about 28 h after the second GnRH treatment. Thus, AI should be done BEFORE 24 hr after the second GnRH injection. An increase in pregnancy losses is also noted for these late bred cattle. Thus breeding too late is worse than breeding too early in AI programs.

THE OPTIMAL TIME OF AI WAS ABOUT 16 H AFTER THE SECOND GnRH TREATMENT. (The second GnRH injection can be given in the afternoon and inseminated that next morning.)

CoSynch protocols should be avoided if possible. There is a 10% improvement in CR if the AI and the second GnRH shot are not given together.

Optimal day to start Ovsynch:

Give the first GnRH shot 6-9 days in the estrus cycle to induce ovulation in the first follicular wave and create a 2nd CL to produce more progesterone.

If injected before day 5, the small follicles don't ovulate and if started after day 8, the ovum is old and not as fertile.

Resynch Programs:

Generally, fertility has been lower in programs with a shorter breeding interval than 32d Resynch. D19 Resynch had low fertility, d26 had similar fertility but increased EED, which left d 32 Resynch with the highest overall preg rate at 68 days. $15/cow/yr advantage was shown for Resynch 32 over Resynch 26, with the largest advantage in Lact 2+ cows.

If cows are US or rectal palpated at day 32 and there is no CL present, insert a CIDR along with the GnRH to start Resynch. If a CL is present at 32 day, go ahead with the GnRH injection if doing rectal palpation or Estrumate if the operator is confident of U/S open diagnosis at 32 days.

6.4% pregnancy loss is expected between 33 to 40 d after TAI, so day 32 Resynch had a higher preg rate.

rBST had no effect on fertility.

Presynchronized Resynch protocols have generally not been utilized during Resynch protocols because of the excessive number days that are required between TAI. It would take three normal estrus cycles time period to do US at 28 days, PGF, then Ovsynch 11-14 days later.

There is promise for US diagnosed herds. If diagnosed open at day 34, PGF2 is given and Resynch is started on day 39. Pregnancy loss was less for these cows than Resynch 32 cows. PGF2-Presynch had $12/cow/yr advantage of Resynch 32, if there was not extra charge for US service.

For Follicular Cyst cows, there was improved fertility when GnRH was administered I wk prior Resynch

Double Ovsynch was not evaluated, but Dr. Averill attended the Baltimore meeting where this option was discussed and can provide further info. But there was data that showed 8% improved Preg/AI and $27/cow/yr advantage of Double Ovsynch over Resynch 32.