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IMPROVE ESTROUS DETECTION - REDUCE COSTS

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Failure to detect estrus (or heat) is one of the most common and costly problems that limits success in reproductive programs. Approximately, half of all estruses are undetected. In addition, up to 15 % of dairy cattle presented for insemination are not in estrus. Failure to detect cows in estrus and breeding cows not in estrus, results in significant economic losses.

As dairy herds have increased in size, adequate time to visually observe cows for estrus has been reduced. In addition, increased milk production and insecure footing on concrete instead of dirt has reduced the time and length of estrous expression (Table 1).

Since the development of synchronization programs for timed artificial insemination (TAI), more and more dairies utilize a TAI protocol (i.e. Ovsynch, CoSynch-72) in conjunction with estrous detection. Many dairies start with a series of prostaglandin treatments (i.e. Presynchronization) prior to beginning a TAI protocol. Approximately, 83 % of cows show estrus within 2 – 6 days following the second prostaglandin treatment, if the first treatment was used as a "set-up" shot and cows were not bred. Cows not bred following the prostaglandins, begin the TAI protocol.

Estrous expression is reduced due to the GnRH within a TAI protocol. Even though prostaglandin treatments improve the synchrony at which cows show estrus, take steps to

Table 1. Estrous activity on dirt versus concrete surfaces (Source: Britt et al., 1986).

	Dirt	Concrete
Duration of estrus (hrs)	13.8	9.4
Total Mounts	7.0	3.2
Total Stands	6.3	2.9

improve the number of cows observed and inseminated at estrus. By improving estrous detection and the number of cows inseminated following prostaglandins, the number of cows

entering the TAI protocol is significantly reduced. This reduces the number of treatments administered, significantly reducing costs.

A TAI program is important for insuring all cows are inseminated by a certain time after calving, treating anovular conditions, and breeding cows not caught in estrus prior to the TAI program. When possible, it is still advantageous to breed cows following detected estrus.

Several estrous detection aids (tail chalk, heat mount patches, pedometers, etc.) exist that improve the accuracy and number of cows detected in estrus. For further improvements, use a combination of two or more methods and follow these tips:

1) Utilize visual observations and tail chalk as a fairly cheap and easy way to improve estrous detection. Schedule visual observation at least 2 to 3 times per day for 20 minutes each, preferably early in the morning and late in the evening.
2) Check herd records to see when the cow was last in estrus to verify accuracy of estrous detection. Keep in mind sometimes the cow doing the mounting is the cow truly in estrus.
3) Observe secondary signs as another aid in accurately identifying cows in estrus.
4) Be as aggressive as possible with identifying cows in estrus, particularly when estrous expression is reduced in the summer or when cows spend the majority of their time on concrete (i.e. freestall vs. open dry-lot).
5) Combine estrous detection technology with judicious management and interpretation by knowledgeable cow people. The tested and proven "eyeball" technique requires time. No matter the technique, success of estrous detection programs depends upon dedicated, observant people. Never use estrous detection aides and TAI programs as a crutch, but as a tool.

About 10 % of the cause for failure to detect estruses can be attributed to cow problems and 90 % to "management" problems. Improve your estrous detection efficiency to improve your bottom line.