

# A REPRODUCTIVE MOMENT WITH MEL

By Mel DeJarnette, reproductive specialist

## KICKING THE **BAD** HABIT

**W**e all have heard that human beings are “creatures of habit,” but have you ever stopped to notice how true this is? Think about your morning rituals as you dress and prepare for the day. With two legs and two feet, there is a 50-50 probability as to which leg would go into the pants first or which shoe will go on first. However, whether it’s the left or the right one first, 90 percent of us do it in the same sequence 90 percent of the time. Through continuous repetition it becomes so natural that it is difficult to break the routine. Test yourself tomorrow by putting the opposite leg in your pants first. It can wreck your whole day.

So what do habits have to do with reproduction and getting cows pregnant? The short answer: lots! Once you develop a routine, you basically start performing the task without thinking about it. Chores seem to get done automatically while your brain runs on autopilot. Habits and routines are great things to have as long as they are good ones.

Bad habits usually originate from an isolated attempt to take a shortcut on some procedure that seems unnecessary or too complicated. Short-term success leads to a false sense of security that eventually develops into a routine procedure that is “asking for trouble.”

Although bad habits usually lead to problems in the reproductive-management program, often bad habits may be better than no habits at all. At least with a bad habit, it’s easy to repeat what you’re doing, identify the problem and then take measures to convert the bad habit into a good one. Lack of habits makes troubleshooting extremely difficult.

Let’s discuss areas where bad habits or lack of habits can create problems for the breeding program.

### SEMEN HANDLING

Semen handling is highly prone to the development of bad habits. Proper semen handling can be subdivided into three major areas of concern: temperature, time and hygiene. Each area has specific recommendations that, while they may seem trivial, can have a huge effect on the success of an A.I. program.

### TEMPERATURE CONTROL

Keep unused straws frozen. This statement seems so simple, but raising straws too high or holding them too long in the neck tube of the tank are the most commonly violated semen-handling principles of all. The damage caused when semen temperature rises above about minus 150 degrees Fahrenheit and then returns to liquid-nitrogen temperature is both dramatic and irreversible. To keep the quality of semen in your tank optimal, develop the following GOOD habits:

1. Use tweezers for straw retrieval. If you work on a dairy, your fingers have enough calluses that you’re really not worried about getting them burned by liquid nitrogen. However, tweezers are usually longer than fingers and allow you to keep unused straws lower in the tank during retrieval.

2. Keep an up-to-date semen inventory card. This allows you to go directly to the canister needed without unnecessarily subjecting straws to warmer temperatures while rummaging through the tank to find the bull you want.

3. Once semen is thawed at 95 F, maintain that temperature until it is deposited in the cow. Don’t take for granted that the environmental temperature is not cold enough to do damage or that wrapping the gun in a paper towel is sufficient. Make a habit of placing the wrapped and loaded gun as close to the body as

possible, year round. Occasionally, test your thermal-protection procedures by doing a “dummy-run” using a thermometer instead of an A.I. gun.

### TIME

It’s a good habit and a standard recommendation to thaw no more straws than can be deposited in the cow within 10 to 15 minutes (10 preferred). This is mainly a problem when the semen-thawing area and the cows to be inseminated are not in close proximity. In these situations, technicians often will batch-thaw straws to increase efficiency and reduce the number of trips back and forth. Mobile semen-thawing facilities, such as a cart, GATOR<sup>®</sup> or an old van, cut down on both the time and distance from thaw bath to cow, diminishing the need for batch-thawing.

Some studies have suggested thawing more than two straws at once compromises fertility. More recent studies, however, refute these findings and suggest batch-thaws of five to eight straws have no adverse affect on fertility (provided recommended time and temperature constraints are observed). This stands to reason as straw number is an arbitrary value. The more straws you thaw, the longer it will take to use them all and, thus, the more opportunity there is for something to go wrong. The sperm in a straw could care less if you name them “1” or “5,” but they most certainly can tell whether you are maintaining temperature or taking too long to get to the cow. Again, do a “dummy-run” sometime to see how long it takes to get from the thaw-bath to uterus. You may be surprised.



## HYGIENE

An often-overlooked aspect of semen handling is hygiene. The cow's uterus is highly susceptible to infection if bacteria are introduced through careless semen-handling procedures. To find out whether you have developed any "bad" hygienic habits, answer these questions. Would you store your lunch in your breeding kit? Are the sheathes clean enough to use as drinking straws? Would you drink the water from your thaw-bath? Would you eat a marshmallow roasted on the end of your A.I. gun? Although I wouldn't recommend any of the above even if the answer were "yes," if the mere thought turns your stomach, then it's probably time to "clean up your act."

## HEAT DETECTION

The biggest problem with heat detection is not "bad" habits, but lack of any habits at all. Often when I ask a herdsman about the heat-detection program, I hear something like this: "We don't really have a set time to watch for heats. Everyone just watches for heats all the time as we go about our daily chores."

In some places I have seen this system actually work. However, more often than not, the above quote can be translated to: "If, in our travels through the barn, we are knocked to the ground by a cow in heat, we'll usually write the number down. That is, unless we think someone else saw it, in which case we assume the other person wrote the number down."

To be successful, a heat-detection program must be routine, systematic and habitual. Part of the reason heat detection does not receive the attention it once did is that in many herds, it's become an overwhelming task. The old recommendations were to heat detect for 20 to 30 minutes each morning and late afternoon. However, these recommendations were developed when the average herd size was well below

100 cows. Newsflash!: you can't do a good job of heat detection in a 500-cow herd in a 20- to 30-minute period. In reality, we need to spend about 20 minutes per 100 cows. For herds exceeding 1,000 cows, efficient heat detection requires almost 24-hour surveillance. That much heat detection is a hard habit to develop. However, systematically incorporating estrous-detection aids, such as chalk, paint, KAMAR® or BOVINE BEACON®, into your heat-detection programs provides 24-hour surveillance with minimal labor investment. Daily evaluation and touch up of these aids is then a much easier habit to establish. Of course these systems do have limitations, but in

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most herds they have proven to be far better than the alternative of using no heat-detection aids.

Until you make heat detection systematic, automatic and habitual in your herd, you likely will not be happy with your herd's reproductive performance.

## SYSTEMATIC BREEDING PROGRAMS

Increasing herd size and the difficulties of heat detection have led to the development of a number of new "systematic" breeding programs for dairy cattle. Target breeding, Modified-Target Breeding, Select Synch, Ovsynch and Modified-Ovsynch are just a few. Each of these systems is designed to systematically incorporate hormone injections into the reproductive-management program to reduce or eliminate the need for heat detection. However, just like heat detection, the key to making them work and realizing a return on your investment is to implement the program systematically or "habitually."

All too often I see herd managers try to incorporate these systems in a haphazard or almost random approach. Cows are not assigned to the program until they are late in lactation, and even then there is no set procedure for identifying when to treat cows and when not to.

Even worse are attempts to incorporate the protocols without complying with the protocol recommendations. Shots often are skipped or given at non-prescribed times, which alters the program's effectiveness. Each of the aforementioned systems has specific advantages and disadvantages that may allow one system to work best in your herd, while another protocol may be better for your neighbor. However, the key to success for all protocols is to consistently and habitually assign cows to the program, and follow the protocol exactly as prescribed. If you start to randomly pick and choose when to treat cows or which cows to treat, then the result usually turns out to be a higher bill for hormones with little or no measurable improvement in reproductive efficiency.

In today's large dairies, procedures must be implemented in a systematic approach if we have any hope of them being successful. The absence of a "routine" approach, leaves too many things to chance, and often adds complexity to the system. The profitability of your dairy depends on habits. Develop lots and lots of good ones!

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