



# Not Just a Test: Integrating Milk Pregnancy Testing into a Reproductive Management Program

A successful reproductive program is a priority for profitable dairy farms. Building your program starts with decisions about what cows to breed and when to breed them. It is just as important to determine what cows are pregnant and what cows are open so that we start the process over again as soon as possible. Approaching pregnancy testing as a process rather than a single event will result in a more successful reproduction program. Milk pregnancy testing has added new dimensions of convenience and simplicity to this process. DHIA testing on a regular monthly schedule and milk pregnancy testing that same milk sample is a great way to add a concise yet customizable approach to this part of reproductive management.

Milk pregnancy testing is a tool that should be approached with three important times in mind. Early diagnosis will identify failure at an early stage. Mid-lactation will confirm that pregnancy was retained through the highest loss risk stage of the first trimester. Pre-dry off will verify cows are ready to rest or continue milking without the risk of wasted dry cow therapy.

## How do I know that the right cows are being identified for milk pregnancy testing?

Every farm has different parameters for reproduction management, and Dairy One DHIA Field Technicians are trained to customize the reporting mechanism that identifies cows for pregnancy testing. An important component of reproductive management is maintaining correct information. It is essential to create a correct list that does not exclude eligible cows, include ineligible cows, or suggest testing cows too often. It is critical to identify open cows so informed decisions about breeding or culling may be made. Ineligible cows may be those without a breeding or not past a breeding date long enough to use a milk pregnancy test; testing those cows may waste money or even worse, lead to actions on a potentially pregnant cow that cause her to cycle back into heat and possibly lose an early pregnancy.

Every DHIA Field Technician starts with a basic command that generates a list of cows to present to management as cows eligible to be tested. The abbreviation for this command is **PRGTST8**, which in long form looks like this: **L %ID RPRO DIM DSLH DCC DCCP PEN PRGITM9 INMILK BY RPRO DCC**

What does this command mean? The report generated by this command starts by listing basic identification information about the cows. The most important items on the report reflect label testing criteria of 60 days in milk (DIM) and 28 or more days since last heat or breeding (DSLH). Other important information includes where the cow is (PEN) and what her reproductive status is (RPRO).

This is especially helpful when dairies want to confirm that pregnant cows have remained so after the initial diagnosis. Lastly, the command includes how long the cow has been pregnant (DCC, days carried calf) and when in her pregnancy she was diagnosed as pregnant (DCCP, days carried calf at pregnancy). Additional information can be added as requested by the farm.

## When should I use milk pregnancy testing?

There are three important times to consider milk pregnancy testing. The first is early diagnosis at days 28-60 after breeding for herds on a monthly test interval. The second is 75-107 days carried calf for the pregnant cows. The third is at the end of the lactation but before the cow is dried off. This is a critical time to know whether or not a cow is pregnant, due to loss of income from milk at dry-off and also potentially for having to keep her for additional time without any profit until she clears the meat withholding period for any dry cow therapy used.

## How can I customize a milk pregnancy testing report for my farm?

Your Dairy One Field Technician is trained to create a customized pregnancy testing report for your farm that supports your reproduction management style and goals. PRGITM9, part of the command mentioned previously, defines a management program as determined by the farm. It is a series of "FOR" statements that selects cows that meet one or more criteria for managing a strategy for the herd, which in this case is milk pregnancy testing. This part of the command can be customized based on the unique needs of each farm. To illustrate, here is an example of this part of the command, expanded to show customized information: **FOR(RC=4 DSLH>27)(RC=5 DCC=75-107 DCCP<76)(RC=5 DCC>160 DCCP<161)INMILK**

This example shows the 3 important times to consider milk pregnancy testing. The first is the initial test, shown as **(RC=4 DSLH>27)**. This calls for cows that are bred and more than 27 days have passed since breeding, which adheres to the label requirements for milk pregnancy testing.

The second is shown by **(RC=5 DCC=75-107 DCCP<76)**, which calls for pregnant cows (Reproductive Code 5 is Pregnant) that are 75-107 DCC, with a DCCP of less than 76. This will confirm cows that are pregnant without incurring the extra cost of testing cows that have already had their pregnancies confirmed.

The third and final time to check for pregnancy happens at the end of a lactation but before dry off, when we can still get a milk sample. To be safe and not miss cows that may be dried off early, this



example uses **(RC=5 DCC>160 DCCP<161)**, which calls for cows that are still pregnant, over 160 DCC, and whose last pregnancy check was prior to 161 DCC. (It is arbitrary to use 160 for this example, but 280 days gestation length minus the 60 days planned for a dry period and back up enough to be sure that all cows get pregnancy checked before dry off in case cows are dried off early.) Once checked, cows will not be checked excessively due to the limit in the command. **INMILK** is included because we are only able to check cows, not heifers, with milk pregnancy technology.

Some may think it excessive to re-check cows after being declared pregnant. However, cows lose pregnancies, and although the specific rate differs between studies, as a general rule you can expect losses possibly reaching 25% from day 28 pregnancy diagnosis through calving. The "Pregnancy Loss in Lactating Cows" graph shows that you can expect a significant drop-off of this rate at about day 56, whereas the losses from there to full term are roughly 7%.

## How can I get started?

Milk pregnancy testing can fit into any reproductive management plan. It can't be beat as the simplest, least intrusive (for both cows and people), and easiest routine to set up as part of test day sampling for pregnancy determination. Every farm can customize this method of pregnancy testing by setting up software programs with their Dairy One DHIA technician to identify cows eligible to be tested consistent with the protocol put in place. Once the setup is complete, making the software run and creating the work list is all that is needed for consistent and accurate identification of cows to be tested, even to the point of limiting the number of cows now with the rest to be tested later as determined by cost. All that is left to do is to review the list with you technician before submission and wait for the results. To get started, contact your Dairy One DHIA Technician, or call Dairy One at 800.344.2697 to learn more.