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DHI Records Pay

by Jack McAllister

In the management of their dairy farm business, producers must always be questioning costs and returns for each expenditure. It takes records to provide the information as a basis for the questioning. Raw financial records such as milk checks stubs, feed bills, payroll checks, etc. are needed but so are milk hauler tickets, amounts of feed purchased and production and performance records on the cows and heifers.

Many factors affect the performance of the dairy herd day to day and most have a direct effect on the milk output of the herd either in the regular milk pick-ups from the farm or milk output over time. Is there any way to measure these factors and their costs and returns? The Dairy Herd Improvement (DHI) program was begun in 1905 to collect some very basic information on cows - how much milk they produced, how much feed they ate and what the feed cost. Now, 101 years later that same basic information is collected along with useful information on udder health, reproduction, genetics, health, growth and survival. The program is fee-for-service which can provide important information to evaluate costs and returns.

Let's deal with the first question many of us often have - how much does the program cost? The answer is that the cost really depends on what options you choose in the DHI program. As an example let's take an average size herd of 80 cows milking and dry and a herdowner who wants someone to come to the farm for one milking a month to collect the milk yield data and milk samples for somatic cell, butterfat and protein analysis as well as everything else the herdowner records on the cows as the month goes along. The basic cost is \$1.10 per cow. If recordkeeping is on a PC then there is an additional charge of \$0.21 to \$0.34 per cow depending if a handheld computer is also used. The total cost then could be up to \$1.50 per month, about a nickel a cow a day.

What information can you get to see if DHI records pay more than a nickel a day? Probably individual cow somatic cell count information will be the first data you could use. Milk sample results from the Mid-South Dairy Records lab for Kentucky and Missouri can be faxed, e-mailed or retrieved from the web. The cows are listed with the cows contributing the most cells to the bulk tank listed first. The

list also estimates what the cell count of the milk from all the cows would be if the highest cows were not included. Sometimes as little as 5 to 10% of the cows in the herd can account for 60% or more of the somatic cells going into the bulk tank. Just a few cows with very high cell counts could be preventing the herd from receiving a quality bonus. The quality bonus is paid on all the milk shipped and this must be weighed against the amount of milk those high cell count cows produce. The monthly DHI Herd Summary report also estimates how much milk is not harvested from high cell count cows because yield is reduced and the value of that milk.

The DHI records also provide information on indications of problems with the feeding program from standardized 150 day milk records. The feeding program obviously can affect milk output and feed cost. Problems in getting cows re-bred after calving, cows not peaking in milk yield and cows with inadequate genetics for high milk yield are other examples that can be revealed from examining the DHI records. Obviously there are costs and returns associated with each of these problems. The records won't solve the problems but they can help identify causes. Management can hopefully solve the problems once they are identified. DHI records can pay if they contribute to generating about one-half a pound of milk more per cow per day.

Common Pitfalls When Raising Young Dairy Heifers

by Donna M. Amaral-Phillips

1 Are you getting adequate colostrum into newborn baby calves?

Why is this important? Calves are born without antibodies to fight off diseases. They must absorb antibodies during the first day of life. During the first day of life, the ability to absorb antibodies decreases rapidly and by 12 hours is about a third of the rate at birth. Calves that do not receive adequate antibodies through colostrum, are more likely to get sick (known as higher rate of morbidity) and are more likely to die (higher mortality rates).

Take-Home Points: Calves should be hand-fed 2 to 3 quarts of colostrum within 4 to 6 hours after birth. Calves that nurse their dams often times do not receive adequate amounts of colostrum and have higher rates of sickness and death. The quality or antibody content of colostrum should be checked using a colostrometer. Calves should be removed from their dam at birth and placed in a draft-free, individual hutch or pen.

2 Are calves on milk or milk replacer being fed water free-choice with their calf starter?

Why is this important? When calves are fed milk either in a bucket or through a nipple bottle or pail, the esophageal groove forms a funnel which directs milk directly from the esophagus into the calf's true stomach or abomasum. Milk does not enter the calf's rumen. In direct contrast, when calves drink water, it goes directly into the rumen. Calf starter (grain mix specially formulated for baby calves) and water is needed for optimal development of the rumen so that your calf can digest forages. In a research trial, calves that were fed water with their calf starter gained 38% more weight than those who did not receive water free-choice.

Take-Home Points: Water should be fed free-choice to baby calves in addition to calf starter starting at 4 days of age. Hay is not fed until calves are weaned and calves are eating 4 to 5 lbs of calf starter.

3 Does your calf and heifer grain mix contain **Deccox®**, **Rumensin®** or **Bovatec®**?

Why is this important? These feed additives can help prevent coccidiosis, a disease which can cause diarrhea in young animals. Deccox® (chemical name is decoquinate) is generally used in some milk replacers and calf starters and is not used in grain mixes for older heifers. Rumensin® and Bovatec® are ionophores and can be used in heifer grain mixes as well as calf starters. Besides preventing coccidiosis in heifers, the addition of Rumensin® or Bovatec® to a heifer's grain mix results in more efficient "digestion" within the heifer's rumen and research has shown approximately 0.1 lb more daily weight gain with heifers calving 30 days earlier.

Take-home message: Check to see that your dairy heifer grain mix includes Rumensin® or Bovatec®.

4 Are heifers under 400 lbs housed in small groups of similar size and weight?

Why is this important? For the first month after weaning, calves should be housed in very small groups of 3 to 5 heifers per group. By housing heifers in small groups, they can learn to socialize with each other and to compete for feed and water with minimal competition. As heifers get older, the size of the group can be increased. However, to assure optimum growth, heifers under 6 months of age should be housed in groups of less than 8 heifers per group and they should be within 75 lbs of body weight. Males should be fed and housed separately from heifers.

Benchmarks for Evaluating Reproductive Performance of the Dairy Herd

by Raymond L. Nebel, Emeritus Extension Dairy Scientist, Virginia Tech

Complete and accurate herd records should provide the tools necessary to define past herd performance, assist in establishing goals for the benchmarks being evaluated, and allow monitoring to determine the impact of the plan developed to reach the established goals. The first step in record analysis is to identify key benchmarks that reflect components of reproductive performance that affect the desired outcome or goal. In fact, on many farms data overload is the problem where too much information is available and decisions must be made on what is really important and useful. Eight benchmarks and levels where intervention is recommended are shown below. These goals must be applied with caution and may not be appropriate for intervention on an individual cow basis. It is also important to be practical and reasonable in applying these goals especially in cases where vast improvement in present performance is recommended. In some cases the average value for a benchmark should only be the starting point. A distribution of calving intervals into three categories (<12, 12 to 14, >14 months) allows for a more factual picture of past performance. Days open should also be divided into three groups (<85, 85 to 145, >145 days) and recommended categories for days to first service are less than voluntary waiting period, voluntary waiting period to 100 days, and number of first services greater than 100 days.

Eight benchmarks with intervention levels for monitoring the reproductive status and trends in a dairy herd.

<u>Parameter</u>	<u>Goal</u>	<u>Intervention</u>
Days open	115	160
Calving interval, months	13	14.5
Days to first service	75	100
Conception rate, first service, %	55	30
Conception rate, all services, %	50	30
Heat detection rate, %	70	40
Reproductive culls per lactation, %	< 8	15
Abortions, %	< 5	10

Reproductive performance is a function of certain management policies and how well these policies are

implemented in the day-to-day management of the herd. It has long been known that there is an important economic advantage to be gained by efficient reproduction in dairy herds. Throughout her herd life, a cow should calve without difficulty, experience little or no postpartum reproductive disease, breed back within an optimal time period, carry each fetus to term, and have a live birth. The ability to use records effectively is one of the cornerstones of reproductive management.

Surviving The Dairy Economic Roller Coaster

by Donna M. Amaral-Phillips

With lower milk prices and higher feed costs this year, many dairy farmers are looking for ways to survive these tough economical times. We need to look at ways to improve net income for which farmers can control and change. Farmers can control how they use their monetary resources for the feeding program on the own farms .

When reviewing your feeding program, start by taking a hard look at each cow in your herd. Available feed and financial resources need to be allocated to the most productive cows in the herd. Cows which are the less productive, such as those cows which have been open a long time, cows with high cell counts, and/or the lowest producers may need to be culled. Farmers need to allocate the available forage resources and dollars to purchase feed to those cows which make the most money per dollar invested. Sometimes, culling cows may even increase the total amount of milk produced if feed bunk space or amount of feed fed was limiting productivity prior to culling.

Early lactation cows are the profit generators. It is extremely important that these cows be given every opportunity to milk to their potential. These cows need to see quality feed in the feed bunk at all times and have a comfortable stall to lie down in and chew their cud. You may want to think about managing these cows separately from the later lactation cows so that you can give them some additional attention and/or additional grain, different forages, or feeds. This practice allows you to target which cows receive those feeds that cost more or those quality forages that are tight supply.

Feed costs represent 50 to 60% of the cost to produce milk. Review your current feeding program to see if there are additional changes that can help you save feed dollars. In some situations, changing the ingredients of the grain mixture but at the same time providing a balanced diet can save money by reducing purchased feed costs. Also, reevaluate if the feed additives you are adding to see if they

are resulting in additional milk production, improved health, or improved reproductive performance to justify their cost. Above all, consult your nutritionist to see if there are ways to reduce feed costs.

During tough economical times it is very hard to resist the urge to cut back on feed which can later cost more dollars than you saved now. For example, dry cows and heifers need grain to maintain their body condition and to grow. However, they are not currently income generating assets. But we need to realize that cutting corners here can cost us in lower milk production, delayed rebreeding and compromised health once they calve. Cutting corners now that compromise future health and performance will end up costing you more dollars than you save.