Getting to Know Your Records and Technicians Support Team: Q & A With Fred Baldwin and Kim Haupt

How would you describe your job?

FRED: Kim and I are responsible for keeping DHI records information moving accurately and in a timely manner through the Dairy One system. Herd records are edited approximately every 2 hours beginning at 7:00 a.m. We check and make adjustments to data that is missing, incorrect, or outside of the acceptable limits. We continually track the movement of herd data from the field to the lab, from the lab to processing, and from processing back to the dairy and the technician.

Fred Baldwin assists farmers and technicians with questions relating to DHI records information.

We are the primary software support for approximately 155 field staff and 7 market managers. We help create new reports and modify existing reports. We receive many calls from DHI testers who are looking for transfer information for purchased animals. We each average about 10 to 15 of these calls per day.

We are responsible for technician training for new hires, as well as ongoing training. I work with a group of 10 technicians who beta-test software updates for the field staff with the goal that every update is "field-ready" prior to general release.

We serve as liaisons for the 4 milk labs (located in State College, PA, Fairlawn PA, Hagerstown, MD, and Ithaca, NY) and the 3 processing centers (DRMS, Provo, and AgSource). We help track down missing samples and resolve data conflicts that prevent herds from processing.

We receive many calls from dairy producers with a wide range of needs: Help with understanding reports, data correction, missing or incomplete test results, and inquiries for new or additional service.

KIM: I keep track of herds that we received samples for but the tech hasn't uploaded yet, make cow corrections as needed, and take care of any notes or communication from the DHI testers. I print cow pages, calf pages or other reports from requests from either the dairy or the tech.

What kind of services do you provide that directly impact farmers?

FRED: Kim generates awards packages for county annual meetings. She is responsible for Electronic Meter Certifications. We generate herd records as requested for dairy dispersals, and cow and calf sales.

KIM: Making cow corrections and making sure identification is correct for USDA and the breed associations.

How does your job indirectly impact farmers?

FRED: I am currently working with a small group of technicians who use hand-held data handlers for entry of milk weights, sample numbers, and pen numbers. They are using autosampler and electronic meters on a trial basis as we seek out new ways to adapt to the rapidly changing dairy environment.

We are committed to providing well-trained field staff. New technicians spend 2 weeks working with 1 of 5 Dairy One certified trainers before they work on their own. This is followed up by 3 days of training at the Dairy One Center in Ithaca. Veteran technicians attend 2 or more training sessions each year, as well as receive regular updates via e-mail and CD.

How do you feel your job is most useful to farmers?

FRED: Working to keep data moving smoothly through the system is critical for value and usefulness. We use a system of hourly checks from the labs and technician uploads. Kim and I help assure the integrity of Dairy One records by working with our processing centers. When errors occur, we are able to make corrections, and if needed, reprocess data. We work with cattle associations, consultants, and other industry specialists as well.

KIM: Keeping the records accurate.

Can you identify any ways in which farmers could better utilize your services?

FRED: The best ideas for new data reports and new ways to provide service come from dairies. We welcome your input—both positive and not-so-positive! When problems do arise, please contact us promptly by phone at 1-800-496-3344 or by e-mail at dmr@dairyone.com.

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In This Issue

Dairy One NEWS
WHERE INFORMATION CREATES OPPORTUNITY
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Improving Milk Quality With DHIA Records

By Jamie Zimmerman, General Manager

The Northeast endured a long, cold, snowy winter and despite the calendar, spring got off to a rough start. On a positive note, we have seen an improvement in the dairy economy with forecasts for strong milk pricing for the balance of the year.

One of the most widely used terms today in the dairy industry is "volatility." The term applies to many aspects of operating dairy farm businesses, including milk prices, feed and input prices, weather, regulation, and more. In these volatile times, Dairy One continues to focus on its mission of providing management information that assists farmers and their advisors in making sound business decisions.

An area of our industry that is receiving increased attention is that of milk quality. The movement, either through market forces or regulation to produce higher quality milk with lower somatic cell (SCC) levels, is a win-win for farmers and consumers. We have known for years that managing dairy cattle to lower SCC levels results in increased milk production, decreased veterinary expenses, reduced risk of antibiotic contamination, and increased milk quality premiums. Improved raw milk quality leads to better-tasting dairy products with improved shelf life and happy consumers.

As we look around the country, there are a number of milk processors that require farms to deliver milk with SCC levels below 400,000 cells/ml, and some require a maximum level of 250,000 cells/ml. Additionally, there is industry discussion about lowering the legal SCC limit from 750,000 to 400,000 – similar to that of the European Union. One of the most effective ways to manage udder health and SCC in these volatile times is by testing individual cows on a regular basis. The good news is that over 90% of those using Dairy One DHIA services already test for individual cow SCC. However, testing for SCC and achieving a desired level of SCC on a consistent basis can be two different issues. To help farms manage and achieve their desired level of herd SCC, there are evaluation tools available from Dairy One to help pinpoint the source or sources of elevated SCCs. These tools may be accessed through on-farm software reports or processing center reports. Either way, we can assist you in finding the right tool for your situation.

Regardless of your herd's current SCC level, to maintain low SCCs or to improve them usually requires analysis, advice, and a plan. For years, Dairy One has worked informally with Quality Milk Production Services (QMPS) to help farmers maintain and improve udder health. QMPS is a tremendous resource for the Northeast. Recently, Dairy One and QMPS teamed up more formally to create the *400K Beat It!* program. *400K Beat It!* combines the udder health measuring tools from Dairy One with the professional analysis and advice from QMPS, resulting in a farm-specific strategy and plan to improve SCCs. For more information on *400K Beat It!* or to discuss the best evaluation and monitoring tools, please contact George Cudoc at 607-257-1272, ext. 2114 or george.cudoc@dairyone.com.

Making sense of your available DHI herd record information and deciding upon an appropriate course of action can be challenging due to the complex nature of managing dairy cattle. One new tool available to farms processing their records through DRMS is the Herd Evaluator (DHI-402 report). All farms that process through DRMS received a complementary copy of the Herd Evaluator during the early spring. The report focuses on 5 key areas of dairy production to help evaluate the need for change: milk production, somatic cell level, herd turnover, breeding, and inventory. Similar tools are also available through on-farm software. If you find the Herd Evaluator report useful and would like to continue receiving it, please speak with your Dairy One technician.

Dairy One is ready to meet your information needs so you can make better management decisions about the production aspects of your dairy farm business: cattle, milk, feed, soil, water, and manure. For more information on all Dairy One services, please visit our web site at http://www.dairyone.com.

Have a safe spring and summer.

Jamie

Forage Sampling Frequency as Influenced by Dairy Herd Size

By Pat Hoffman, Randy Shaver, and Paul Dyk

Introduction

The practice of forage sampling and analysis has long been the foundation for dairy nutrition consulting and ration formulation. As the forage and dairy production industries have evolved, forage sampling/analysis has become integral not only for ration formulation, but also for forage contracting, pricing and inventory control programs used by dairy producers and their consultants. Because forage quality plays such a critical role on modern dairy farms, the traditional forage sampling and analysis guidelines may not be adequate. The aim of this "Focus on Forage" article is to rethink forage sampling and analysis guidelines for dairy farms in a question/answer format. For more general background information, readers are referred to "Sampling hay, silage and total mixed rations for analysis" (UW Extension Publ. A2309; http://learningstore.uwex.edu/assets/pdfs/A2309.pdf).

How frequently should the dry matter (DM) content of silages be determined on the farm?

The DM content of silages and wet by-product feeds must be determined to calculate the as-fed amounts of these ingredients to add to the TMR to ensure that the desired amount of DM is being fed in the ration. Because feeding the proper amount of DM of each feed ingredient in the ration is so important, it is recommended that the DM content of silages be determined as frequently as possible. Many farms adopt 1x to 3x per week forage DM evaluation protocols to ensure that the proper amount of silage DM is fed in the ration. In most instances, weekly or batch sampling of wet by-product feeds for DM determination is adequate. In addition, when a change in silage moisture content is noticeable by sight or touch, the DM content of the silage or by-product feed should be redetermined immediately.

There are some circumstances that may require altering the basic silage or by-product feed DM monitoring plan listed above. For example, in bunker silos, the silage DM monitoring program is dependent on the variation in DM content at filling, removal rate and whether or not a facer is used to remove the silage. With minimal variation in DM content at filling (i.e. corn silage), fast removal rates and facer removal, the DM content during feed-out is often less variable because DM contents (i.e. varying harvest and drying conditions) are better represented horizontally and vertically along the face of the bunker silo. With highly variable DM contents at harvest (i.e. legume or legume-grass silages), slow removal rates and unloader removal, the silage DM content during feed-out can be highly variable. As a result, silage DM monitoring programs may need to be intensified depending on the forage and how the silage is removed.

Another consideration is monitoring the DM content of silages stored in silo bags. Often, a set weekly DM monitoring program that works well for corn silage stored in bags does not work well for legume, legume-grass or grass silages stored in silo bags, because silages stored in bags are removed exactly as filled; load-to-load, field-to-field, or cutting-to-cutting with the variation in DM content at filling representing during feed-out. This concept is defined in Figure 1 where the variation in DM content of 100 loads each of legume-grass silage and corn silage is plotted to demonstrate the greater load-to-load variation in DM content for legume-grass silage than corn silage. When legume or legume-grass silages are stored in silo bags, it is often better to determine the DM content of silages when filling the silo and marking the bags by load, field, or cutting so that rapid changes in silage DM content can be anticipated. This approach can work for other nutrients (i.e. CP, NDF, etc.) as well. Another simple procedure to determine DM content of silages in bags or tower silos that are highly variable in DM content is to use a food dehydrator and place a silage sample in the dehydrator after feeding. The dehydrator will dry the forage slowly overnight, and the forage DM content can be determined the following day immediately before feeding. For more information on measuring forage DM content with a food dehydrator, refer to: www.uwex.edu/ces/crops/uwforage/DM_using_dehydrator_Final.pdf.

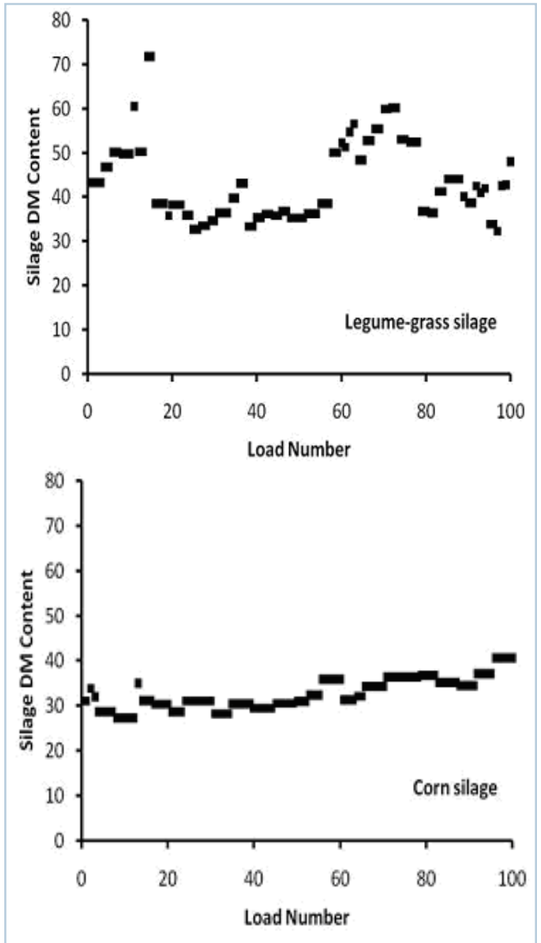

Figure 1. The variation in DM of 100 loads of legume-grass silage and corn silage. (Personal communication: Mike Bertram, UW Marshfield ARS).

Table 1. Forage sampling frequency optimized by herd size

	No. of Milking Cows in Herd					
	50	100	200	400	800	1600
Interval between sampling, days	30	16	11	7	5	4
No. of sampling days per month	1	2	3	4	6	7
No. of samples per sampling day per forage	1	2	3	3	3	3
No. of samples per month per forage	1	4	9	12	18	21

How frequently should forages be sampled for nutrient composition analysis at a commercial feed testing laboratory?

Evaluation of forage quality has traditionally been done by monthly sampling of the forages being fed and sending the samples to a feed and forage testing laboratory for determination of nutrient composition. However, this sampling protocol may be inadequate on larger dairy farms. Researchers at The Ohio State University now recommend different feed and forage sampling protocols depending upon herd size. An analysis was performed using their software program to generate the results provided in Tables 1 and 2. The optimum sampling frequency for herds ranging from 50 to 1600 milking cows is presented in Table 1. The optimum sampling schedule for the 50-cow herd was the same as what has been done traditionally in the dairy industry. As herd size increased from 50 to 1000+ cows, the interval between sampling decreased from 30 to 4 days so that sampling was required on 7 days per month in the large herd instead of only 1 day monthly in the small herd. Additionally, the number of samples required per sampling day per forage was 1, 2 and 3 for 50, 100 and 200 to 1600 cow herds, respectively. Therefore, the number of samples required per month per forage increased from 1 to 21 as herd size increased from 50 to 1600 cows.

In anticipation of some large herds not wanting to adopt a more aggressive sampling schedule, the results from a comparison of a more conservative sampling schedule to the optimum is presented in Table 2. For large herds, the interval between sampling was set at 10 days so that the number of sampling days per month was limited to 3. The number of samples per sampling day per forage was limited to 2, thereby resulting in 6 samples per month per forage. The total quality cost (TQC) to the dairy herd for this more conservative sampling schedule relative to the optimum was $8, $29, and $81 per day; TQC includes the cost due to lost milk production if forage quality declines.

The amount of specific forage included in the ration and the potential nutrient content variation can also influence its sampling and analysis frequency. For example, if a dairy herd is feeding 20 lbs. DM per cow per day from legume-grass silage, which has a more variable nutrient composition, then the silage should be tested frequently, as variation in nutrient composition could have a large impact on the ration. In contrast, if a dairy herd is feeding 20 lbs. DM per cow per day of corn silage with low variation in nutrient composition, then the silage can be tested less frequently. Likewise, if feeding 1 lb. of straw per cow per day, the variation in the quality of straw would have minimal impact on the ration; thus, the straw can be tested less frequently. Dry hay or straw is best sampled and analyzed on a lot-to-lot or load-to-load basis. The process is different for silages because silo filling, unloading and feeding is a continuous or dynamic process, and silage sampling and analysis should likewise be continuous to determine or anticipate changes in nutrient composition over time.

Table 2. Total Quality Cost (TQC) of a more conservative forage sampling schedule relative to the optimum.

	No. of Milking Cows in Herd					
	50	100	200	400	800	1600
Interval between sampling, days	30	15	15	10	10	10
No. of sampling days per month	1	2	2	3	3	3
No. of samples per day per forage	1	1	2	2	2	2
No. of samples per month per forage	1	2	4	6	6	6
TQC relative to the optimum sampling schedule, $/day	---	$3	$2	$8	$29	$81

How should new sample analysis results be used?

An intensive forage sampling program does not mean rations are automatically rebalanced every time a new silage or feed analysis is received from the feed and forage testing laboratory. Intensified silage sampling protocols are designed to quantify changes in forage quality as early as possible or during the period of change. If the new nutrient composition results change and there is a logical reason for the change (i.e. change in lot or load, field, cutting, variety, location within the silo, change of silo, etc.), then the new nutrient composition data likely better represents the forage in the current ration. In this case, the new data should be used for ration reformulation.

If the change in the primary nutrient (CP, NDF, starch, etc.) composition is small (<5.0% of the old value), then the change in nutrient composition may simply be due to a random error related to sampling or laboratory analysis. In this case, the new nutrient composition data should be averaged with the old nutrient composition data and the mean values used for the scheduled ration reformulation.

References

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