



Quality Certification Services Inc.

When making data-driven decisions, accuracy is expected

Dairy producers need accurate and detailed information to effectively manage their dairies. A 2006 dairy business analysis summary, published by several land grant universities, found that the average cost for Dairy Herd Information (DHI) records accounts for less than 0.5% of all expenses on the average dairy. Yet, these records account for business decisions that directly affect 42% of an average dairy's total expenses and 84% of its income.

Collecting data on dairies

Collecting monthly or periodic milk weights is one of the basics, no matter which DHI test plan a dairy producer uses. Daily milk production is measured with milk meters owned by a DHI technician or electronic meters used on the farm. In the United States, the DHI system uses more than 100,000 portable milk meters and more than 60,000 certified electronic meters. Quality Certification Services Inc. (QCS) assures that each milk meter accurately records milk weights.

QCS maintains a list of approved milk meter models that can be used for collecting milk weights. Approved milk meters meet testing guidelines for accuracy and repeatability. This list can be found at www.quality-certification.com. In the United States, simply being approved is not enough. To be certified for use in DHI data collection, each meter needs to be calibrated

Figure 1. Certified milk meter



at least annually. *Figure 1* illustrates a certified milk meter. This is an approved type of meter; and, it bears a calibration sticker. (Calibration tags or bands are also acceptable.) When a field technician brings milk meters to a dairy on test day, make sure all meters used bear a current calibration sticker or tag. If some meters don't have a calibration sticker, ask the technician to use only calibrated meters. The calibration sticker indicates routine maintenance and proper function, and when and where the meters were calibrated. Using certified meters is key to getting an accurate recording of milk production and a representative milk sample.

National DHIA- and International Committee for Animal Recording-approved meters must perform within a 2% tolerance range. Many approved meter types meet these requirements, but some available meters do not. *Figure 2* illustrates a meter that is "not approved" for DHI testing. The meter has a shorter inlet and smaller flask. Marketed for "spot checks" on farms between DHI test days, there is no assurance results are accurate or reliable.

If a field technician brings these meters to the farm on test day, ask the technician to use only approved and calibrated meters. These meters may inaccurately measure milk production and provide poor milk component samples, which may compromise management and genetic results. Using the right equipment is a dairy producer's assurance of accurate milk weight data for use by a dairy operation's consultant team to make sound

Figure 2. Milk meter not approved for DHI use



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management decisions.

Another alternative to milk weight collection is to use on-farm electronic meters and samplers. Today's DHI system is flexible and can use data collected from a producer's meters. To be used, on-farm electronic milk meters must be checked annually to ensure proper performance. There are two options to meet this requirement – annual calibration by a milking equipment dealer or statistical report of the meters' performance. These "parlor performance reports" are available through software programs such as DairyComp 305 and PCDART, as well as milking equipment manufacturers' software programs. In addition, monitor meters monthly for performance. DHI field service affiliates can work with clients to obtain and evaluate reports, and develop a DHI program that uses the equipment a producer owns.

Accurate milk sample analysis

Many management decisions at the dairy are made based on test day milk component analysis results. Starting with accurate component results, milk fat and protein data are used to evaluate overall feeding program performance and individual cow production. SCC results are used to make mastitis screening, treatment and culling decisions. In addition, the DHI system offers additional milk sample tests, such as MUN (milk urea nitrogen), to help nutritionists fine-tune rations (considering feed efficiency and cost), reduce nutrient waste and enhance reproductive performance. The accuracy and reliability of these results can help managers and their consultant teams make decisions that can enhance economic performance.

How can dairy producers be sure they are getting accurate results? Working with a certified DHI laboratory is the most important step. Currently, there are 45 certified DHI laboratories that analyze more than 4.7 million milk samples monthly. Each laboratory meets the requirements established

by the dairy records industry and approved by breed associations and the AI industry. Monthly, each laboratory participates in accuracy testing, along with periodic on-site evaluations of procedures, equipment and personnel. In certain areas of the United States,

"mobile" milk laboratories offer on-farm milk analysis. While these entities may analyze milk samples for a few cents, they are not part of the DHI program and are "not certified." QCS cannot provide any level of assurance that the data producers receive from these entities are accurate. When it comes to making data-driven decisions that return dollars to a dairy, using a certified lab is definitely worth a few pennies.

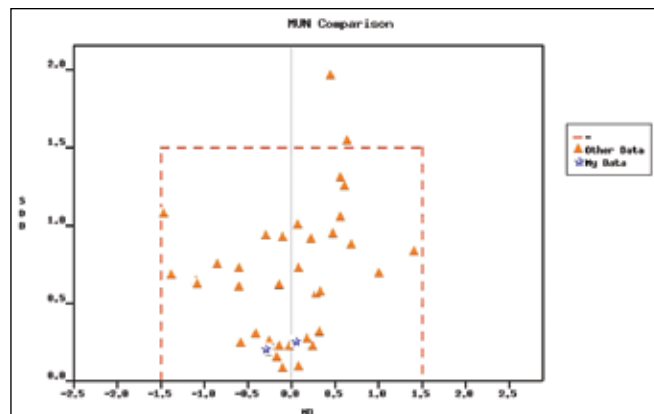
If producers want to know which laboratory is analyzing their milk samples, they may ask their DHI field technician. They can also provide a monthly comparison report, showing how the milk laboratory compares to all DHI laboratories.

Figure 3 illustrates a sample comparison report for a certified DHI laboratory. This chart shows all laboratories analyzing MUN for the month, with a producer's laboratory indicated by blue stars. To be in compliance, laboratory results must be within the box. This type of chart is an indicator that the results are accurate and reliability across the entire herd is high. For example, if a dairy and its consultant team are using MUN analysis results, this laboratory provides excellent results (high accuracy and low variance). Monthly, each DHI laboratory has access to this report for each milk component analyzed and should be able to provide a performance report.

Accuracy for decision making

QCS also monitors compliance of

Figure 3. Sample comparison report for a certified DHI laboratory



the four U.S. dairy records processing centers (DRPC). While each DRPC may offer customized and unique reports to dairy producers, all DRPCs are fully evaluated for compliance of key data fields and calculations with processing center requirements annually and monitored monthly for data handling and calculations. The end result is that records are accurate for use in dairy management decisions.

The accuracy and amount of data flowing in all aspects of an operation is important for any size operation. A perception exists that DHI data are primarily used for genetic evaluations.

However, the cornerstone of value in DHI programs is providing accurate and reliable data for management decisions that affect almost every aspect of a producer's operation. DHI testing is one of a dairy's smallest expenses on a per cow basis. Yet, this information is the basis for evaluating individual cow and herd performance, feeding program design and response analysis, monitoring milk quality, analyzing reproduction, benchmarking key areas, business planning and making financial projections. Partnering with the DHI industry and dairy producers, QCS assures data accuracy. By using approved and calibrated meters, certified field service, labs and DRPCs that provide the data results and tools producers need, they can be assured they have accurate herd data for management and genetic decisions that enhance herd economic results.