

Lab Technology Means Confidence in Results

Whether for payment or for herd management decisions, producers can have full confidence in the integrity and accuracy of their lab results.

Milk testing is a very specific science and CanWest DHI's labs have this science down to a fine art. CanWest owns and operates three laboratories in Guelph, Ontario, Edmonton, Alberta and Chilliwack, British Columbia.

So what does it take to make a "World Class" lab?

Neil Petreny, General Manager of CanWest DHI comments: "We pride ourselves on high quality, accurate and cost-effective lab operations. However, I think what sets us apart is our ability to proactively lead the way with new innovative tests while maintaining a customer focus approach to what we do in our labs."

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The first component of high quality lab services is accurate, well maintained, reliable equipment. Each of the three labs operates mid-infrared (MIR) equipment which tests for Fat/Protein as well as equipment for Somatic Cell Count. The high throughput equipment will analyze some 2.8 million DHI samples on an annual basis. In addition, the labs in Alberta and British Columbia provide bulk tank composition for payment purposes in those provinces, as well as routine quality/bacteria testing through high throughput Bactoscan machines. All labs also provide Milk Urea Nitrogen (MUN), and BHB Ketosis analysis. Finally, the more specialized tests for Johne's, Leukosis, Mastitis DNA and Pregnancy are centralized at the Ontario lab for greater efficiencies.



Each of these processes requires specialized, top-of-the-line equipment and every machine or testing component comes to the lab carefully calibrated by the manufacturer. All machines go through on-going calibration process to ensure that they remain within strict specifications. In addition, with every herd (and at minimum every 100 samples within a herd), a control sample is inserted to confirm that the calibrated accuracy is maintained.

Upon arrival in the lab, samples are entered into the system and tracked by herd number and the quantity of samples received. A note is taken of any additional testing beyond components and SCC. Careful attention is paid to the start and end of the herd samples. When a result falls outside of the acceptable range, the equipment flags the sample to the lab technician and this sample is pulled out of the testing line and

reinserted for a second test to validate the initial results. Checking and rechecking is par for the course.

In addition to the in-house quality control, the Standards Council of Canada accredits and sets the lab standards of reliability through their Program for the Accreditation of Laboratories in Canada (PALCAN). This accreditation is recognized worldwide and each of the DHI labs have achieved, and must maintain, this accreditation for all tests.

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The Accreditation Program has monthly processes wherein labs are sent a set of standard proficiency samples that are analyzed through the various testing machines and results submitted back for third party review. This process ensures the ongoing validity and integrity of the lab processes and results.

However, the key to the quality and success of any lab lies in the staff, and certainly, DHI is no exception. Petreny points out "definitely our lab staff make it happen. It wouldn't be possible without a team of dedicated individuals."

Petreny concludes, "At the end of the day, dairy producers aren't that interested in the details of how milk labs operate. They expect innovation, quick turn around, cost-efficiency, and above all, accurate results so they can be paid fairly and make the best possible herd management decisions. That's what our world class laboratories deliver."

DHI on Leading Edge of Milk Analysis and Disease Diagnostics



Dairy Farmers have stated repeatedly that their need for, and reliance on, credible, accurate information has grown rapidly in recent years. In this era of food safety and traceability the need for dependable and easy-to-use record keeping, as well as fast, accurate and innovative lab analysis is obvious. DairyComp software in its flexibility and adaptability has already proven to be an on-farm and industry-wide resource for management and record keeping.

Over the past decade one of the areas that

CanWest DHI has focused on is the development of our labs for the purpose of milk analysis and disease diagnostics. As a result we are on the leading edge of this field nationally and globally.

DHI operates four labs in Canada, three owned and one under contract. These are world-class facilities owned by Canadian dairy farmers. All of these labs are regularly inspected and approved by the Standards Council of Canada. These strict standards governing all aspects of lab analysis and equipment calibration and maintenance are also recognized under worldwide standards concerning lab analysis. Aside from regular milk testing services including fat, protein, SCC and MUN, DHI began offering disease diagnostics a few years ago starting with Johne's and then Leukosis. Canadian dairy farmers were the first in the world to have access to DNA mastitis

identification through their test day milk sample. More recently, Pregnancy testing and BHB Ketosis analysis have added greater value to the milk sample.

The potential for information and disease diagnostics through the test day milk sample is quite amazing and will continue to grow over the coming years. It has been our practice to validate each new test by working closely with researchers and veterinarians to ensure that these tests are providing our dairy farm managers and consultants with accurate, reliable and relevant information.

As a service provider, CanWest DHI will continually and proactively adapt to assist dairy farmers in producing safe, high quality products profitably. We will continue to be on the leading edge of milk analysis.