



## World Class Labs Means Confidence in Results

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

**M**ilk 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."

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. The Alberta and Ontario labs can also provide Milk Urea Nitrogen (MUN) analysis. Finally, the more specialized tests such as Johne's, Leukosis and Mastitis DNA testing 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 a weekly 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



Staff at the DHI Pacific Milk Analysis Lab in Chilliwack

LEFT TO RIGHT: Dianna Wong, Linda Clease, Travis Freeman (Mgr), Robbie Bates, Stephanie Toop

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 in Ontario, Alberta, British Columbia, as well as the lab in Manitoba, with whom DHI contract testing services, has achieved and must maintain this accreditation for all tests.

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. Deb van de Water has been in charge of the Guelph lab since 2005 and is a graduate with an Honours Bachelor of Science degree and has worked in an accredited lab environment since 1983. The lab operates with a team of eight and when asked what made the Ontario lab a world class facility, van de Water is quick to point out "definitely our passion for our work, our quality control systems and our fully-accredited lab status makes us world class. It wouldn't be possible without a team of dedicated individuals."

John Komarnicki who heads up the DHI Central Milk Testing Lab in Edmonton, graduated with a Bachelor of Science in Agriculture degree, majoring in dairy and food science. His 33 years of dairy lab experience and 11 years with DHI

provides solid background for the team of six full time and four part time employees. In addition to achieving and maintaining Standards Council of Canada accreditation since 1993, Komarnicki attributes world class status to the fact that "the DHI CMT lab is one of only three labs in Canada that can conduct chemical reference analysis for butterfat, protein, and total solids determination in raw milk and milk products and is one of only two labs that supplies dairy laboratories around the country with calibration milk and cream standards, which are then used to calibrate infrared milk analyzers."

Travis Freeman graduated with a Bachelor of Science in Biology and has spent 11 years in the industry heading up the DHI Pacific Milk Analysis Lab in Chilliwack and the team of five staff who work there. Freeman attributes their world class status not only to the Standards Council of Canada accreditation but also to "the dedication, experience and professional attitude of staff in following the quality control system when testing DHI, custom, quality and payment samples."



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

### CHAIRMAN'S COMMENTS

#### DHI on leading edge in milk analysis and disease diagnostics



Dairy Farmers have stated repeatedly that their need for, and reliance on, qualified competent advisors has grown rapidly in recent years. As we move into an era of food safety and traceability the need for on farm access to reliable and easy-to-use record keeping as well as fast, accurate and innovative lab analysis is obvious. Dairy Comp software in its flexibility and adaptability has already proven to be an on-farm and industry-wide resource for management and record keeping data.

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. CanWest 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 world wide standards concerning lab analysis.

Aside from regular milk testing services including fat, protein, SCC and MUN, CanWest DHI began offering disease diagnostics a couple of years ago starting with Johne's and then Leukosis. This spring Canadian Dairy Farmers were the first in the world to have access to Staph mastitis identification through their test day milk sample. This fall the mastitis test will be expanded to include other mastitis organisms. The potential for disease diagnostics through your test day milk sample is quite amazing and will continue to grow over the coming months and years. It has been our practice at CanWest DHI to verify each new test by working closely with our Vets and Universities to ensure that these test are providing our dairy farm managers and consultants with accurate, reliable and relevant information.

As service providers, CanWest DHI will continually and proactively adapt to assist dairy farmers in producing safe, high quality products profitably. Canadian Dairy Farmers have a passion for their dairy cattle as well as their dairy industry and they should expect no less from those service providers whom are helping them attain their goals!

John Bongers

*John Bongers is a dairy producer from Elgin, Ontario*