



More than Just a Milk Sample...

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When the typical dairy producer looks at a DHIA sample on test day Fat, Protein, SCC, and MUN results immediately come to mind. These common analyses bring valuable information to light when managing your herd. Yet, these analyses only scratch the surface of the potential information that can be extracted from your DHIA sample. That same sample can also be run for Johne's, pregnancy testing, Leukosis, and BVD (Bovine Viral Diarrhea). This single sample can provide insight into each cow's individual health, which will enable you to gain a more detailed perspective of your overall herd health.

There are many benefits in using a DHIA sample for additional health diagnostic testing. There are no additional supplies to purchase and no additional shipping costs to be added. It reduces the need to separate out individual cows for sampling at a different time. Your DHIA technician collects the sample and fills out the necessary paperwork, saving you both time and labor costs. A DHIA sample is also less stress on cows, in comparison to a blood sample or an ear notch. It allows a less invasive way to perform pregnancy verification and is collected as part of the cow's routine milking

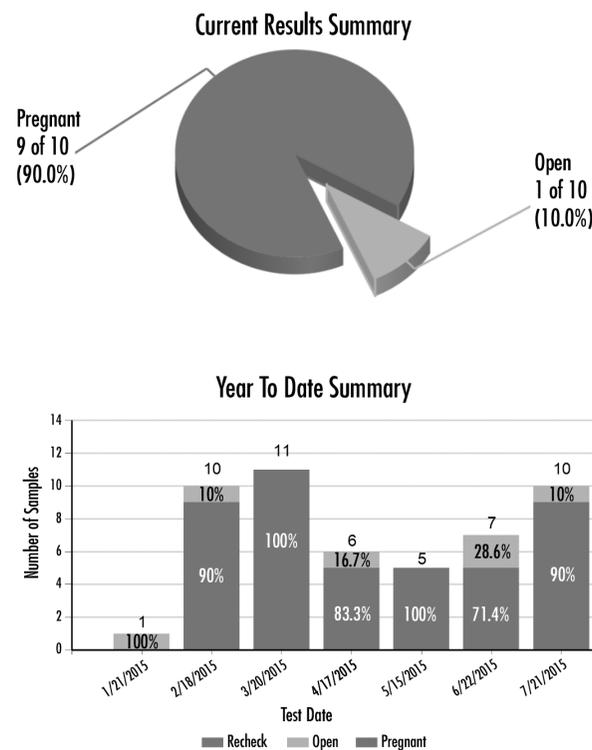
Johne's Testing

The Animal Health Diagnostics Lab of Dairy One utilizes the Johne's Milk ELISA test to aid farms in their Johne's management program. Johne's disease is a contagious, chronic, and often fatal gastrointestinal infection in ruminants. "Lost productivity due to Johne's disease is estimated to cost the U.S. dairy industry \$200 million to \$250 million annually."¹ The Johne's Milk ELISA test identifies antibodies in the milk that combat the bacterium that causes Johne's disease. There are 3 possible results: positive, negative, and suspect. A "positive" result indicates that the animal tested has produced antibodies associated with Johne's disease. All positive animals should be retested to ensure that the presence of the antibodies is from the contraction of Johne's disease, as opposed to exposure without contraction. A "negative" result means that the animal has not produced such antibodies. A "suspect" result is indicative that the animal may have the disease or has been exposed to the disease, but not contracted it. ELISA milk testing for Johne's is best used to determine herd prevalence of the disease. Animals should be tested at the end of their lactation, close to dry off. Analyzing monthly DHIA milk samples for Johne's allows farmers to set up a protocol to ensure they test the correct animals at the proper time.

Milk Pregnancy Testing

Dairy One's Animal Health Diagnostics Lab has run over 125,000 milk pregnancy samples since it was established in Spring 2013. Milk pregnancy testing is a tool for pregnancy confirmation. Its primary pur-

pose is to aid the farmer in managing normal pregnancy losses that occur during gestation. There may be pregnancy losses approaching 25% from early 28 day pregnancy diagnosis to calving. Milk pregnancy testing allows farmers to catch these pregnancy losses and reduce the number of days open, which in turn will reduce the cost of the pregnancy loss. The lab uses ELISA technology to determine the pregnancy status. ELISA technology ensures accuracy of 98% or greater. Cows can be tested as early as 28 days post-breeding and 60 days post-calving. Each month, your DHIA technician can generate a list of cows that are eligible to be tested and add milk pregnancy testing to the selected DHIA samples. The results are available via mail and e-mail and are also able to be loaded directly into your Dairy Comp 305 or Scout software to help reduce the occurrence of data input errors (Figure 1).



Account #	Total Samples Processed: 10 - Date Analyzed: 7/21/2015
Animal ID:	Result:
106	Pregnant
121	Pregnant
133	Pregnant
140	Pregnant
152	Pregnant
203	Pregnant
249	Pregnant
260	Pregnant
265	Pregnant
	Total: 9
2264	Open
	Total: 1

Figure 1: Milk Pregnancy Test Results

Leukosis Testing

All milk samples submitted for Leukosis testing are sent to AntelBio to be analyzed with the Leukosis Milk ELISA analysis. Bovine Leukosis is an incurable viral infection that can occur at any age. Cattle become infected with Leukosis by the transmission of infected white blood cells which can be found in blood, colostrum, and milk. The Leukosis Milk ELISA test analyzes each milk sample for antibodies to the Leukosis infection. "The NAHMS 1997 survey found nearly 90 percent of the U.S. dairies had serological evidence of leukosis infection with no specific geographical association or predisposition. AntelBio's testing results would concur. Since AntelBio began testing milk samples for leukosis, only two herds (<5%) have been found free of antibody titers."² The prevalence of Leukosis is widespread but actual clinical cases are rare. Altering your animal handling procedures such as having individual needles and AI gloves for each cow can help reduce the transmission of Leukosis within your herd. Frequent Leukosis testing can help dairies determine which management practices are contributing to the spread of Leukosis on their farm.

BVD Testing

Cornell University's Animal Health Diagnostic Center and AntelBio conduct BVD testing on milk samples for Dairy One. BVD is caused by a virus that weakens the cow's immune system. "Prevention of BVD in the United States involves vaccination with various strains of modified live and killed virus. Most animals that have healthy and active immune systems will be effectively protected against strains of BVD virus represented in the current vaccination program. Unfortunately, the number and variety of BVD strains are unknown, and viral mutation continues to produce new strains on an ongoing basis. The greatest risk with BVD is the introduction of new strains either through new herd additions or persistent infection."³ When testing for BVD with a milk sample, it is best to test immediately after a calf is born. Maintaining frequent BVD testing in a herd can help dairies identify and remove persistently infected cows.

Consider how using your monthly DHIA milk samples to test for Johne's, pregnancy, Leukosis, and BVD could fit into your herd health program. Ask your DHIA technician how you can add these analyses to your monthly DHIA test. For further information, contact Dairy One by phone at 1-800-344-2697, or visit our website at www.dairyone.com.

¹ <http://www.johnesdisease.org>

² http://www.antelbio.com/Publications/Johnes_Watch_PDF/Milk_Watch_4_2.pdf

³ http://www.antelbio.com/Publications/Johnes_Watch_PDF/Triple%20threat%20to%20the%20immune%20system%20web.pdf