WE SUPPORT YOUR LOCAL COW

Today's dairy farmers combine high tech and soft touch to keep their livestock and the products they produce healthy. It's what makes sense and dollars. Farmers have a lot of time and money invested in their farming operations. Often it is not just their resources, but those of their family as well.

The Minnesota Dairy Herd Improvement Association (DHIA) has been using computers with cows since the late 1950s. Today about half of the dairy farms representing about 60% of Minnesota's dairy cows use this service to make dollars through good science and make things better for the dairy cow by combining science and common sense.

DHIA employs 45 field technicians that regularly visit dairy farms during milking. (That's right, at 4:30 a.m. or 8:30 p.m. – remember the dairyman runs what you might refer to as a split schedule, except that his or her split does not always result in time off between milking shifts). Typically, the herd hires DHIA to make one visit a month. On most dairies, DHIA brings a metering device to capture a milk weight and a representative sample of the milk produced by each milking cow. A laptop computer with sophisticated software is used to enter information on each animal, such as identification, breeding, calving information and veterinary and other health events.

The milk sample from each cow is diverted from the milk as it flows into the pipeline on its way to the cooling tank. The samples are sent to a milk lab for analysis. Our Minnesota lab is in Sauk Centre. We have three other milk analyses labs in our system. They are located in Wisconsin and Ohio. The labs use computer calibrated infrared light refraction to analyze the milk for butterfat and protein content. Samples are also tested, at the option of the dairy, for Total Solids, Somatic Cell Count (SCC), and Milk Urea Nitrogen (MUN). SCC and MUN are indicators of animal health and nutrition. The machines used to analyze the milk run about 400 samples per hour and cost nearly $400,000 each. In recent years tests have also been developed which can detect pregnancy and the presence of certain diseases using this milk sample.

The component test results tell the dairy professional much about the health of the individual cow, and also her diet. If butterfat tests are not in balance with protein test results, a change in the ration is often made to bring things into balance. The MUN test is another tool to judge the ration and cow's ability to digest and utilize the nutrients she is being fed. Somatic Cell Count is actually looking at the white blood cell level. Somatic Cell Counts on the rise signal a coming health problem for the cow. SCC is the most popular individual cow data point DHIA customers choose, because of the value of the information.

Once milk samples are analyzed, results are transmitted to our office in Buffalo. There data from the farm is merged with lab results, and the complete data is sent to Raleigh, North Carolina for further data processing and summarization. From that Data Processing Center, data is sent back over the internet to Buffalo, where the reports are printed and electronic files are readied for dairies and consultants, such as nutritionists and

veterinarians. These consultants use the information to help the dairy farmer balance rations (your diet should be healthy and as closely monitored as a dairy cow), and develop breeding and herd health programs. (The role of the veterinarian has changed from "emergency" visits to developing feeding and "preventative health care" type services).

This whole process, from farm to lab to data processing, takes two days on average. What was the turnaround time on your last doctor's office visit that required a lab test? It is important for the information to be current so good management decisions can be made.

A side benefit of the system is research at USDA. DHIA forwards identification and production information to USDA and University of Minnesota researchers at no charge. One small example of the usefulness of this data is "calving ease". When a calf is born, the dairy farmer reports the "ease" of the birth for the cow. This data flows through the system and is summarized at USDA. When a dairy manager is making a decision on which bull to use on a young or small cow, he or she refers to the Calving Ease information collected by DHIA. This enables them to choose a bull that will make the calving (that results from this breeding) easier on the cow and help insure a healthy calf. With the advent of breeding dairy cows to beef bulls, we have begun to collect calving ease information on those beef bulls as well.

Nearly 95% of our dairy farmers have a computer. Over 600 of them now have DHIA software sitting on their farm. The primary role of this software is to help the dairy better track and analyze herd health and reproduction.

Many of the best and most conscientious dairy farms use DHIA information. Average production per cow on DHIA for 2022 was 25,345 pounds of milk per cow, with a 4.2% butterfat test and 3.24% protein. USDA estimates production from all cows in MN in 2022 to be 21,170 lbs per cow. Dairies using DHIA information produce about 4100 pounds of milk *per cow* more than herds that are not using DHIA services.

Due to the dedication of our dairy farmers and our employees, Minnesota DHIA is an industry leader in the accuracy of information collected, in identification of animal and parentage. Our milk labs are nationally recognized for the quality of their work. The lab at Sauk Centre offers services to others besides dairy farmers. We offer manure testing, with the majority of customers being pork producers.

A board of dairy farmers elected by the dairy farmer members governs us. We enjoy outstanding support from the University of Minnesota and agri-businesses throughout the region.

We salute the dairy industry, not just because it is a vital economic force, but because it is filled with good stewards who care for the animals and the environment for personal and economic reasons. They produce quality products for all of our families.