

# Dairy Extension

## Precision Dairy 2015

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The University of Minnesota along with the University of Kentucky organized and hosted the 2nd U.S. Precision Dairy Conference and Expo, June 24-25, in Rochester, MN. The program was developed in partnership with key industry sponsors and included a variety of topics related to technology in dairy. There were 24 presentations including 10 dairy producer showcases, which offered the opportunity to virtually visit those farms and learn first-hand how to optimize the use of various technologies. For a complete list of topics, go to [z.umn.edu/pd2015](http://z.umn.edu/pd2015) and click on Program. Please plan to attend our next conference and trade show on Precision Dairy so you can benefit from the discussions and networking during the event. Comments about the event are welcome (send to [miendres@umn.edu](mailto:miendres@umn.edu)).

Although industry and research presentations were very informative, I will focus today on some of the producer showcase sessions and try to briefly describe the technologies used on those farms. I will describe the remaining of them in a follow-up article. We are very thankful to all the dairy producers who traveled to our event during a busy time of the year to present a virtual tour of their farm. It is much appreciated! Every producer was a great presenter too and interacted very well with the audience. We had some very informative question and answer sessions following each talk.

We started the showcase sessions with Brian Houin from Plymouth, IN. They milk 3,500 cows in three milking parlors, all with Afifarm and one also including Afilab. Their first technology on the farm was DC305 used to manage the herd and track history of each animal; Pocket Cow Card wirelessly sends files to DC305. Genomics testing (Clarifide, Zoetis) is used to aid heifer culling decisions and speed up genetic gain. CowManager sensors have been added to the breeding heifer program; 2014's heat detection rate was 77% and pregnancy rate was 41%. Afimilk was installed at one site in 2005, another in 2010 and the third site in 2011, and it is used to record daily milk yield for each cow and help detect cows with health problems. In 2015, they also installed Afilab at the Homestead site which records individual cow milk fat, protein, lactose and conductivity. It helps in identifying cows with subclinical ketosis, mastitis, and subclinical acidosis. In addition, FeedWatch and VAS Handheld NIR moisture tester are used for feeding management. The dairies successfully use separated manure solids for bedding.

Next on the program was Gerhard Ritzema from Seaforth, ON, Canada. He and his wife Heather have 335 cows and use six DeLaval automated milking systems with Herd Navigator. Cows are housed in two groups, each with three robots; heifers and cows are kept separate. The herd averages 23,700 lb of milk and 180,000 SCC. About 4% of cows are fetched per day. Herd Navigator provides various daily reports checked each morning: cows to breed, fresh cow, ketosis, mastitis, feed. Pregnancy rate improved from 26% to 34% since they started using Herd Navigator. The HN system cost them \$186 per cow per year and they calculated that the pay back will be in 5 years. Follow them on Twitter: @ritzemadairy.

After lunch and a plenary session with Dr. Jeffrey Bewley, we had John Balbian from Amsterdam, NY, on

the program. John milks 200 cows and is using Media technology to monitor his cows in addition to automated calf feeders. The Media system provides information on heat detection, rumination, feeding behavior, health monitoring, and calving time monitoring. It uses cellular communication instead of the Internet and it is an integrated system - HeatPhone, FeedPhone, VelPhone, SanPhone. The system sends text messages about group changes in water or feed consumption, rumination; reports cows at risk due to changes in behavior, cows in heat, etc. John stopped using synchronization protocols and is also now using milk test for pregnancy check. He used to drench every fresh cow and take temperatures every day in the fresh cow pen; now he has automatic temperature monitoring and only needs to drench a smaller number of cows. The system has provided distance monitoring of cows and schedule flexibility.

Sander Penterman, from Thorp, WI, was next on the program. He and his wife Amy milk 850 cows and were the first to install the AGIS CowSensor (CowManager) system in the U.S. This system uses ear tags with a chip that measures cow temperature, rumination, activity, resting and feeding behavior. Data are collected every hour and can be accessed anywhere Internet is available. Herd health report is checked each morning and used to detect sick cows faster. Use of synchronization protocols for breeding has been reduced by 90%. Pregnancy rate is currently at 24%. In 2015, they also installed an Urban automated calf feeder and move calves to group pens at 5 to 10 days of age. One unit is feeding 4 pens of 25 calves and they are using pasteurized milk with additives. Results so far have been positive.

Additional producer showcases will be described in a follow-up article. Stay tuned!

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