NEWSLETTER

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14 Mile Watershed friends and supporters,

It's encouraging to see our agriculture neighbors utilizing the latest technology to reduce irrigation, fertilizer and pesticide use. And, their use of cover crops helps to reduce erosion and runoff into the watershed, just as recommended in the 9 Key Element Plan for the 14 Mile Watershed. Thank you to Heartland Farms for hosting us and to Bill Pegler and the Adams-Friendship Times Reporter for this article.

Lake groups visit Heartland Farms

By Bill Pegler

A group of 18 people representing lakes, local and state government, and community groups paid a visit to Heartland Farms in the Town of Colburn this summer as part of an effort to understand how state-of-the-art farming practices can help improve water quality, maintain soil health and improve the financial bottom line at the same time.

Heartland Farms, which started out as an 80-acre potato farm in 1873, now spans 4 counties, including Adams County, covering 27,000 irrigated acres of land with the storage capacity for over 5,500,000 hundredweight (Cwt) of potatoes.

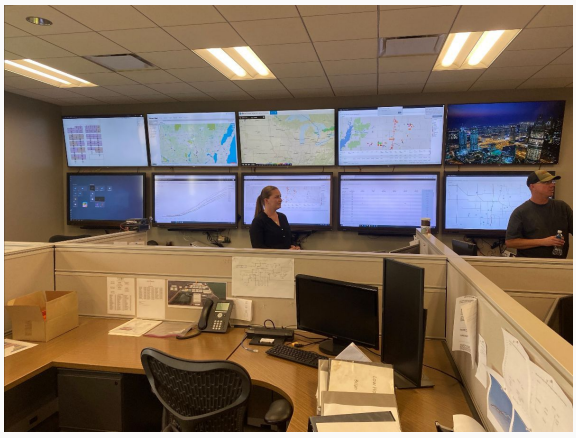
Representatives from the Department of Natural Resources (DNR), the Adams County Land & Water Conservation Department (LWCD), the Town of Rome, the 14 Mile Creek Watershed

Alliance, the Petenwell and Castle Rock Stewards (PACRS), the Tri-Lakes Committee, the Wisconsin River TMDL project, the Wisconsin Wetlands Association, and the Adams County Lake Alliance were all in attendance for the two-hour presentation and tour that began at the their solar powered office building and training center.

Adams County is at the center of two major conservation initiatives. The Wisconsin River TMDL (Total Maximum Daily Load) project spans the entire length of the Wisconsin River including Petenwell and Castle Rock Lakes with the goal of reducing the amount of phosphorus accumulating in the Wisconsin River. The purpose of that 10 year project is reduce phosphorus inputs from sanitation plants, farms, homes and factories in order to stop harmful algae blooms and that have become common on the lakes. And this year, the Environmental Protection Agency (EPA) approved a 9 Key Element Plan to address nutrient loading (both phosphorus and nitrogen) along the 14 Mile Creek watershed which spans four counties including Adams, Wood, Portage and Waushara counties. The 14 Mile Creek watershed also feeds into Petenwell Lake so the two projects have important ties.

In order for these multi-million-dollar projects to succeed, working with producer-led farming groups is as important as educating homeowners on fertilizer and septic system best practices.

Jeremie Pavelski began the two-hour event highlighting what was done in 1994 by introducing something as simple as a rinsing station for potatoes. Washing the potatoes kept the dirt on the farm instead of the stores. The rinsing facility was designed to reclaim the soil and the water for future reuse.



Inside the Heartland Farms Operations Center where all phases of planting, growing, and harvesting are monitored on 20 different screens.

Potatoes are optically scanned for size and quality before getting routed to storage for eventual distribution.

With 300 active irrigation pivots in use today, water usage management is critical, especially as concerns about the impact of high-capacity wells on groundwater grows each year. We've all seen irrigation systems that seem to water the roads as much as the fields or be in operation

during a down pour. To reduce the chances of irrigation systems “watering the roads”, Heartland has developed new monitoring technology to alert them if there has been a mechanical issue that would cause the irrigator to water the road. Heartland Farms has installed rain gauges at every field which are tied to the operation of the irrigation pivots. If there has been sufficient rain to meet the needs of the crop, the irrigation systems are turned off. Utilizing real-time rainfall information can also help save millions of gallons of water each rainfall event by allowing irrigation systems to be turned off quicker, rather than having to drive to manual rain gauges before knowing if the rain amount met the needs of the crop. Daily soil moisture checks are also taken.

Real time data is critical to their operation. In their main operational center, 20 monitors track a range of information from weather to fleet location to soil temperature to pest infestation. Satellite imagery is also used.

A new artificial intelligence (AI) system is now being tested to identify insect or hail damage to crops by scanning real-time imagery of the crops.

Farm vehicles are monitored for fuel usage consumption by tracking speed and idle time. GPS tracking allows for accurate and efficient planting and targeted harvesting, as well. Each field is evaluated weekly to determine the need for nutrients.

When harvesting is completed, cover crops, which are to reduce soil erosion and protect soil nutrient levels, are standard practice. Within 48 hours of a harvest, the cover crops (often a cereal rye) are planted.

The tour finished up at an enormous warehouse where the potatoes are stored. The cavernous building is climate controlled both for temperature and humidity in order to prevent pressure bruising as the potatoes are stacked. Though the warehouse was empty at the time of the tour, when it comes time to ship the potatoes to be turned into everyone’s favorite chips or French fries, Heartland Farms can ship out up to 120 semi-truck loads per day.

“The science and technology involved in agriculture is constantly evolving. As farmers, we have more tools in our toolbox than ever before and utilizing those tools to increase sustainability is amazing. Our job as agriculturists is to provide healthy, safe food while ensuring the soil and water and other natural resources are healthy and safe for our generation and future generations. We appreciate the opportunity to collaborate with groups who care about their communities and the environment as much as we do.” says Jeremie Pavelski, Co-Owner of Heartland Farms.

Don Ystad, President

14 Mile Watershed Alliance

The 14 Mile Watershed Alliance is a nonprofit organization dedicated to the improvement of surface and groundwater in the 14 Mile Creek Watershed in central Wisconsin. See us at 14milewatershed.org or https://www.facebook.com/14MileWatershed

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