USDA United States Department of Agriculture

Manitowoc County Success from the Field

Building a Wisconsin Dairy Herd with Pasture

Background

Karl and Robert Klessig are fifth-generation dairy farmers who manage the Saxon Homestead Farm on the southern edge of Manitowoc County in Cleveland, Wisconsin. Their ancestors from Saxony, Germany, started farming these lands in 1850, initially focusing on milk production and eventually adding artisan cheese production to their portfolio. In order to take advantage of the fertile soil of Manitowoc County, the farm historically used grazing and a free range system to feed their dairy cows.

Today, Saxon Homestead Farm operates over 1,400 acres of farmland and continues to produce artisan cheese with their grass fed dairy milk herd. Part of the land, 700 acres, are managed as permanent pasture for 600+ dairy cattle and 200+ beef cattle. Previously, the farm incorporated some larger blocks of rangeland, like their ancestors, and farmed conventionally, not fully committing to an intensive rotational grazing management system until returning from a trip to New Zealand. There, they observed how grass feeding and using pastureland to feed dairy and beef cattle can be cost effective and produce high-quality products. When they returned home, they immediately began implementing high quality forages, partitioned off pastures (paddocks) using electric fence, improved cattle trails and watering systems to manage their herd. They focused on this type of farming to stay true to their roots and be good stewards of the land. Together, Karl and Robert feel they have a responsibility as land managers to protect the land and keep it as natural as they can.

Back in 2006, the Natural Resource Conservation Service (NRCS) begin assisting the Klessigs with planning and applying for cost-share opportunities to more effectively manage nutrients, pests and animal feed. The Klessigs incorporate efficient and profitable production systems based around rotational grazing. They continue to work with local NRCS staff and Glacierland Resource Conservation and Development Council (RC&D) for technical assistance and the management of their Conservation Stewardship Program (CSP) contract.

Program Successes

On July 10th, local NRCS staff and Glacierland RC&D organized a pasture walk on the Saxton Homestead Farm. The primary focus of the pasture walk was to introduce county Land Conservation Committee (LCC) members and elected county officials to the world of intensive rotational grazing and demonstrate how permanent pasture can add to overall soil health by decreasing soil erosion and increasing soil microbial activity. It is important that policy and decision makers are exposed to all types of agricultural practices in order to make educated decisions when setting rules and regulations on the agricultural community.

Fig 1. (Left to Right) Adam Abel, NRCS Soil Conservationist; Matt Rataczak, NRCS District Conservationist; and Robert Klessig, Saxon Homestead Farm Manager; explaining the rainfall simulator.

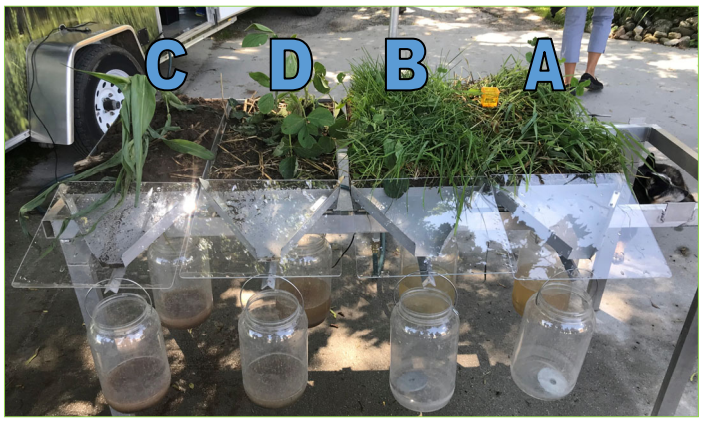

Fig 2. Field samples used for the rainfall simulator showing how much water infiltrates through high quality permanent pasture (Right-back container) and how much surface runoff carries sediment from the conventional corn field (Left-front container).

Wisconsin Natural Resources Conservation Service

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Before touring the pasture, NRCS employee Matt Rataczak demonstrated a rainfall simulator to show how different vegetation compositions create a variety of soil structures that infiltrate water differently. Field samples were taken from a Saxon Homestead Farm improved pasture field (Fig 2, A), a pasture field damaged from 2018–19 outwintering to represent a pasture that has been overgrazed (Fig 2, B), and a conventionally farmed corn field (Fig 2, C). An additional sample was taken from a soybean field on a neighboring farm that has been implementing no-till and cover crops for the past five years with a soybean-corn rotation (Fig 2, D).

Over 30 attendees, representing five county LCC's, watched in genuine curiosity as the rainfall simulator poured the equivalent of 0.50 inches per hour of rain over the samples. The rainfall simulator provided an eye-opening example of how farmers can increase the soil's ability to hold or infiltrate water by keeping the soil covered using cover crops or permanent pasture, retaining living roots to keep the soil biology active, implementing diverse crop rotations and mixtures and limiting soil disturbance. The result of these practices is a reduction of the amount of sediment runoff during rain events.

After demonstrating the rainfall simulator and providing information on soil health, Robert and Karl showed off their fields to explain how permanent pasture helped their farm become more sustainable. They highlighted a field that was recently converted to pasture but historically had been maintained with conventional farming practices. Karl explained how the ditch adjacent to the recently purchased field would run dirty, like chocolate milk, after heavy rains and in the spring, but since they have restored it to permanent pasture, the water coming off of that particular field has been clean and clear. This field is an excellent example of how planting diverse mixtures hold more soil in place and build up the soil biology.

Robert and Karl also highlighted the importance of improving lanes and incorporating a maintenance schedule on a dairy farm since their dairy cattle return to the milking parlor multiple times a day. Their pastures contain a variety of drainage classes, including a wet area where they need to monitor the soil moisture and the duration cattle are on it to protect the vigor of the pasture. Our message was well received by LCC members. Committee members expressed their excitement about the rotational grazing process and will bring back what they learned to their respective committees.

Fig 3. Robert explaining the importance of timing when grazing in wet areas (left half) and of improved cattle trails (right half) when it comes to pasture quality and maintenance.

Future Plans

Implementing a rotational grazing system for a dairy herd of this size takes a tremendous amount of planning to be successful. The Klessigs have grazing down to a science and are always finding new ways to introduce the next generation to the farming industry. The Klessigs keep moving forward in the world of sustainability and profitability. They work toward increasing the amount of time their dairy cattle spend per year on pasture as well as increasing the forage quality of their pastures. Saxon Homestead Farm enjoys being a part of NRCS outreach events and hopes to continue this service.

For more information about Saxon Homestead Farm please visit www.saxonhomestead.com