

2021

# Purdue Extension Specialist Quarterly Highlight

January – March (Q1)

## *Forage Testing is Critical for Healthy Cattle and Cost-Effective Operations*

When recent extreme weather and rains created delays in hay harvest, **Keith Johnson, Professor of Agronomy, and Nick Minton, Beef Systems Specialist**, recognized that this would result in less than ideal hay quality. Unless supplemental feeding was planned, results would be poor nutrition for cattle across Indiana.

Routine testing of forage nutritional value is done by sending samples to chemical analyses labs, and working with nutritionists for developing feed rations to ensure healthy diets for cattle. Unfortunately, not all producers test harvested forages before winter-feeding begins.

Johnson and Minton, in collaboration with **Agriculture & Natural Resources Educators**, delivered several forage nutrition quality programs to demonstrate and encourage testing and supplemental feeding.

“Forage Analysis Testing Cost-Share”, with Soil and Water Conservation District and Natural Resources Conservation Service partners, provided free forage tests. Producers found testing to be a reasonable task and adjusted rations based on their specific results.

From Feldun-Purdue Agricultural Center’s “Twilight Tour Field Day” producers better understood pasture renovation procedures, importance of harvest forage sampling and nutritional analysis before feeding, and supplementing stored forages.



Photo: Keith Johnson



After “Forage Quality and Testing Workshop” demonstrations, producers requested to borrow the county Extension office’s hay probe and received bags so samples could be shipped to laboratories.

At the Southern Indiana Purdue Agricultural Center “Grazing 102” workshop, wagon tours, hands-on demonstrations, and pasture walks, helped producers learn about soil fertility, forage-induced animal disorders, and animal nutrition. In the following six-months, producers had adopted at least one recommended practice that increased returns or reduced cost per acre up to \$100.

Producers found visual demonstrations of poor-quality versus high-quality hay influential, encouraging them to match hay resources on the farm to nutrient needs of beef cows. “Considering the volume of hay an animal will need to eat to maintain balance, clearly, I have been giving my animals inadequate nutrients in the winter months all this time,” remarked a producer. Another said they knew hay analysis was a good thing, but didn’t know it was such a big deal until this program.

Producers learned about poor quality forages resulting from extreme weather and late harvests, completed forage tests for quality, and worked with nutritionists to develop diets and rations that met nutrient requirements for cattle care and production, resulting in improved finances per acre for the enterprise.

2021

# Purdue Extension Specialist Quarterly Highlight

January – March (Q1)

## *Community Development: Turtle Mountain Reservation's Substance Use Disorder Recovery Center*

In partnership with the Purdue Center for Regional Development and the University of Kentucky, Purdue Extension secured a USDA Rural Economic Development Innovation (REDI) grant to foster rural development in nine communities in the North Central and Southern regions. For one of the nine, the Turtle Mountain Band of the Chippewa in North Dakota, their dream was to create a substance use disorder recovery center.

Purdue Extension's **Michael Wilcox, Community Development Program Leader**, collaborated with **Nicole Adams, Clinical Assistant Professor, Purdue School of Nursing**, on an innovative, community development effort using new tools (system mapping techniques and landscape architecture design tools), paradigms (merger between community and recovery capital) and culturally oriented approaches.

Purdue generated a data snapshot of Turtle Mountain Reservation that showcased Quality of Life, Workforce Development, Economic Development, e-Connectivity and Technological Innovation as critical elements for the region. A two-day workshop shared information and tools for developing goals, objectives, strategies and a timetable. Monthly writing team calls, bi-monthly REDI support calls, quarterly USDA Rural Development webinars, and many virtual meetings with the local team were coordinated and conducted.

Wilcox, Adams and the Turtle Mountain team created a clinical plan outlining detailed service, staffing and building design needs, and a business plan incorporating a demand and supply analysis, staffing cost projections, revenue projections with

information on workforce development needs, billing requirements, and USDA community facilities loan details.

Extension brought in **Aaron Thompson, Director of the Purdue Center for Community and Environmental Design**, and Center staff for consultation to generate an outdoor site plan to enhance the natural environment and provide patients and families opportunities to interact with the land. A draft plan, detailed site designs, and computer visualizations were presented to tribal leaders and staff, whose enthusiastic response led to more comprehensive designs including a welcoming garden experience, therapeutic gardens and learning spaces, and separate spaces for reflection and solitude. Primary roadways and patient housing are already under construction, as the tribe finalizes funding for remaining facilities.

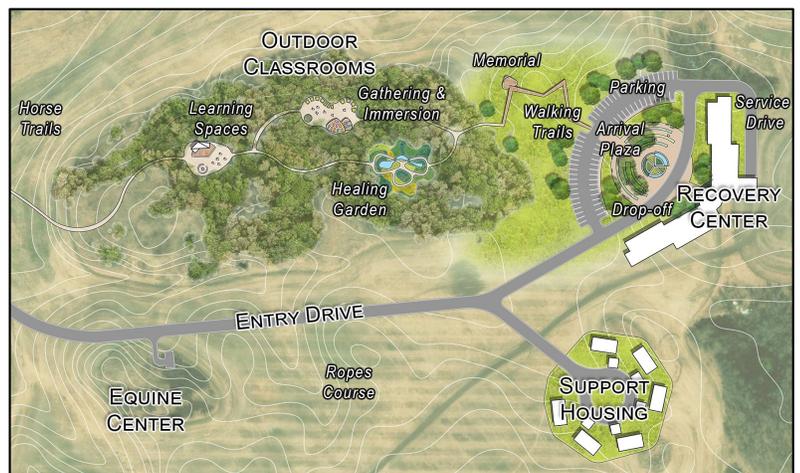


Photo: Purdue Center for Community and Environmental Design

Ongoing work will further develop the recovery-oriented system of care, and create funding strategies and promote organizational and workforce development. The tribe will coordinate installation with local design, engineering, and construction firms. At completion, the 100-acre campus will integrate a new central facility, recovery residences, confidence course, equine therapy stables, sweat lodge, medicinal garden, and walking trails for the Turtle Mountain Band of Chippewa Indians community.