



# U.P. Ag Connections Newsletter

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## Spartan Bus Tour celebrates spirit of UP, northern Michigan

By: Sydney Hawkins, Alex Tekip, Dalin Clark

*This is an excerpt of a larger article. Check out the entire article, plus videos and other related content available [here](#). Or scan the QR code below.*

Over three days and more than 1,100 miles, 60 Michigan State University administrators and faculty members traded lecture halls and laboratories for a classroom on wheels, journeying to 15 different communities in northern Michigan and the Upper Peninsula as part of the Spartan Bus Tour. “We have 17,000 alumni and 1,400 current students at Michigan State who hail from the Upper Peninsula,” said MSU President Kevin M. Guskiewicz, Ph.D. “It was an honor to meet some of those alumni and students; to witness the impact of our longstanding partnerships in health, education and sustainability; and to imagine what new opportunities might look like.”

“Michigan State maintains partnerships across the Upper Peninsula and northern Michigan that, in some cases, span generations,” said Guskiewicz. “We’re working together to address health, education, sustainability and prosperity as we build a better future for all.”

From Oct. 19-21, this group of Spartans met with partners, explored new opportunities to collaborate and learned more about the places MSU students and alumni call home.

### Day 3: “We’re built for this”

The final morning of the Spartan Bus Tour brought dark clouds and chilly rain, but the group persevered to find beautiful fall colors, berries and wetlands at [Sand Point Marsh Trail](#), a half-mile wheelchair-accessible boardwalk along Pictured Rocks National Lakeshore. Although it’s changed hands many times, the property is now owned by the Michigan Department of Natural Resources.

With Lake Superior in view from the trailhead, this area is home to birds, frogs, turtles, beavers and a wide variety of plant life. In the past, it was a dense forest that was cleared for lumber that became buildings, boats and charcoal. Michigan was the nation’s leading lumber producer between 1869 and 1900. Logging was one of the two area industries, the other being iron mining.

Anna Ellis, from the [College of Agriculture and Natural Resources](#), is a forestry and natural resources educator with [MSU Extension](#) in Alger County. She guided the group through the trail and shared insights about the area, its current inhabitants and its history.

“My favorite part of this job is being the connection point where I can help people understand their environment and its history,” Ellis said. “I like to help people learn about the natural resources around them in a different way. There’s often this lightbulb moment when I share facts with people who haven’t spent much time outdoors.”

“It’s great to have the Spartan Bus Tour stop here,” she said. “It helps everyone feel better connected to the university and each other.” The next stop was at the MSU [Upper Peninsula Research and Extension Center](#), or UPREC, where a curious herd of Red Angus cattle was

an active part of the scenery. Established in 1899, this MSU [AgBioResearch](#) facility in Chatham supports the next generation of farmers and eaters, according to Abbey Palmer, a community food systems educator at MSU Extension. “We do research and take risks so UP farmers can learn from our mistakes,” she said. “We support farms of all kinds in the area. For example, our certified organic operation conducts specialized research to help us all plan for the next 100 years of growing vegetables above the 45th parallel.”





As UP farmers have transitioned from raising dairy cows to beef cattle, the UPREC team is studying different cattle genetics and finishing systems. The team also maintains a small grain research program for local brewers and distillers and even cross-pollinates corn to help tortilla makers get the starch and flavor they need.

“We also host outreach programs for youth and adults,” Palmer said. “Some schools in the Upper Peninsula have students kindergarten through 12th grade in the same building. School gardens we support with education can really contribute to their school lunch programs. We offer fun learning experiences to connect growers and eaters, such as a Seed-to-Kitchen initiative that involves local chefs sharing their veggie taste preferences, ideas about extending the growing season, and a Farm-to-School Institute for teachers.”

Land for this research center was donated in 1899 by Munising Railroad, and the property includes 830 owned acres and another 350 acres that are rented. Research and education programs focus on four core areas that reflect the current and future needs of people in the Upper Peninsula: beef cattle, field crops, organic specialty crops and land-based learning. Researchers track changing demographics, land use, aging infrastructure and increased costs so they can align with the people and farms they serve.

Matt Daum, dean and associate provost for the College of Agriculture and Natural Resources, who was part of the Spartan Bus Tour, explained that work done at the UPREC helps farmers achieve higher value and anticipate the needs of end users.

“We work behind the scenes to help farmers improve value, profitability and sustainability,” Daum said. “It’s amazing how much science is involved.”

The third stop of the day was a fun look at the history of a very specific form of winter transportation. Located at the northernmost point of Lake Michigan, [Top-of-the-Lake Snowmobile Museum](#) in Naubinway features 200 antique, vintage and prototype snowmobiles and memorabilia

Owner Charlie Vallier said he started collecting snowmobiles when he got out of the Army and talked his dad into becoming a Viking snowmobile dealer. He opened Michigan’s first and only classic snowmobile museum in 2007, expanded into the current building in 2013 and completed an addition in 2018. The museum received an operational grant from the Michigan Arts and Culture Council in conjunction with the National Endowment for the Arts in 2023.

“To have the bus tour come here is just awesome,” Vallier said. “We get to showcase our community and the snowmobiles. Michigan has an awesome trail system, and we’re really proud to promote that. A lot of places in the UP would be closed in the wintertime if it wasn’t for the snowmobilers coming through. In Newberry, for instance, a lot of the large hotels that have opened in the last 20 or 30 years are there because they can stay open in the wintertime, too.”

The Spartan Bus Tour then headed downstate to visit a program designed to benefit the future. [Northwest Michigan Community Action Agency](#), or NMCAA, is offering Food-Body-Mind, a 16-week preschool classroom program that proactively addresses mental and physical health crises that can arise in early childhood. The program also helps reduce health disparities.

Led and created by MSU [College of Nursing](#) researcher and MSU Research Foundation Professor Jiyong Ling, Food-Body-Mind helps increase behavioral well-being in preschool-age children. This program is supported by a \$5.8 million grant from the National Institutes of Health. Active in 35 Head Start preschool classrooms throughout Michigan, the program will support 13 classrooms in NMCAA during the 2025-26 academic year and aims to work with 50 Michigan classrooms in total.

“What I love about Food-Body-Mind is that it benefits children and families by giving our classrooms an established nutrition and mindfulness curriculum,” said Shannon Phelps, NMCAA child and family development director. “It’s a really nice fit with Head Start because it is a multigeneration program, extending time in the classroom into what happens at home. We’ve worked with Dr. Ling in the past, and we’re so happy her program is returning and expanding here at NMCAA.”

NMCAA serves 10 counties in northwest Michigan, with a team of 350 employees. Head Start preschool programs serve children who are 3 to 4 years old. Children who have participated in Head Start programs are often found to outperform their peers in cognitive ability and social-emotional competence. Head Start also provides prenatal services, programs to alleviate homelessness and help for those who need clean water.

Spartan Bus Tour participants toured the day care facility and participated in Food-Body-Mind classroom exercises. Students sampled kiwi and talked about how it felt “slippery,” sounded “quiet,” looked “fuzzy,” smelled “yummy” and tasted “good.” Teachers led students in mindfulness exercises that focused on deep breathing.

“The way Food-Body-Mind is structured, it could grow to include rural and urban child care programs across the country and offer long-term benefits to children and their families,” Ling said. “When people have good health, they tend to be happier and feel more socially connected and purposeful. Parents have told me that their children go from eating only Cheerios to eating vegetables.”



After seeing a rainbow above the colors of the changing trees, the group arrived at their final stop close to campus, a warm reception at [Uncle John's Cider Mill](#), a long-time MSU partner. Here, five generations come together on the family-run farm in St. Johns to offer memorable experiences to their guests. The cozy barn that hosted the Spartans was reminiscent of the past, while everyone talked about how this experience would impact their futures.

Lucía Cárdenas Curiel, associate professor of bilingual/multilingual education in the Department of Teacher Education in the [College of Education](#), shared her perspective on the trip.

"Throughout this trip, I saw so many connections to my own culture and story — cross-generational learning, family labor and perseverance," Curiel said. "Sorting wild rice reminded me of sorting beans with my mom as a child on our kitchen table. Walking through the iron mines made me think of my great-grandfather, who fled the Mexican Revolution in 1910 to work in the U.S. and then returned to Mexico. At the lighthouse, the folk stories echoed La Llorona, and at UPREC, they found how to answer the need of tortillerías to find the right kind of masa by cross-pollinating corn from yellow corn and indigenous flint corn — finding a special hybrid corn that produces the starch needed to make tortillas. I never expected to find so many connections between the UP and my own roots."

MSU President Kevin M. Guskiewicz asked everyone on the tour to describe their experience in one word. Among them were "connection," "inspired," "opportunity," "heart," "pride" and "Ubuntu."

"After traveling so many miles to meet Michiganders in the places they call home, I am always drawn to the word 'responsibility.' We have a responsibility as Michigan's state university to serve its people through the work that we do at MSU," he said. "There's a lot going on in the world right now and times are tough, but we are Spartans and we are built for this."

## PFAS in Animal Agriculture

**Faith Cullens-Nobis and Katie King**

Per- and polyfluoroalkyl substances otherwise known as PFAS or "forever chemicals" are a large class of manmade chemicals that are commonly used for their water, oil and stain resistant properties. These chemicals can be found in a wide range of products like firefighting foam, cosmetics, food packaging, non-stick cookware, carpeting, textiles, and more. Due to their widespread use, these chemicals can also be found in water, soil, fish, livestock, pets, wildlife and humans around the world. PFAS chemicals can also be found on agricultural land at varying levels, but more research is needed to identify the extent of this contamination.

PFAS are still in use today and don't break down significantly in the environment, but they can move, particularly through the water cycle. Some PFAS can build-up in our bodies, which can lead to health risks. Therefore, breathing, drinking or eating food contaminated with PFAS is a concern. Research is still ongoing to fully understand the effects that PFAS might have on health. Although more research is needed, some human health studies have shown that high exposures to certain PFAS may:

- Lower a woman's chance of getting pregnant
- Increase the chance of high blood pressure in pregnant women
- Increase the chance of thyroid disease
- Change the body's immune response
- Increase the chance of cancer, especially kidney and testicular cancers

### How do PFAS get onto farmland?

PFAS can enter farmland through several different pathways including land application of materials containing high levels of PFAS, such as biosolids, paper sludge, and tannery waste. Other pathways include irrigating with contaminated water, proximity to contaminated PFAS sites and potentially through the application of pesticides, fertilizers, septage, and precipitation, although more research is needed to understand the extent of soil contamination resulting from these applications. Since 2021, Michigan has implemented a PFAS interim strategy to limit the land application of biosolids with high levels of PFAS. Prior to 2021, some biosolids may have contained high levels of PFAS and have been applied to some farmland across the state. For more information about PFAS in biosolids, farms or septage, please visit: <https://www.canr.msu.edu/pfas/>.





## What can be done about PFAS contamination in soil?

Recent findings have demonstrated elevated PFAS levels in agricultural soils across the world due to inadvertent introduction through the application of biosolids, atmospheric deposition and irrigation with contaminated water. The current methods available for PFAS remediation from soil, like excavation followed by incineration, are not feasible for wide-scale agricultural usage. However, there is a lot of promising research on the horizon and there are some strategies available to help deal with PFAS contaminated land. For example, some crops readily uptake PFAS, such as grasses, while corn grain has very little PFAS accumulation. If you have some contaminated fields and some 'clean' fields, it would not be wise to graze animals on contaminated fields, but growing corn grain may be an acceptable practice.

Research on PFAS in agricultural systems is ongoing across the world, including at Michigan State University, however there is a shortfall of data in the literature on the bio-accumulation factors, transfer factors, and the health effects on plants and livestock. Because the nature of PFAS could lead to uptake and bioaccumulation in plants and livestock, even low levels of PFAS in the soils or irrigation water could result in elevated concentrations within crops and/or animals.

## How is PFAS in food being handled in Michigan?

Research does suggest PFAS may build up over time in animal tissues and could be present in varying amounts in their meat, milk, and eggs. In many cases, animals put on to clean feed and water have reduced PFAS secretion enough to produce saleable products.

Currently, there are no federal or Michigan based food safety standards for PFAS levels. However, some states and countries do have regulations or guidelines in place. Most food screening levels focus on PFOS (one specific type of PFAS chemical) concentrations in milk, beef and eggs because that is where the most research has been conducted. In Maine, the Center for Disease Control set an action level of PFOS in [beef](#) (3.4 ppb) and [milk](#) (210 ppt), which guides the decision to allow a farm's products to be sold in the commercial market. For comparison, in Europe, the regulatory threshold for beef to be sold is 0.30 ppb. The large difference between the values is due to different toxicity values used in the calculations. Expect these values to continue to decrease as we discover PFAS to be more harmful than initially thought.

MSU Extension is here to help producers impacted by PFAS contamination. MSU Extension has funding to sample agricultural soils and have confidential conversation on determining risk and strategies to mitigate PFAS contamination. Please contact Faith Cullens-Nobis at 517-388-1078 or [cullensf@msu.edu](mailto:cullensf@msu.edu) if you are interested in more information or in testing soil or water for PFAS.

## Michigan 4-H HealthCorps AmeriCorps is Hiring!

Marquette County MSU Extension has an open AmeriCorps position for the 2025-26 term! As a 4-H HealthCorps member, you will be essential in fostering healthy habits and positive relationships with youth in our community. HealthCorps members will teach workshops in classrooms, in after-school programs, and camps to promote mental, emotional, and physical well-being among youth.

This part-time position will require the member to serve 20-25 hours per week, starting February 18, 2026, and ending November 13, 2026. Members will receive a living allowance of \$12,000 (pre-tax) to be distributed bi-weekly and have student loan forbearance for qualified loans. Upon successful completion of service, an education award in the amount of \$3,697.50 will be issued. Interested candidates should submit a resume and cover letter to Liana

Pepin at [deisenro@msu.edu](mailto:deisenro@msu.edu)

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## New Educational Resource for Beginning Farmers to Learn by Doing

By: Vicki Morrone and Mariel Borgman

A team of sixteen beginning farmer educators from Argus Farm Stop, American Farmland Trust, Crosshatch Center for Art & Ecology, Detroit Black Community Food Sovereignty Network, Growing Hope, Michigan Food and Farming Systems, Michigan State University and MSU Extension has developed an innovative curriculum designed to empower both educators and aspiring farmers. Rather than offering conventional “how-to” instructions, this resource emphasizes learning by doing—through practical, hands-on activities, guided exploration, and self-reflection.

The curriculum helps facilitators guide learners through real-world experiences—such as farm visits, group work in gardens or fields, and experimentation in their own settings. This approach encourages beginning farmers to try, adapt, and discover what works best for them. With eight core topics, participants can explore a wide range of essential farming skills or dive deeply into one or two areas most relevant to their goals.

Topics include:

- Soil Health
- Land Access
- Produce Safety
- Farm Finances
- Marketing
- Urban Agriculture and Policy
- Integrated Pest Management (IPM)
- Pollinators



Additionally, two specialized curricula support beginning farmer educators in broadening their impact: Engaging Diverse Farmers and Peer-to-Peer Farmer Networks. Each topic provides three key components:

- A facilitator’s guide, which provides an overview of each module and activities, including background information to help facilitators understand the content, detailed step-by-step instructions for each activity, along with materials needed and preparation guidance.
- Participant handouts, which include defined key terms and step-by-step instructions for the activity. They also offer additional diagrams or worksheets to supplement the activity. Participant handouts are organized to be easily printed and distributed to facilitate the learning experience.
- Additional resources are provided to support further learning, which have been reviewed and recommended by beginning farmer educators from the project team to supplement the hands-on activities.

This comprehensive resource is free and open to all. Whether you’re an educator, a new farmer, or a community leader interested in agricultural learning, explore the full curriculum today at: [Home | Beginning Farmers](#)

For additional information contact:

Vicki Morrone, Beginning farmer and organic specialist at Michigan State University, [sorrone@msu.edu](mailto:sorrone@msu.edu) Mariel Borgman, Community Food Systems Educator, Michigan State University Extension, [mborgm@msu.edu](mailto:mborgm@msu.edu)







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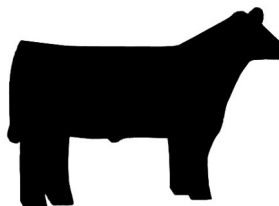
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Average price/100 wt. for 1 ton lots			



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