



MSU Extension

2022-2023

ANNUAL REPORT

Grand Traverse County

MSU Extension offers a broad range of research-based educational outreach to county residents. Over this past year, we've continued to innovate and have empowered families and individuals to live healthier lives, supported new and local businesses, created opportunities for youth leadership development and career exploration, helped farmers with business management and mental health, and much more. Our staff live and work alongside county residents, are rooted in community relationships and are responsive to community needs. Our partnership with you makes this all possible. On behalf of the MSU Extension team serving Grand Traverse County, thank you for another great year. We look forward to your continued support and hope you will be able to join us during one of our upcoming programs.

~ Jennifer Berkey, District 3 Director



481
Programs
Accessed by
Residents

Social Media
Reach
37,400

Indirect
Reach
5,040

Programming
Reach
4,814



SUPPORTING AGRICULTURE AND AGRIBUSINESS



**2022 Dirt to Glass:
Elevating Michigan
Wine from the
Ground Up**

**Over 180
attendees**



**Indirect
activities
reaching over
60,000**



Wine Grape Education Programs

- The connection between farming and fine wine was celebrated with the launch of **Dirt to Glass: Elevating Michigan Wine from the Ground Up**. Over the two days of the inaugural conference, **Dirt to Glass™ 2022** welcomed over 180 people from across Michigan and other midwestern states. As a collaboration between Michigan State University, MSU Extension, and industry innovators and educators this groundbreaking event succeeded in disseminating the most cutting-edge practical information in support of the Michigan grape and wine industry.

“It was the first time a program evaluated soil from this depth to help us understand what is going on in our vineyards... This confirmed a lot of what we knew and shed some new light on how we need to think moving forward.”

- Bryan Ulbrich, owner and winemaker at Left Foot Charley, Traverse City

- This year’s conference will be held in August 2023 with the intention of incorporating more vendors, sponsors, and industry leaders in our effort to elevate Michigan wine from the ground up.

- To increase accessibility to participants across the state, most educational activities were held as hybrid meetings and broadcast on-site over Zoom.

14 programs with 800 attendees funded by a \$5,000 Project GREEN mini-grant and \$21,746 from the MI Craft Beverage Council

- A variety of indirect activities succeeded in reaching over 60,000 people this year: 26 articles and weekly updates on the MSU Extension website and in local and national publications such as American Fruit Grower magazine, two journal articles in BIO Web Conference and Nature Portfolio, two public radio interviews on Brownfield Ag news and WCMU Public Radio, one educational video published on YouTube, one brochure on Michigan grape production and challenges, and management of Michigan Grape and Wine Industry and Dirt to Glass Conference Facebook and Instagram pages.

Wine-Grape Research Being Conducted in Northern MI

- **Modeling Michigan Grapevine Cold Hardiness** — In April 2022, we began monitoring the evaluation of grapevine’s cold hardiness by deploying 20 weather stations and base stations at project sample sites in northwest and southwest



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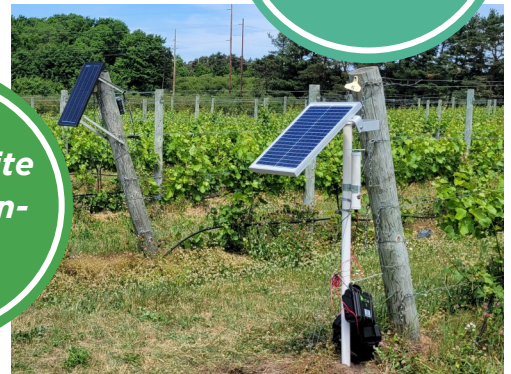
Over 315 tree fruit & wine grape producers

Northwest Michigan Orchard & Vineyard Show

Robotic laser bird repellent



Sampling site wireless sensor



Michigan. All sample sites' wireless sensor networks have been deployed to collect detailed temperature, humidity, and light intensity data. After harvest, when the grapevines are acclimating and preparing for the dormant season, dormant buds will be tested at the Northwest Michigan Horticulture Research Center (NWMHRC) for low-temperature exotherms using differential thermal analysis (DTA). Weekly sampling and DTA testing will continue until budswell in spring 2023.

predator and take flight to seek safety when the laser beam passes by. First-year results have been collected, and as each grape variety ripens at a different time, year-two results will be collected through the harvest season when the test varieties became fully ripe.

Northwest MI Orchard and Vineyard Show 2023

- The attendance for the annual Northwest Orchard and Vineyard Show was close to pre-pandemic numbers this January. We hosted over 315 tree fruit and wine grape producers to the Grand Traverse Resort. In addition to participants, we had over 50 vendors showcasing the newest equipment and products available for 2023. The lineup for educational speakers was top notch and included researchers on two national Specialty Crop Research Initiative projects from Michigan State University, Utah State University (USU), and Clemson University. Dr. Brent Black and his team from USU updated the crowd on some excellent new research using unmanned aerial vehicles to collect precise data in tart cherry systems. Dr. Todd Einhorn, from MSU, provided a recap of irrigation work conducted at the NWMHRC with the help student assistant. The show provided great information on tree fruit disease management strategies, and allowed Erin Lauwers, the new Integrated Pest Management (IPM) educator at the NWMHRC, time to present on her work.

Research project funded by a \$40,000 Project GREEN grant and \$20,172 from the MI Craft Beverage Council

- *Spore trapping for multiple vineyard pathogens* — Downy mildew, powdery mildew, and Botrytis bunch rot are devastating diseases of grapevines in Michigan, and the MSU fruit team proposes a team-based scientific approach to develop a monitoring system that limits the destructive effects of these vineyard diseases.
- *Robotic laser bird repellent* — A laser bird repellent is one of the more visual and high-tech solutions for bird control. This bird repellent method takes advantage of the natural instincts of birds; they see the approaching laser beam as a



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Survey data collected from 85% of total Michigan hop acreage

Michigan Hop Conference

Michigan Cherry Committee – Cherry Industry’s Distinguished Service Award winner

Jim Nugent, former Extension specialist



MI LOCAL HOPS



• The MSU Extension team shares the stage with the National Cherry Festival at the Cherry Industry Luncheon. This year, Michigan Cherry Committee awarded former Extension specialist Jim Nugent with the Cherry Industry’s Distinguished Service award. Since his days in Extension, Jim has remained active in the cherry industry and with MSU research projects. He has recently served as the Chair of the Michigan Tree Fruit Commission, a great grower-supported group that has invested in the tree fruit research stations at MSU.

Hop Research

- Extension educators, professors, specialists, and graduate students continue to secure federal and state funding for hop research in Grand Traverse County. Local partners and stakeholders include Alex Adams of Cambium Analytica, Mike Moran of MI LOCAL HOPS, and Scott Stuhr of Silver Spruce Brewery. Current projects include:
 - SAP Analysis to Improve Nutrient Management and Hop Quality
 - Integrated Practices to Managing Cone Diseases
 - Untapping Terroir: Experimental Evidence of Regional Variation in Hop Flavor Profiles
 - Testing and Managing for Hop Virus and Viroids
 - Management Strategies for Plant-Parasitic Nematodes in Hopyards

- Based upon requests from the Michigan Brewers Guild and the Hop Quality Group, MSU designed a survey instrument to collect cultivar, acreage, yield, and hop quality data from all Michigan hop growers. Those who responded accounted for 85% of the total hop acreage in Michigan. Brewers, growers, and MSU researchers will be able to use the information to improve plant selection, improve hop quality, incorporate Michigan hop varieties into new beer recipes, and more. Presentation of the survey results spurred conversation with the Michigan Department of Agriculture and Rural Development. We are in conversation to codify collection of this important data on an annual basis.

Hop Education and Outreach

- MSU Extension continues to deliver educational content in a variety of forms including conference presentations, the annual MSU Hop Management Guide for growers, peer-reviewed journal articles, and more.
- *MSU Annual Spring Hop Kickoff Meeting* — MSU Extension hosts the annual online Zoom meeting with hop growers, researchers, specialists, and additional stakeholders. The meeting includes important updates to the MSU Hop Management Guide, pest control options and recommendations, irrigation and fertility best practices, and updates from the Hop Growers of Michigan.



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Extension Master Gardeners volunteered 2,440 hours valued at \$73,078



608 pollinators were counted by 355 citizen scientists on flower planters in Downtown TC



65 horticulture questions were answered through the Grand Traverse County office

- **MSU Hop Bine and Dine Webinar Series 2022-2023, May-August** — MSU Extension hosts a bi-weekly online meeting that brings together hop producers, educators, scientists, and more to discuss current growing conditions, and best management practices.
- **Michigan's Great Beer State Conference & Tradeshow 2023** — This premier Midwest brewer-grower conference and tradeshow was held at the Radisson Plaza Hotel at Kalamazoo Center. It is organized and hosted by the Michigan Brewers Guild, MSU Extension, and the Master Brewers Association of the Americas-District MI.

MSU Extension Master Gardener Program

- MSU Extension Master Gardener Volunteers participated in over 40 volunteer projects in Grand Traverse County in 2022. These projects impacted county residents by improving quality of life, empowering youth, protecting waterways, and improving food security. In addition, providing flowering plants to support butterflies, bees, and other pollinators was the focus of several projects in 2022.
- Pollinator gardens at Hull Park and Clinch Park in Traverse City provided flowering plants to support bees and butterflies, along with educational signs so that visitors could learn about the importance of pollinators to our region.
- The most notable volunteer project was the Downtown Planters Project in partnership with the Master Gardeners Association of Northwest MI. Conceived in 2019 at the request of the Traverse City Downtown Development Association (DDA) to beautify and enhance our downtown for visitors, this project has expanded several times beyond Front Street as a series of pollinator gardens with an interactive Citizen Science project to count the pollinators that visit the planters. The project received the inaugural Community Partner award from the DDA at their annual dinner in October 2022.

2023 Michigan's Great Beer State Conference

550+ attendees from across the U.S.

Six speakers from MSU

\$200,000+ contribution to local economy



SUPPORTING AGRICULTURE AND AGRIBUSINESS

IN 2022, MSU EXTENSION ...



Delivered 39 presentations and educational programs to 1,200+ participants.



Hosted 11 agribusiness and farm financial decision-making sessions with 36 farmers.



Received more than 25,000 individual visits to the Managing Farm Stress website, extension.msu.edu/farmstress.



Trained 17 farmers in adult Mental Health First Aid.



"I will use open-ended questions in personal and working relationships to improve communication between me and my friends, family, and colleagues. I will be aware of the warning signs of suicide and use the skills learned on how to direct people to seek help if they are struggling. Thank you for a wonderful presentation."

- Mending the Stress Fence Presentation participant



Farming can be an incredibly unpredictable, dangerous and stressful occupation. That's why Michigan State University (MSU) Extension is committed to supporting agricultural professionals as they navigate tough times and make decisions that have an impact on their families, livelihoods, operations and farms. Combining farm business management expertise with mental and behavioral health expertise, MSU Extension's team of more than 20 dedicated professionals provides innovative resources and support. From teletherapy and financial services to free online education and community presentations, MSU Extension provides a variety of knowledge and training tools — not only to farmers, but also to farm workers, local farm organization chapters, veterinarians, Farm Bureau members, county commissioners and other key stakeholders in agriculture and agribusiness.

Community Presentations

MSU Extension offers a variety of in-person and virtual farm stress educational presentations. Ranging from 20 minutes to two hours, these presentations aim to improve knowledge, awareness and skills for agricultural audiences on farm stress issues, stress management strategies and mental health resources.

• Teletherapy

Through an innovative partnership with Pine Rest Christian Mental Health Services, MSU Extension connects farmers, farm families, agricultural professionals and commercial

fishers to online counseling services (extension.msu.edu/teletherapy). All therapists providing teletherapy through this partnership have an agricultural background or personal connection to agriculture, allowing them to understand the unique stressors of the farming industry.

• Mending the Stress Fence

Reduced farm sales, farm loss and consolidation of farms is creating stress on farmers and their agricultural communities all across Michigan. In an effort to support farmers and agricultural workers, MSU Extension created a new farm stress program: "Mending the Stress Fence." This short, virtual program can be delivered in 30 minutes and helps participants create self-awareness and provides them with tools and resources to help those in need. Topics highlighted in the three-unit course include identification and response to signs of stress, strategies for managing stress and suicide prevention resources.

- 100% of participants increased awareness of the signs and symptoms of stress.
- 98% of participants improved understanding of the eight dimensions of wellness.
- 96% of participants improved understanding of the warning signs of suicide.
- 4% of participants increased their confidence in how to ask open-ended questions.



DEVELOPING YOUTH AND COMMUNITIES

643 youth enrolled in clubs
 145 adult volunteers
 Over \$1,000,000 sold in the
 2022 Livestock Auction
 Over \$9,500 given in Project
 Giveaway
 938 in attendance at
 Education Expo

40
 4-H clubs



Making history with...




4-H Livestock Auction Reaches
\$1,000,000

Thank you to all youth, volunteers, board members, sponsors, and most importantly our AUCTION BUYERS!



2022 4-H Exploration Days

- Eleven youth ages 12-19 attended 4-H Exploration Days for two nights and three days to explore new subjects and receive support in their 4-H project areas on MSU's campus. Participants got to know other 4-H youth in their county as well as across the state as they engage in different sessions and test their independence in navigating campus. Sessions included: 4-H Livestock Marketing, Beginning Rabbit Raising, Introduction to Meat Evaluation, Super Collision of Atomic Nuclei, Artwork is Work – Turning Passion Into Profits, Advanced Junk Drawer Robotics, Public Speaking for Future Rock Stars, Everyone Can Code, Equine Skeleton 101, Orienteering, Working with K-9 Rescue Dogs, American Sign Language for Beginners, Let's Get Cooking: Sustainable Food at MSU.

4-H Special Interest (SPIN) Clubs

- A new 4-H summer SPIN club was created for youth in grades 3rd through 6th grade with a new partnership with the Botanic Gardens at Historic Barns Park. Participants spent three weeks learning about plant and soil science, insects, and wildlife habitat. At the end of the week participants worked to plant a 4-H butterfly garden and assist with harvesting vegetables grown at the volunteer led Giving Garden. Each participant was awarded a Jr. Master Gardener certificate for completing activities in this 4-H

curriculum series which encourages their participation in further 4-H gardening experiences.

- A Family Engineering Night activity training was led by MSU Extension educator Tracy D'Augustino in partnership with the MiSTEM Network in Northwestern Lower Michigan. A total of 13 community educators and formal teachers received a free activity supply kit to use in their classrooms or with the community as well as the free Family Engineering STEM curriculum.

Northwest Michigan Fair Highlights

- There were over 600 youth in 40 different Grand Traverse County clubs who participated in showmanship and market classes at the 2022 fair. Tremendous improvements (new rabbit barn, new equipment) were made to the fairgrounds following donations from the Paul T & Frances B Johnson Foundation. Through the support of the community over \$1,000,000 was purchased in 4-H market projects during the 2022 4-H auction.

4-H Community Outreach Events

- STEAM Makerfest
- YMCA Fall Festival
- Cherry Festival Parade



YOUTH - 3RD-12TH KNOWLEDGE AND BEHAVIOR CHANGE:

after completing a series of nutrition education classes:



Health Program Total Reach: 2,858

MICHIGAN'S HEALTH MATTERS



Nutrition Education at The Botanic Gardens at Historic Barns Park

- Through the development of a new partnership with The Botanic Gardens at Historic Barns Park, MSU Extension has offered nutrition education through presentations highlighting cooking with local seasonal produce.

and seedlings at the Sara Hardy Downtown Farmers Market and The Village at Grand Traverse Commons Farmers Market. This program is provided by Shape Up North of Munson Healthcare with nutrition education classes taught by Community Nutrition Instructors of Michigan State University Extension.



Sustainable Science in the Classroom

- MSU Extension provided support and resources to help guide a local middle school teacher to create a new class called Sustainable Science. This class will be available for all 5th – 8th graders at Kingsley Middle School and will include a curriculum focused on nutrition, cooking skills, composting, hydroponic growing, and other sustainable life skills. As part of the partnership, MSU Extension aided in curriculum development and with the materials needed to sustain this program.

The Fruit and Vegetable Prescription Program


- This program is designed to help patients with chronic disease create new healthy habits that align with the Dietary Guidelines. A healthy eating pattern includes fresh fruits and vegetables and is an evidence-based way to improve health and reduce the risk of chronic disease. Participants in the program are referred by physicians' offices and receive up to \$100 in tokens that can be used to purchase fruits, vegetables, herbs

"I started the program with my health status as poor. Very weak and losing weight. My health has increased to moderate. I am inspired by the recipes to try new foods and prepare food for myself again. I had a very low appetite. Being social at the class and farmers market has helped increase my appetite and feel happier. I am so thankful for this program."

"I really appreciate this program, the kindness and energy of presenters, the samples- great program for social security seniors and all folks that need support to buy local produce!!"



Pantry2Preschool



**182 families at
10 early childcare sites**



Connecting Early Childcare to Nutritious Foods

- MSU Extension continues to partner with the Father Fred Foundation on the Pantry2Preschool program. The program has grown to 182 families at 10 early childcare sites. The program is designed to connect families in need to nutritious foods. Meal boxes are provided to targeted childcare sites twice per month and include ingredients to create a nutritious family-friendly meal along with a recipe. Children at the participating sites also receive nutrition education.

“We have tried vegetables provided in the food boxes that my family would not have purchased or known how to prepare otherwise. This is a great way for us to try new foods.”

“I love how simple and quick, yet filling the recipe was. My family never tried lentil soup before. We really liked it. I am excited to add something new to my meals.”

“The food boxes help stretch my monthly food dollars. I am thankful for this program.”

- Pantry2Preschool Program Participants

Senior Project FRESH

- MSU Extension provided nutrition education classes to support Senior Project FRESH throughout the summer of 2022 in Grand Traverse County. This vital program for Grand Traverse County provides qualifying senior citizens with coupons to purchase locally grown fruits, vegetables, and herbs at farm markets across the state of Michigan. We utilized area partners for outreach efforts that included the Grand Traverse County Commission on Aging and Program of All-Inclusive Care for the Elderly (PACE) North. Along with the program, an educational component was provided to seniors on how to procure, prepare and store locally grown fruits and vegetables to increase dietary intake of much need nutrients. Throughout the farmers market season, we distributed 159 booklets and provided nutrition education sessions for 144 participants. This also included mailing out educational materials for participants with mobility or transportation issues.

Senior
Project FRESH
Market Fresh Food



FOSTERING STRONG COMMUNITIES



MSU Product Center Business Development

- The MSU Product Center and a coalition led by the Grand Traverse Conservation District leveraged nearly \$700,000 in grants to launch the Great Lakes Incubator Farm (GLIF). GLIF is a farm incubator program that makes available land and expertise to new and beginning farmers. The program is nationally unique in its partnership with the National Park Service.

- The MSU Product Center joined Oryana and Crosshatch to offer \$11,000 in zero interest loans to regional food and farm businesses. These loans help businesses scale to meet more demand for local food.
- The MSU Product Center joined a coalition led by Crosshatch to launch the region's first Carbon Farming Cohort. This peer-to-peer learning program helps farmers adopt climate resilient agricultural practices.

187 hours of counseling and research in service to 14 businesses with 77 employees

5 businesses 50% or greater women-owned

3 jobs created

1 new business start

1 new product launch

Over \$1,300,000 in combined annual sales

\$725,617 invested in 2022

\$1,00,000 in sales growth 

New Commissioner School (NCS)

- For over 50 years, the New Commissioner School program has provided county commissioners, both newly elected and returning, with the preparation they need to enter their new term prepared to lead their counties successfully. Several participants from Grand Traverse County participated in the NCS in 2022, which included online self-paced learning and an in-person session with plenty of opportunity for networking with participants from other counties. A new feature this year was round-table discussions, two of which were led by Rob Carson and Yarrow Brown, both of whom are based in Grand Traverse County.

Northern Michigan Counties Association (NMCA)

- County delegates to NMCA launched a successful hybrid format for 2022. In-person participation stayed strong, with



125 attendees

**BeBot
Beach Clean
Up Robot**

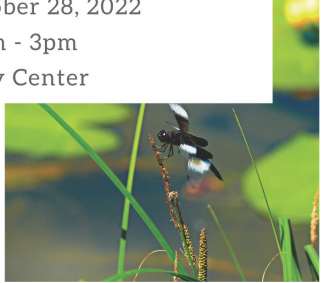


15TH ANNUAL FRESHWATER SUMMIT

Friday, October 28, 2022

9:00am - 3pm

Hagerty Center



several more able to participate via Zoom when they couldn't be there in-person. Participants share lessons learned in their counties, learn about topics currently impacting county government, and discuss the impacts of pending legislation on county government. A series of meetings from late 2021 through early 2022 explored both House and Senate bills aimed at solving problems with provision of Community Mental Health services. Other topics in 2022 included broadband, early childhood programs, state revenue sharing, OMA, the Northern Michigan Children's Assessment Center, and a tour of Camp Grayling.

Strategic Planning

- MSU Extension Governance educator John Amrhein facilitated a planning session for the Grand Traverse County Economic Development Corporation which assisted the board and staff in development of future plans and priorities.

Michigan Sea Grant Extension

- Dedicated to the protection and sustainable use of the Great Lakes and coastal resources, Michigan Sea Grant is a cooperative program of the University of Michigan, Michigan State University, and the National Oceanic and Atmospheric Administration. We fund research, education,

and outreach projects designed to foster science-based decisions about the use and conservation of Great Lakes resources. Efforts this year included:

- Work with The Watershed Center Grand Traverse Bay and City of Traverse City to initiate beach and marina plastics cleanup and education with new tools “BeBot” and “PixieDrone.”
- Co-planning the 2022 Freshwater Summit in October 2022 which had over 125 people in attendance.
- Responding to inquiries regarding fisheries education issues in East and West Grand Traverse Bay
- Work with Northwestern Michigan College on freshwater research and outreach.



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