

Bay County

2016 ANNUAL REPORT

MESSAGE FROM THE DISTRICT COORDINATOR

CONTACT US

We hope you enjoy reading this latest annual report outlining how MSU Extension in Bay County and throughout the state continue to make Michigan thrive as an excellent place to live, raise a family and conduct business.

MSU Extension faculty and staff translate the scientific information gleaned from MSU AgBio Research and other Campus Units into real world applications—something we've done for over 100 years.



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Throughout the history of the Cooperative Extension Service, founded by the Smith-Lever Act of 1914, MSU Extension has worked hard to support an environment of collaboration where innovation and creativity can flourish.

This report provides an overview of the variety of MSU Extension programming that residents of Bay County participated in over the last year. Thank you for your continued support of MSU Extension programs in Bay County.

Diane Smith
District 9 Coordinator
Michigan State University Extension



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DEVELOPING YOUTH AND COMMUNITIES

MSU Extension 4-H programs teach youth life skills that prepare them for the workforce and leadership skills that increase their likelihood of becoming civically active. 4-H'ers also demonstrate less high-risk behaviors such as drug use as well as avoid or reduce involvement with the court system.

Supporting STEM careers through youth programming

The future of Michigan lies, in part, in the hands of its students' abilities to excel in science, technology, engineering and mathematics (STEM). Science literacy among school-aged youth in Michigan is below the national average, directly impacting college Below are examples of MSU Extension programs that are intentionally increasing skills in these areas.

» **Rain Barrel Program**

Katy Hintzen (Sea Grant Educator) and Jodi Wrzesinski (4-H Coordinator) wrote and received a \$1000 grant from the Saginaw Bay Watershed Initiative Network. Washington, Hampton and MacGregor Elementary were locations for the project and 150 youth and 30 teachers were involved as follows:

- **STEAM Education:** An MSU Extension expert provided education about water quality/ stewardship, watershed dynamics, green infrastructure, run off pollution, and water conservation.
- **Rain Barrel:** Each school received a rain barrel. Youth involved in this project painted the barrel with a design using their artistic creativity. Rain barrels were being displayed at various public locations throughout the summer and will be placed back at the school in the fall to collect water to be used at the school.
- **Story Display:** Youth created a story telling about a raindrop's journey from cloud-to-bay and were placed on display plaques. The plaques accompanied the rain barrel while on display over the summer and then returned to the school in the fall with the rain barrel.

» **Family Science and Literacy Programs**

Bay County 4-H Family Science and Literacy educational programs were organized with area schools in Bay County. These afterschool programs utilize hands-on science and literacy activities to encourage families learning together. These events were held at MacGregor Elementary, Handy Middle School and Lindsay Elementary. Over 100 youth and parents participated in these family science and literacy programs in Bay County.

When you support MSU Extension 4-H programs, youth participants learn life skills that prepare them for the workforce – especially for highly sought after jobs in science, technology, engineering and mathematics (STEM).



From once-a-month family workshops and in-school science lessons to after-school technology training and classroom gardening, MSU Extension supplies Michigan schools and the families they serve with the support they need to be successful.

In the U.S. today, many job openings for science, technology, engineering and mathematics (STEM) -related positions go unfilled due to a lack of qualified applicants.

Developing Youth and Communities, continued

- » **4-H Tech Wizards**— Jodi Wrzesinski received a \$40,000 grant to continue the 4-H Tech Wizards program in Bay County. The program was facilitated at Washington Elementary and Handy Middle School and is designed as a small group mentoring program focused on STEAM activities (Science, Engineering, Art, and Mathematics). The program director, Holly Julian, matches a positive adult role model per every four youth within the program. The youth and adults meet for two hours weekly throughout the year. In 2016, 4-H Tech Wizards staff recruited three adults mentors at Handy Middle School and eight adult mentors at Washington Elementary. The 4-H Tech Wizards program reached over fifty youth in 2016.

Learning Life Skills and Leadership

- » **Bay County 4-H Clubs** — 4-H Clubs are the foundation of every successful 4-H program. They provide volunteers and youth with unlimited opportunities for learning, relationship building and fun. 4-H clubs can take many different forms. They can be single project clubs, afterschool clubs, in-school clubs, or community clubs. Regardless of the structure, the primary purpose of 4-H clubs is to support the development of each youth participant's full potential. The club structure is designed to help volunteers and members build significant and lasting relationships. In 2016, Bay County had 14 active clubs with a total of 213 members and 50 leaders involved in those clubs.
- » **Bay 4-H Cloverbud Camp** — In July, Jodi Wrzesinski organized and implemented the 4-H Cloverbud Camp for youth ages 5-8 years old. The camp included 23 youth campers and 5 teen counselors ranging in age from 13-17 years old. The theme for camp was “science adventure” and involved science experiments and hands-on activities. The youth enjoyed field trips to local businesses in downtown Bay City such as Painterly Pottery, Studio 23 and Bay City State Theater. There were also special guests such as, Alicia Wallace from Gypsy Moth Suppression, Jodi Schulz, and Jessica Foss from MSU Extension.
- » **4-H Winterfest**—Jodi Wrzesinski is the chair of the planning committee for the state-wide educational program 4-H Winterfest held at Kettunen Center in Tustin, MI. This hands-on event is open to youth 8-12 years old and includes many indoor and outdoor educational activities. Bay County had 10 youth attend and 5 adult volunteers attend.

MSU Extension provides resources aligned with Michigan science education standards to teach confidence, leadership and responsibility related to STEM.



Developing Youth and Communities, continued

- » **4-H SPIN Clubs**—Short Term Special Interest program or SPIN Clubs are clubs that meet between 6 and 12 week period of time. The club specializes in one specific topic of interest. During 2016 Bay County 4-H had a successful 4-H Archery program winter. Over 40 youth learned archery skills from trained instructors at the Bay City Bowman club in Linwood. Bay County also held a 6 week sewing club for 7 youth. Members of this club learned beginning sewing skills from caring 4-H volunteers.
- » **Saginaw Bay Fishing Camp** — In July of 2016, 40 youth ages 8 to 12 spent four days learning about fish biology, aquatic ecology, and angling skills with hands on activities and of course lots of fishing excursions. In addition, 100 people attended our Family Fishing Night at the end of camp where youth were able to share their new fishing skills with their families. Camp participants gained expertise in knot tying, proper casting technique, how to handle live bait, and how to prepare their catch. They also learned about the science behind fisheries and high quality habitat including the impact of invasive species, the importance of a thriving benthic invertebrate community, and how to identify and classify Great Lakes fish. When we surveyed parents at our Family Fishing Night, 96% strongly agreed that their child learned new skills and knowledge at camp and 84% strongly agreed that their child gained interest in fishing as a result of their camp experience. Programs like Saginaw Bay Fishing Camp foster a lifelong passion for angling among our youth.
- » **Bay County Fair**—The Bay County Fair took place in August. Jodi Wrzesinski planned and implemented events that involved over 100 youth. Over 50 youth sold animals in the Livestock Auction which brought in over \$60,000 to be used for things such as paying for college or purchasing animals for next year. Many local businesses, elected officials, agri-business, and families helped support this event.
- » **Challenge U**—Jodi Wrzesinski was on the planning committee for this state-wide healthy living educational program Challenge U held at Kettunen Center in Tustin, MI. This hands-on event is open to youth 8-12 years old and included many healthy living educational programs as well as cooking for kids classes. Bay County had 5 youth attend and 2 adult volunteers attend.
- » **4-H Exploration Days** — Exploration Days is for young people aged 11 to 19 and involved about 2,500 participants in Michigan. Bay County had 8 youth and 2 adult chaperones attend this year. Exploration Days is designed to help young people learn new ideas and techniques, increase their interest in and readiness for college, explore career options, and develop their decision making, and independence and teamwork skills. They also meet and interact with people from different backgrounds and areas throughout Michigan. 4-H staff and volunteers are on hand to provide guidance and oversight.

MSU Extension programs such as the Michigan 4-H Youth Conservation Council (M4-HYCC) allow Michigan's youth to get involved and become community leaders, but also show them how to be engaged in the legislative process.

Keeping People Healthy

Teaching valuable healthy-eating skills

In 2015, 16.2 percent of people in Michigan were considered to be living below the poverty level. More than 1.5 million Michigan residents qualify to receive Supplemental Nutrition Assistance Program (SNAP) benefits.

MSU Extension's Supplemental Nutrition Assistance Program Education (SNAP-Ed) programs reach 168 adults and 822 youth in Bay County who participate in a series of educational sessions, and another 574 adults and 383 youth in the county who participate in one time presentations.

Through our programs, adults and youth learn how to 1) make the most of their food dollars, 2) understand food labels, 3) make healthy food choices, 4) prepare and portion food, 5) plan menus, 6) understand recipes and 7) keep food safe. The curriculums and teaching tools used to teach the programs include:

- Curriculums: *Eat Healthy Be Active*, *Cooking Matters*, *Project Fresh*, *Healthy Harvest*
- Curriculum Highlight: Show Me Nutrition Curriculum—Youth programming continues to be a cornerstone of educational programming in Bay County. Children participate in a six-week series of lessons about important health themes such as nutrition, food safety, physical activity, media influence and body image.
- Tools: Fender Blender—Youth can volunteer to pedal a bike whose back fender is attached to a blender filled with healthy ingredients. In this way, healthy fruits, vegetables and yogurt smoothies are made from a human powered smoothie bike that participants can sample.
- Partnering Schools: Bay City Public Schools, Bangor Public Schools, Washington Elementary School, Lindsay Elementary School, State Street Academy
- Faith-based Organizations and Other Community Partners: Boys and Girls Club in Pinconning, Michigan Works Bay County, Dow Bay Area Family Y, Bay City Housing Commission, Bay County Housing Commission, Bay County, Head Start, Bay County Summer Recreation, Bay County Juvenile Home, Bay City Boys and Girls Club, Delta College, Bay County WIC, Country Meadows Senior Apartments, Hampton Meadows Senior Apartments

MSU Extension's Supplemental Nutrition Assistance Program Education (SNAP-Ed) programs teach adults how to make the most of their food dollars, by developing skills such as menu planning, understanding recipes and keeping food safe.



Participants learned about the nutrition and health benefits of foods to feed their families in healthy ways.

ENSURING SAFE AND SECURE FOOD

MSU Extension's enhances residents' access to an adequate supply of safe, affordable food. Program participants focus on food safety measures, learn proper food preparation and food preservation techniques, and work with community partners together to strengthen access to healthy food supplies. This leads to a healthy population, which in turn helps keep health care costs in check and our communities viable.

Teaching residents about food safety

ServSafe certification was also taught by MSU Extension with 3 Bay County residents completing the 8 hour course and another 24 residents taking Food Safety as part of a Eat Healthy Be Active series.

MSU Extension Reducing foodborne illnesses

Food preservation is both a popular hobby and a small business opportunity, but people who preserve food without following scientifically proven food preservation techniques increase the risk of foodborne illness. As a result of MSU Extension food safety programs, individuals now use safer food handling, preparation, storage and preservation techniques. This reduces medical expenses, reduces food recalls and contributes to the financial stability of food businesses. This benefits other community members by decreasing the economic costs of foodborne illnesses, estimated at \$6.9 million in 2000.

47 Bay County adults enjoyed the following Food Safety courses MSU Extension offered:

Preserving Food at Home—Canning Basics

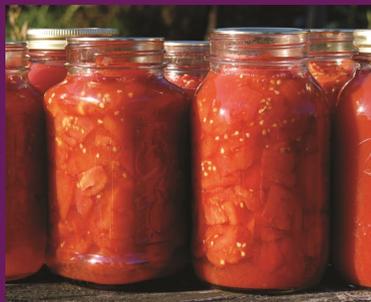
Fresh Pack and Fermenting Pickling Methods

Canning Jams and Jellies

Blanching and Freezing

Drying Fruits, Veggies & Herbs

MSU Extension efforts in ensuring safe and secure food lead to a healthy population, which in turn helps keep health care costs in check and our communities viable.



Keeping Businesses Strong

MSU Extension and the MSU Product Center help Michigan entrepreneurs develop and commercialize high-value, consumer-responsive products and businesses in the food, agriculture, natural resources and bioeconomy sectors. This fuels the economy by creating and retaining jobs, and helps ensure a healthy tax base.

Michigan's growing craft beer industry, made up of dedicated small business owners, is improving the economy and instilling a sense of local pride in regions throughout Michigan.

Meeting the needs of Michigan specialty food businesses

Consumers are eager to purchase made-in-Michigan products, and small businesses in Michigan are attempting to meet this demand by using all Michigan-made ingredients in their products. Michigan's growing specialty food businesses, made up of dedicated small business owners, are improving the economy and instilling a sense of local pride in regions throughout Michigan, which are seeing their locally made food get national attention.

MSU Extension Educator, Frank Gublo, provided the following for 4 Bay County residents:

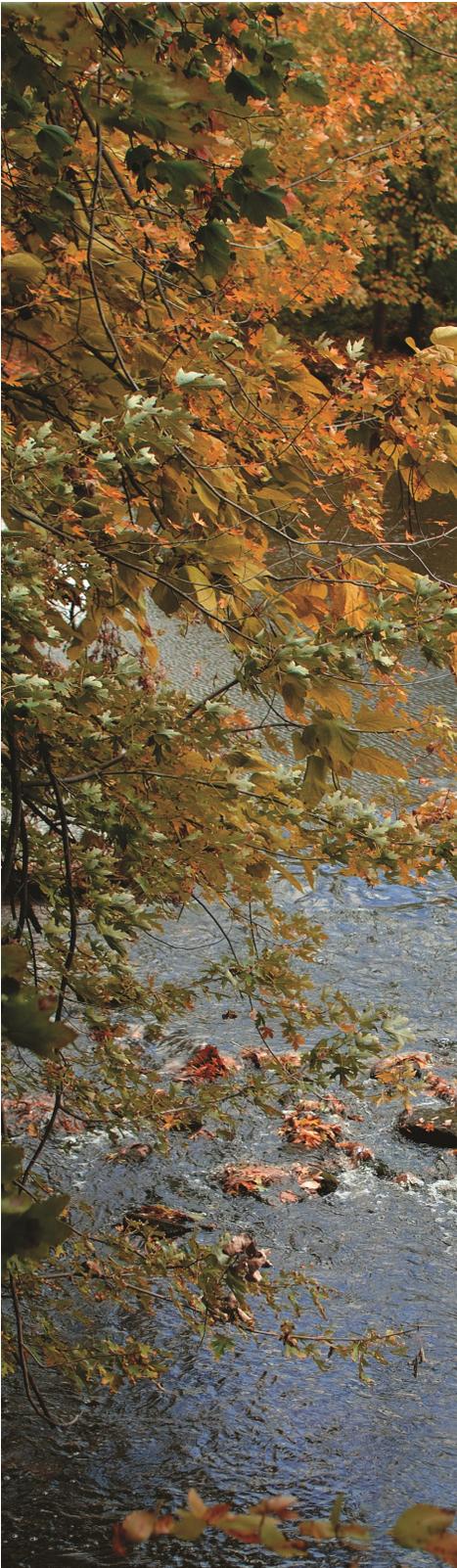
- ⇒ Gave a client from Munger assistance in farm business planning
- ⇒ Provided business counseling for a beginning farmer who wanted a value added agriculture product
- ⇒ Worked with an urban ag start-up to assist in determining the best crops to sell down in the Detroit market
- ⇒ Provided business counseling regarding financing a variety of urban ag projects

Bay City Food Cooperative

MSU Extension and the MSU Product Center has the USDA Cooperative Development Grant. In Bay County, the Product Center team is actively involved in assisting county residents in the establishment of the Bay City Food Cooperative. When launched, the Cooperative will provide healthy and local food in a grocery store setting. The Product Center team has assisted in developing the legal framework for the Cooperative and will continue to assist in identifying local food producers who will market their product in the Cooperative store.

Michigan brewers are looking for high-quality, affordable malt and hop products with consistent quality and availability.





Natural Resource Protection

Phragmites & Invasive Species Workshops

Few invasive plant species have managed to change the Saginaw Bay shoreline as much as *Phragmites australis*, also known as common reed or simply *Phragmites*. Over the past few years, several *Phragmites* treatment projects have helped reclaim Saginaw Bay shoreline and wetland habitat from this invasive grass.

MSU Extension Educator, Kay Hitzen, organized a series of workshops for **37 local residents and landowners** in Bay County to provide information on invasive species and in particular *Phragmites*. Practical information was given for landowners on how to treat *Phragmites* on their property and how to enroll in larger group treatment programs.

Drill Conductor Training courses

Four Bay County residents participated in the Michigan Sea Grant coordinated Drill Conductor Training courses. The courses were held throughout the Great Lakes region to help Great Lakes commercial fishing vessel captains fulfill U.S. Coast Guard regulations related to instruction, drills and safety orientations, and onboard emergency instruction.

Bay Area Chamber of Commerce Leadership Class Natural Resource Session

Twenty-three residents attended an educational session on current natural resource challenges in the Saginaw Bay watershed centering on nonpoint source pollution, invasive species, public stewardship, and habitat preservation and regional efforts to make progress in addressing challenges. Michigan's natural resources – water, forests, fisheries and wildlife – are economic drivers and important to our quality of life. Our programs improve public understanding of Michigan's natural resources, help landowners and communities use those assets for sustainable long-term social and economic development, conserve natural resources for future generations, and broaden stakeholder engagement in natural resources decision making.



Natural Resource Protection, Continued

Lake Huron Regional Fisheries Workshops

MSU Extension and Sea Grant educated local fisheries stakeholders with fisheries research and management agencies. A workshop was delivered in Bay City on April 19 where 27 local participants included anglers, fisheries-related businesses (charter captains, bait shop owners, commercial fishing operators), resource management interests, educators, and media.

1986 Flood Project

A new project spearheaded by Michigan State University and Michigan Sea Grant will commemorate the 30th anniversary of the 1986 storm and help communities in Bay County take a proactive approach in preparing for future storm events.

The project includes an online interactive map showcasing firsthand accounts of the 1986 storm as well as several promotional events in communities that were heavily impacted by the flooding. Residents who lived through the 1986 storm can submit photos and written descriptions of their experiences to be included in the project. All of the historical documents and accounts submitted to the project will be archived in perpetuity at the Bay County Historical Society.

SUPPORTING AGRICULTURE AND HORTICULTURE

Michigan agriculture continues to be a growing segment of the state's economy. MSU Extension teaches producers profitable and efficient business production practices while learning to optimize and reduce the use of pesticides and fertilizers to conserve and protect water resources. The number of households raising a portion of their own food and raising livestock or gardening for pleasure or relaxation continues to increase as well.

- » **Sugarbeet Advancement Program**—30 local farmers participated in the REACH sugarbeet agronomy sessions. The sugarbeet industry alone has a direct economic impact of over 550 million dollars. When compared to other sugarbeet production areas in the last 10 years, Michigan tops the charts for improved sugarbeet yields, quality and profitability. Much of these gains have come from extensive effort put forth by MSU Extension's Sugarbeet Advancement Program working with the industry. In 2016, 25 research trials were conducted in the Great Lakes Bay Area. These efforts included variety testing, improving management techniques, and solving production constraints.
- » **Bean and Beet Symposium**—This symposium was held on February 19, 2016 at Horizons Conference Center. This trade show/conference is for dry bean and sugarbeet growers and includes over 104 exhibitors and draws over 450 producers.
- » **Michigan Ontario Sugarbeet Research Reporting Session**—35 Bay County producers attended the research session. Generally 12-14 more speakers report at this event. It has become very popular to growers to attend this event because they can get a quick research update on a lot of different agronomy topics.
- » **Bay Thumb Vegetable Meeting**—11 Bay County growers attended the meeting to learn about the Food Safety Modernization Act for vegetables from research and extension specialists and Extension Educators.

When you support MSU Extension, you help participants learn profitable and efficient business and production practices.



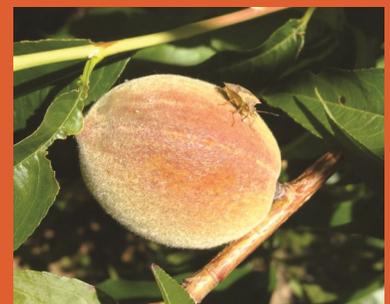
Breakfast on the Farm (BOTF) bridges the gap between Michigan's farmers and consumers who often have little idea where the food on their plates comes from.



Supporting Agriculture and Horticulture, continued

- » **Great Lakes Forage & Grazing Conference**—A critical program for the forage based farm industries of Michigan. Forages for livestock feed include alfalfa, grass, corn silage, and pastures. In 2015, Michigan had 970,000 acres for hay, 41,097 acres for pasture, and 260,000 acres for corn silage totaling 1,271,097. Forages are the third largest commodity crop in Michigan after corn and soybeans and represented \$417,570,000 in revenue for farmers in 2015. Forages are also an integral part of the dairy, beef, horse, sheep and other small ruminant industries in Michigan.
- » **Beginning Farmers Webinar Series**— 3 Bay County residents participated in the webinar seeking basic, start-up information for new farming enterprises. The audience was primarily people currently engaged, or considering engagement, in smaller scale commercial agriculture
- » **Integrated Pest Management (IPM) Academy**— 12 Bay County residents completed a two-day program covering the fundamentals of IPM and the resources and technology for sustainable agricultural practitioners. This program is a collaboration between several Extension field-based educators and campus specialists. Academy participants gain a solid foundation in sustainable pest management, knowledge of MSU and its partners' resources, and the ability to share this knowledge with their farm clientele. The Academy's long-term goal is to increase sustainable agriculture through expanded awareness and adoption of IPM strategies that improve crop efficiency, minimize pesticide use and enhance environmental quality.
- » **MSU Field Crops Webinar Series**— 3 Bay County residents participated in the six webinars where MSU Professors covered Overcoming Weed Management Challenges in 2016, Field Crop Disease Management Updates, Forage Improvement on a Budget, Nutrient Management Research in Field Crops, Evaluating Insecticide Seed Treatments and Cover Crop Termination Strategies.
- » **Soil Test Kits**—Test kits as well as additional publications on a wide variety of topics within MSUE's expertise are available at the local MSUE office or at shop.msu.edu (click the MSU Extension Bookstore link on the top right. This year the local office gave out 17 home owner kits and 19 farmer and food plot boxes.

The brown marmorated stink bug has a host range of more than 300 known plants, including fruits grown in Michigan.



Supporting Agriculture and Horticulture, continued

» **Michigan Master Gardener Program (MMGP) College—**

MMGP provides interested individuals an opportunity to take part in a focused, 13-week training experience that provides in-depth education in many aspects of horticulture including trees and shrubs, flowers, vegetables, fruit, soil, water, pests, indoor plants and lawns. Individuals who complete the training can get involved in local gardening activities through the Bay Master Gardener Association. Additional educational sessions residents participated in are listed below:

- 19 local residents took the Master Gardener College that consisted of four educational tours and one workshop
- 4 residents attended the Smart Gardening for Pollinators session

» **MSUE Lawn and Garden Hotline—**MSUE Consumer Horticulture educators and trained Master Gardener Volunteers are dedicated in helping answer any at-home garden questions. MSUE has an “Ask an Expert” button on the webpage msue.msu.edu, or call toll-free 1-888-MSUE4MI (888-678-3464). Staff and volunteers are available weekdays 9:00 am—12:00 pm and 1:00 pm—5:00 pm. You can also receive valuable information and sign up for MSUE’s Home Gardening news at migarden.msu.edu.

Proper animal composting works well as a way to deal with road kill, as an alternative disposal method for animal control units and as a disaster response when livestock and other animal mortalities require disposal.



During the 2014 Ag Expo, MSU researchers provided a demonstration for local municipality representatives of animal mortality composting.

Extension Educators Serving Bay County

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Jessica Foss

Health & Nutrition Program Associate

Frank Gublo

Greening Michigan Educator—Product Center/Community Food Systems

Katy Hintzen

Greening Michigan Educator—Michigan Sea Grant

Holly Julian

4-H Tech Wizards Staff

Karen Parker

Health and Nutrition Program Instructor

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