

Bay County

2017 ANNUAL REPORT

MESSAGE FROM THE DISTRICT COORDINATOR

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.

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.

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DEVELOPING YOUTH AND COMMUNITIES

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

The program taught youth about the importance of rain barrels and how they can directly help improve the quality of water in our rivers, streams and lakes. Over 150 youth and 30 volunteers were involved in the project and represent the Bay City community

21st Century Afterschool Program

MSU Extension 4-H staff conducted weekly programs at Handy Middle School and Hampton Elementary School with three 2nd grade classrooms each. Programs were STEAM based and focused on money, time, mapping, neutral buoyancy, zoonotics, airplanes, wind energy, rockets, density and volume, states of matter, plants and fractions, environmental education, Be the Best You and dissection.

School Family Enrichment Programs

- ⇒ Bangor Central held their first ever family science night with MSU Extension providing the content. More than 68 youth and their parents participated in this event where families learned and participated together in a variety of science based activities.
- ⇒ MacGregor Elementary School also held a Family Literacy Night where 77 attended. There were 13 activities for youth to participate in that came from the Heads In, Hearts In resources. MacGregor Elementary School also held a family enrichment science night where 99 attended. Over 15 science experiments were offered to youth and their families. Families also had the opportunity to win raffle baskets with science supplies to do at home. Every family that attended received a science toolkit that also had supplies to continue doing science at home.
- ⇒ Kolb Elementary School Family held a Science Expo. There were a total of four classrooms of youth totaling 99 youth who visited five different hands-on, educational tables that focused on earth, land, and air science. Tables were facilitated by MSUE staff and parents.

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.



Developing Youth and Communities

4-H SPIN Clubs—Special Interest (SPIN) Clubs focus on a particular topic of interest and meet 6-8 times over the course of about 2 months. **Over 649 youth** participated in these clubs. Topics included Floral Design, Sewing Basics, Pie Baking, and Break Making.

Saginaw Bay Fishing Camp — In 2017, **25 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, **their family members 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. Programs like Saginaw Bay Fishing Camp foster a lifelong passion for angling among our youth. Program partners were Saginaw Bay Walleye Club, The Conservation Fund, Bay City Public Schools, and the Bay City State Park.

Bay County Fair—The Bay County Fair took place in August. Holly Julian planned and implemented events that involved over **200 youth**. This year **88 youth** attended the fair and **80 youth** sold animals in the Livestock Auction. Many local businesses, elected officials, agri-businesses, and community members helped support this event. A total of **16 youth** received awards from Kiwanis in their project area.

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 **14 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.

Developing Youth and Communities

4-H Tech Wizards

Mentoring Weeknd Event: 10 youth and 4 adult volunteers attended 4-H Mentoring Weekend at Kettunen Center, a 4-H facility up in Tustin, MI. In addition to mentoring sessions, youth were able to participate in many activities such as kayaking, fishing, swimming, hiking, etc.

Number of Volunteers and Youth: Washington Elementary has 5 volunteers/mentors and 30 youth/mentees. Handy Elementary has 1 mentor and 35-40 mentees.

Educational Sessions: Tech Wizards meet weekly and educational sessions included: Airplane Design, Veterinary Science, Catapulting, Egg Drop Experiment, Self Defense, Solar Eclipse, Bridge Building, and much more

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 2017, Bay County had 14 active clubs with a total of 190 members and 30 leaders involved in those clubs.

Bay 4-H Cloverbud Camp — In July, 4-H Cloverbud Camp for youth ages 5-8 years old with 20 youth campers, 7 teen volunteers and 2 adult chaperones attending. Youth learned about healthy eating habits and explored downtown Bay City as they learned about their community.

4-H Winterfest—The state-wide educational program 4-H Winterfest was 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 21 youth attend and statewide over 250 youth attended

4-H Statewide Workshops—Bay County youth and adults have attended many statewide workshops over time. A sampling of the workshops and Bay County citizens that attended are as follows:

- ⇒ Real Colors Personality Profiles—14
- ⇒ Parliamentary Procedure Training—32
- ⇒ Stepping Stones Outdoor Educational Program—54
- ⇒ Shooting Sports State Tournament—14

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.



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

Developing Youth and Communities

Early Childhood Education

MSU Early Childhood Development provides education for families with children ages birth to five as well as their caregivers. Our services focus around literacy, math, art, science, discipline, healthy relationships, and social emotional health. This year we had 18 Saginaw County residents and childcare business employees registered for our seminars. Seminars were held on the following topics: Mindfulness, Positive Discipline, The ABC's of Early Literacy.

Social Emotional Health Research

15 residents attended a one-time presentation of "Stress Less with Mindfulness," focusing on the breath, the research supporting the benefits, and tools for daily practice. Partner Delta College, MI Primary Care Association, Northeast Michigan Community Service Agency, Dental Assistant Association Members



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

Keeping People Healthy

Teaching Valuable Healthy-Eating Skills

In 2016, 15 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 165 adults and 821 youth in Bay County who participate in a series of educational sessions, and another 671 adults and 744 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

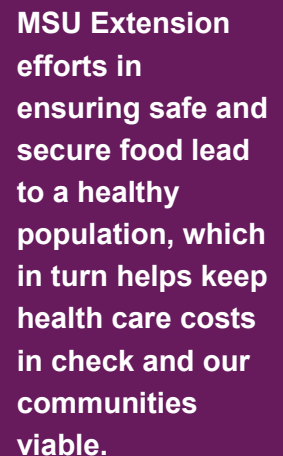
ServSafe certification was also taught by MSU Extension with 50 Bay County residents completing the 8 hour course. This class is for those serving food to the public where there must be one certified manager per food establishment in Michigan. A 4 Hour ServSafe class was held for the 70 Bay City Public Schools Food Service Staff. Participants received training from the 4 Hour ServSafe Food Handler curriculum.

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.

40 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
- Salsa



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.



Business and Local Government

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 Educators, Frank Gublo and Mark Thomas, provided counseling for 4 Bay County residents.

Land Use Planning and Zoning

In 2017, 7 residents in Saginaw County attended the training called Regulating Medical Marijuana Facilities: A Workshop for Local Government. The seminar reviewed current laws in Michigan and how they impact local government, including what options are available to local government.

Local Government Trainings

MSU Extension and Michigan Township Association collaborated to bring MSU Extension Educators and Specialists to provide educational training at their conference. Parliamentary Procedure Basics and Current Issues Affecting Michigan Local Governments: Local Government Finance Reform was taught with 9 Supervisors, Treasurers, Trustees and Clerks attending.

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.

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





Natural Resource Protection

Saginaw Bay Reef Project

Sea Grant assisted with education and outreach for organizations that wanted to restore reef habitat.

Runoff Risk Advisory Tool

The goal of this project was to inform farmers about runoff risk to their fields when they are applying manure or other fertilizers and reduce the impacts to Michigan inland waters and Great Lakes. The tool is now available to the public. Read the press release here: <http://www.michigan.gov/som/0,4669,7-192-47796-424412--,00.html>.

Coast Storm Project

Sea Grant working the East Michigan Council of Governments (EMCOG) and other partners to educate municipalities throughout the Saginaw Bay Watershed to be prepared for coastal storms. This project will bring awareness about the impacts of extreme storms to communities and tools to help communities prepare for such storms. Through 2017 Michigan Sea Grant will be producing fact sheets, webinars, and a workshop to educate decision makers throughout the Saginaw Bay Watershed about extreme storms.

Free Fishing Festival

This event at the Bay City State Recreation Area attracted approximately 1,200 people. Sea Grant set-up a booth where discussed invasive species were discussed with children and adults. The focused on Asian carp, quagga and zebra mussels, sea lamprey and European frog-bit. Seeing a live sea lamprey, sorting through shells and sea lamprey tattoos were all hits!

Aquatic Invasive Species Camp

Kip helped to organize a committee with many partners interested in developing an Aquatic Invasive Species camp for youth to be held at the Bay City State Recreation Area. The committee met several times. However funding for 2017 was not received. The committee is planning to continue working on the camp, with Michigan Sea Grant acting as fiduciary in 2018. The new Saginaw Bay Extension educator will assist with this project.

Educational Article

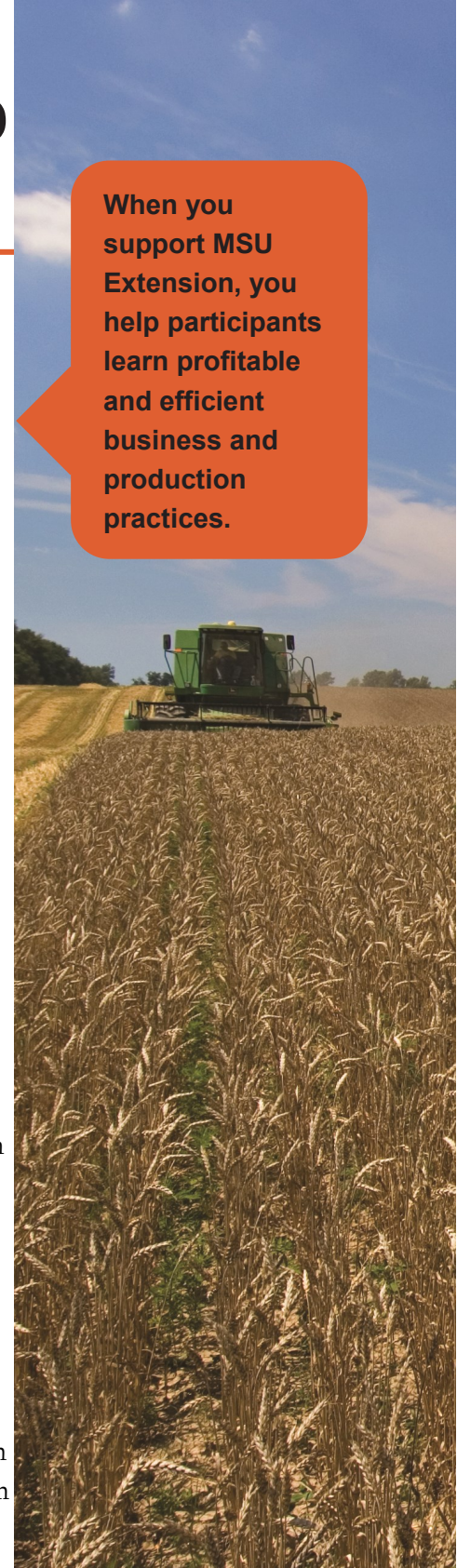
An educational article was written regarding flowering rush, which is an invasive plant spreading in the Saginaw Bay Watershed - see http://msue.anr.msu.edu/news/national_invasive_species_awareness_week_flowering_rush_msg17_cronk17

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.

- » **Sugarbeet Advancement Program**—40 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 2017, 17 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**—300 people attended the Symposium that was held in Saginaw County. The educational programs were conducted in two parts. The Dry bean educational program was held for 2 hours in the morning and included production information, marketing and new varieties. The 2 hour afternoon program was on Sugarbeet fertility, controlling cercospora leafspot and improving farm energy efficiency.
- » **Bay Thumb Vegetable Meeting**—An update was provided for 9 growers on disease control measures in vine crops, tomatoes, and onions, a two-year cover crop and fertility project at Forgotten Harvest Farms; weed control measures for vine crops, tomatoes, peppers, sweet corn, and onions; update on onion thrips control, and moth pests in sweet corn; an introductory talk on soil fertility and health for vegetables.
- » **Beginning Farmers Webinar Series**— 4 residents participated in the Collin Thompson presentation on tool systems, transplanting techniques, irrigation systems, topics related to hoop house management, and a variety of other small farm specific topics.

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

- » **Integrated Pest Management (IPM) Academy**— 17 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**— 9 Bay County producers attended the event. This event provided the following updates: Field Crops Recommendations for Soil Fertility, Weed, Insect and Disease Control, and the Market Outlook for 2017 and beyond. Specialists Christy Sprague, Chris DiFonzo, Marty Chilvers, Kurt Steinke, and Jim Hilker presented in 2017.
- » **Soybean Education**—2017 SMaRT Meeting, attended by 10 residents, where results from the 2016 SMaRT research trials were given and Mark Seamon presented information on managing marestail and soybean cyst nematodes.
- » **Breakfast On The Farm**—16 Bay County residents attended the Breakfast On The Farm in Gratiot and Ottawa County. The event offered a farm-cooked breakfast and self-guided walking tour of the farm. Educational stations are set up throughout the farmstead that provided information on how farmers take care of their animals, how they protect the environment and the steps they take to produce healthy and wholesome food.

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**

MGP 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:

- 13 local residents took the Master Gardener Re-Certification training
- 1 resident attended the advanced training

» **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 statewide on Friday’s from 9am -12pm. You can also receive valuable information and sign up for MSUE’s Gardening news at migarden.msu.edu.



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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