



Missaukee County 2017–2018 ANNUAL REPORT

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MESSAGE FROM THE DISTRICT COORDINATOR

Michigan State University Extension is pleased to bring you this report of the work we have done in Missaukee County during 2017. The partnership that has been developed through the Cooperative Extension system for over 100 years brings valuable federal and state resources to the local level to provide programming, research, and services in youth development, agriculture, community development, natural resources, health and nutrition, and so much more.

By receiving local support for our programming, we are able to bring the research and education from our state's land grant university to meet the needs of the local community.

Inside this report you will see the highlights of the work we have done during this past year. We look forward to continuing to serve the residents of Missaukee County for another 100 years.

Shari Spoelman, District Coordinator



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MEASURING IMPACT

CONNECTING WITH RESIDENTS

Youth Served	1,207
Youth in 4-H Clubs	160
Agriculture & Consumer Horticulture	165
Soil Tests	50
Nat'l Resources, Comm Development, Gov & Public Policy	29
Nutrition for low income residents (SNAP-Ed)	1,006
Other Health and Nutrition	50

DISTRICT 6 DIGITAL REACH

From Jan 1, 2017, to Dec 31, 2017, visitors from the 7 county district viewed more than 138,129 pages of rich, science-based content on the MSU Extension website (msue.msu.edu).

MSU EXTENSION'S EXPANDED DIGITAL REACH

Through combined face-to-face trainings, online webinars, social media, website interaction and electronic newsletters, MSU Extension has made more than 12.1 million connections. More than 149,000 adults* and 212,000 youth† participated in MSU Extension programming in the 2016-17 programming year.

More than 5.3 million people viewed more than 9.8 million pages on the MSU Extension website.‡ Of those, more than 1 million were Michigan residents. MSU Extension remains one of the most visited Cooperative Extension System education websites in the country.

MSU Extension also distributes a series of electronic newsletters that cater to residents' unique interests. Last year, nearly 1.9 million newsletters covering 90 topic areas were distributed to

about 53,000 email addresses.‡ You can sign up for these informative newsletters by visiting msue.msu.edu and clicking on "Newsletter Sign Up" or texting MSUE to 22828.

MSU Extension uses social media channels to reach people with educational content. Currently, Extension reaches more than 4,300 Facebook followers and more than 3,200 Twitter followers.‡ In addition, Michigan 4-H families and volunteers stay informed about activities through social media channels, including on Michigan 4-H Facebook with more than 4,700 likes and on Twitter with more than 1,456 followers.

*From ES237 Federal Report – Oct. 1, 2015, to Sept. 30, 2016

†From Michigan Extension Planning and Reporting System – Jan. 1, 2016, to Dec. 31, 2016

‡From July 1, 2016, to June 30, 2017

Developing Youth and Communities



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).

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). Extension programs help children develop early literacy skills that support school readiness. They learn leadership and decision-making skills in 4-H that increase their likelihood of becoming civically active. 4-H'ers also demonstrate reduced high-risk behaviors such as drug use, and learn to complete tasks, solve problems and seek any help they might need from peers and adults. 4-H involvement also helps participants avoid or reduce involvement with the court system. This helps ensure more young people succeed in school, attend college and contribute to their communities. More successful young people in communities results in greater tax revenues and consumer spending and increases the likelihood that young people will stay in, or return to, their communities.

4-H in Missaukee County

4-H Exhibitor Education Classes for the Missaukee Agricultural Youth Show

Dave Stroud and Laura Quist hosted an Exhibitor Education class series, free for the public. Target audience included youth show fair exhibitors who are not enrolled in 4-H clubs. To help better prepare them for a successful Show experience, education programs offered tips on showmanship, safe handling techniques with livestock, animal health, entrepreneurial skills, and biosecurity classes. These included:

- **Be Healthy at The Fair** (biosecurity) teaches skills to maintain healthy conditions for both people and animals at the fair or exhibition.
- **Indoor exhibit class** (Tips on best practices for photography, insect collections, poster making, leaf/flower pressing projects.)
- **Livestock nutrition**
- **PQA** – Swine education class designed to teach best practices to promote food safety.
- **Marketing** – using life skills such as goal-setting, budgeting, and communication to help exhibitors break even with your market animal project.
- **Dairy fitting and showmanship** – prepare youth for showing their animal to judges and knowledgeable answering the judge's questions about their animal and the care it needs.



Whether it is written, spoken or visually represented, the way we express ourselves makes a big impact on our daily lives at home, work and play.

4-H Clubs

Most of Missaukee's 4-H clubs are livestock-based project clubs. Many participants chose to celebrate their projects by participating in the Youth Show, or moving on and showing at regional and state competitions. Many of our volunteer leaders also serve as superintendents for the Youth Show, helping to support this county-wide celebration of youth and agriculture. Missaukee's 2017 4-H clubs and their leaders included:

- Canine 4-H Companion Club—canine companions, dog agility, training, and knowledge dog club, Katiane Myers (Youth Show superintendent)
- Backyard Poultry Club, Cindy Jones and Haylee Durga (superintendent)
- Missaukee Hop-Alongs—rabbit club, Jennifer Low (Youth Show superintendent)
- Goat Getters 4-H Club—goat club, Cindy Jones
- Missaukee 4-H Little Moo-vers—steer club, Chelsea Smith (Youth Show superintendent)
- Missaukee Moo Crew—dairy club, Lynnae Dick
- Crazy Crafters 4-H Club - indoor exhibits, Cindy Jones
- Indoor Exhibits, Laura Quist (superintendent)
- P.I.G. 4-H Club—swine club, Tammy Gandolfi

Not all 4-H clubs are animal-based or Youth Show-based; programming can be in ANY content area. The Babysitting SPIN (Special Interest) Clubs are a good example.

Babysitting SPIN Clubs at Lake City and McBain Middle Schools

Babysitting clubs are designed to teach middle school age youth about the responsibilities of babysitting and becoming a capable, caring, trustworthy and responsible sitter. These clubs help youth develop the confidence needed to handle situations that could happen when babysitting, and prepare youth in the business aspects of babysitting.



Butterfly Lifecycles and Habitats

Laura Quist brought live insects to share and led 100 McBain kindergarteners on an adventure into the community pollinator garden adjacent to the school grounds. The event also featured the tagging and release of Monarch butterflies through a citizen-science program called Monarch Watch.



Developing Youth and Communities, continued

Archery

Blazing Arrows 4-H Archery Club – Once again, club leaders Dale Mosher, Tony and Theresa Manganello ran an outstanding 4-H program. This club hosts an annual regional archery tournament at Festival of the Pines. The Blazing Arrows also compete at the 4-H State Shooting Competition each July. This year, all 16 participants came home with top 1st-3rd medals in their divisions.

BLAZING ARROWS 4-H CLUB

Gain skill through practice, dedication and hard work. Compete at state 4-H archery competitions.

Club Leaders: Dale Mosher, Teresa and Anthony Manganello

For more information contact Missaukee 4-H at 231-839-4667.



2017 4-H State Shooting Sports Competition - 16 youth received medals!

Communication Expansion Effort

The 4-H office provides newsletters, emails and social media postings to create awareness and remind residents of clubs, workshops, training events, activities, and scholarships. Newsletters are available online at the county's 4-H website and Facebook page.

Exploration Days

This fun MSU pre-college program could be the highlight of the summer - it could even change your life! About 2,500 youth (ages 11-19) and chaperones from across Michigan attend annually for a 3-day overnight experience on the MSU campus. Participants chose from nearly 200 classes and activities. Sessions are taught by people who know their stuff, including MSU faculty members, 4-H volunteers and staff members and other experts. It's not all sessions! There's plenty of time for fun, including swimming, skating, souvenir shopping, exploring, bowling, basketball—even a great dance Thursday night. 8th, 9th and 10th graders who attend this session (or Michigan 4-H's other pre-college experiences) are eligible for a \$2000 scholarship applied to their first year at MSU.



States' 4-H International Exchange Programs

Missaukee 4-H member Dereck Kamphouse participated in the States' 4-H International Exchange Programs by hosting a Japanese exchange student. As one of the pioneers of international youth exchange, 4-H has more than 40-years' experience helping youth and families discover a global perspective while living an unforgettable experience.

Ensuring Strong Communities

100th Anniversary of Extension in Missaukee County



Missaukee County MSU Extension celebrated 100 years of providing educational programs to county residents in 2017. MSU Extension staff highlighted Extension programs offered both past and present in several articles for the Missaukee Sentinel and Cadillac News.

A historical display was set up at the Missaukee District Library in November to show some of the significant contributions by Extension to the county over the past 100 years.

Reducing foodborne illness through food safety education of individuals and small businesses

In Missaukee County, participants were involved with classes for Cottage Food Law as well as a food preservation class. Also, food safety related questions are answered regularly through phone calls and eXtension, an online Extension resource.



Impacts of MSU Extension's food safety education:

- 99% of participants report they will follow research-based and tested recipes for home food preservation.
- 79 percent can properly identify controlling times and temperatures.
- 89% know correct methods of cleaning and sanitizing surfaces.

Don't Guess - Soil Test!

MSU Extension provides soil testing services for home gardens and lawns, field crops and wildlife food plots. For home owners, a postage paid self-mailer is available for purchase that makes soil testing a breeze. After collecting the soil sample, customers simply put the envelope in the mail and then expect results from the lab in approximately 10 -14 days. For field crops and food plots the customer is responsible for mailing the samples to the lab and again, they can expect results within two weeks. Soil testing ensures that the appropriate amount of fertilizer and lime is applied, which is good for the pocketbook and the environment!



Keeping People Healthy



Encouraging healthy behaviors helps reduce food and health care costs by helping prevent chronic health conditions and providing safe environments throughout a person's life span.

Fostering Health through Nutrition and Physical Activity

Our Challenge

Obesity has important consequences on our nation's health and economy. It is linked to a number of chronic diseases, including coronary heart disease, stroke, diabetes, and some cancers. Among adults, the medical costs associated with obesity are estimated at 147 billion dollars. According to The State of Obesity: Better Policies for a Healthier America released in 2017, Michigan has the 10th highest adult obesity rate in the nation. Michigan's adult obesity rate is currently 32.5 percent, up from 22.1 percent in 2000 and from 13.2 percent in 1990.

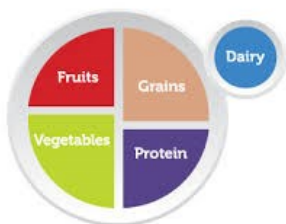
Healthier Lives through Nutrition Education

Michigan State University Extension supports individual and community level, or public health approaches, to prevent obesity. Through the United States Department of Agriculture Supplemental Nutrition Assistance Program Education (SNAP-Ed), we provide exemplary nutrition and physical activity education for limited resource participants where they eat, learn, live, work, play, and shop. Program and outreach efforts aim to increase the likelihood limited resource youth, adults and seniors make healthy food choices within a limited budget and choose physically active lifestyles consistent with the Dietary Guidelines for Americans.

\$1 = \$10



EVERY \$1 SPENT ON NUTRITION EDUCATION SAVES AS MUCH AS \$10 IN LONG-TERM HEALTH CARE COSTS.



NUMBER OF PARTICIPANTS REACHED THROUGH NUTRITION EDUCATION

397
Adults



609
Youth

Keeping People Healthy, continued

"Dear MSU Extension, Thank you for coming to our class. I have learned more about healthier food choices. I also learned how to read labels and what to look for when I go shopping myself. I really like the grilled chicken with the cornflake breading. It was easy to cook after learning what to do. Best part was it was a healthier alternative for chicken nuggets. Even better, it tasted great."

Programming Impacts.

For youth and adults who took part in series-based classes, increases were reported in areas of behavior.

There have been notable successes as a result of our direct education in the community. Program Instructor Denise Gilde draws from evidence-based curricula to reinforce healthy eating and physical activity promotion among youth, adults and seniors throughout Missaukee County.

One noteworthy success has been our partnership with

Lake City High School. Denise works with teens to support and encourage healthy eating behaviors and food preferences. The 6-lesson curriculum helps middle and high school-aged youth become self-sufficient in the kitchen while teaching healthy habits that will last into adulthood. Teens can have a positive influence on their families and friends to encourage shopping for and preparing healthy foods. Teen Cuisine is one of

several other programs delivered in Missaukee County in 2017.



several other programs delivered in Missaukee County in 2017.

Making the healthy choice easier - Supporting Changes to the Policy, System and Environment

MSU Extension works to create a culture of health and wellness by providing coaching at the organization level. We provide technical assistance in assessing the environment, including policies and the physical space, creating an action

plan, and implementing the action plan to work towards best practices related to nutrition and physical activity.

Partners

Local partnerships are critical to the success of our work. Relationships with Lake City Area Schools, District 10 Health Department, the Missaukee Library, Little Blessings early child care and Lake City preschool are some of the many partners that help support and host our effort to reach Missaukee individuals and families.

I Really Appreciate you coming in, to Teach us about Healthy Foods. Thank you for teaching us the Health benefits + the non Health benefits about foods. Thank you for the Trip to Foster's. Also for the Cook off, That was Fun. And Once I was thankful for you coming and teaching about animals.

Supporting Food and Agriculture



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

Michigan agriculture continues to be a growing segment of the state's economy. The production of commercial food and nonfood agricultural operations is growing rapidly. The number of households raising a portion of their own food and raising livestock or gardening for pleasure or relaxation continues to increase. When you support MSU Extension, you help participants learn profitable and efficient business and production practices. Participants also learn how to optimize and reduce the use of pesticides and fertilizers, and how to conserve and protect water resources. This education leads to better use of time, money and human capital, and helps retain and create agricultural jobs. These measures strengthen Michigan's economy while connecting farmers to local food opportunities and global markets. In this way you help MSU Extension encourage growth in a sustainable and prosperous Michigan food and agriculture system.

Farm Financial Management

Dairy farm milk prices have been depressed for several years. MSU Extension offered programs and resources to help families deal with financial stress on their dairy farms.

Milk Check Economics: The on-farm milk prices are impacted by several factors – federal milk marketing programs, cooperative/processor aspects and on-farm specifics. This meeting looked at the features of dairy farm milk checks and how each factor is calculated. By understanding the milk pricing system, dairy farmers can determine what aspects of their milk price they can influence.

Dairy producers, agribusiness professionals and agricultural lenders attended this meeting in Cadillac on December 1, 2017 (9 participants from Missaukee County). Presentations were made by Dr. Chris Wolf, MSU Dept. of Agricultural, Food, and Resource Economics, and Kathy Lee, MSU Extension dairy educator.



In addition, Shannon Lindquist, MSU Extension educator, provided information about resources available to help people dealing with stress, including the financial stress being experienced by some dairy farm families.

Individual Farm Financial Assistance: MSU Extension educators worked individually with several Missaukee County dairy farms to identify opportunities to improve production efficiency and their financial status. Financial analysis tools were used to monitor various measures of profitability and develop projected cash flow budgets.

Supporting Food and Agriculture



Christmas Tree Production

Reducing coning in Fraser fir

Cones are a major liability in Christmas tree production. They reduce the aesthetic value of trees and utilize internal resources of trees that could go toward shoot and needle growth. Large trees may produce over one thousand cones, requiring extensive hand labor to remove. In fact, some growers report that cone-picking has become their single largest labor expense. In on-farm trials in Missaukee County, MSU is investigating two alternative approaches to control cone formation in Fraser fir Christmas tree plantations. We are evaluating coning and growth responses of Fraser fir trees treated with a plant growth regulators and methods of post-emergent herbicide application to developing Fraser fir cones to prevent cone development. Based on these studies we have consistently seen a high degree of cone control (80 – 100%) and low rates of damage to trees. We will be working with growers to see how we can operationalize these techniques to help reduce expensive costs of cone removal.



Nitrogen Management

MSU Extension is investigating the use of nitrogen stabilizers in conifer nursery and Christmas tree production. This addition of these products can increase costs by \$35 - \$200+ per ton of nitrogen fertilizer. A series of trials with field-grown trees was initiated in 2015 in Missaukee County to determine the effect of these products on tree growth and quality. We are also investigating the impact of nitrogen stabilizers on nitrate leaching. Based on results to date, nitrogen stabilizers did not improve growth or nitrogen concentration of needles and did not reduce nitrate-N leaching compared to conventional fertilization with urea or ammonium sulfate. The project is on-going, however, these indicate the less-expensive conventional fertilizers are adequate for Christmas tree production systems.



2017 MSU Agriculture Innovation Day – Focus on Forages and the Future

The second annual MSU Agriculture Innovation Day was held on August 24, 2017 at the MSU Lake City Research Center. MSU Agriculture Innovation Day is an annual event which focuses in-depth education on a single topic.

The 2017 educational field day delivered a cutting-edge, in-depth look at forages, dairy and livestock, and the future to help farmers meet growing producer demands. Leading experts from MSU and across the country shared the latest research and provided practical demonstrations for participants to improve their bottom line with new strategies that also improve or protect the environment.

The educational sessions addressed new research on reduced lignin alfalfa, new technology to improve silage quality, better methods to produce baleage, ways to stretch acreage for manure application, and several sessions regarding improved methods in beef production. Each session highlighted key ideas needed for successful implementation and showed financial analysis of how these ideas will impact farm profitability. People from across Michigan attended this field day.

Focus on the First 24 Hours (of a calf's life)

The first 24 hours of a calf's life can significantly influence its longevity and productivity in the herd. MSU Extension dairy educators highlighted key factors in managing newborn dairy calves at a meeting held in Falmouth on February 14, 2017.

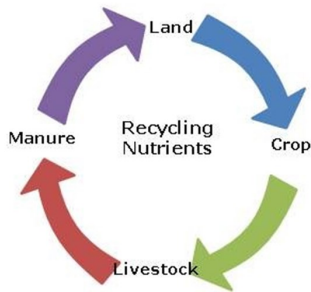
Dairy farm owners, farm employees and agribusiness professionals attended this MSU Extension program to learn about the latest research and strategies to improve long-term health and growth of dairy replacements from the first day.

The meeting focused on the benefits of feeding ample quantities of high quality colostrum to the calf, management of the maternity pen, appropriate intervention during birth, handling the newborn calf for optimum health, and minimizing stress of the calf during winter conditions.

Ag Transportation and Safety

In January 2017, a workshop sponsored by Missaukee Farm Bureau was held in Missaukee County. This MAEAP Phase I meeting featured MSU Extension's Shelby Burlew, statewide Livestock Environmental Educator. She provided a presentation on "Emergency Response to Manure Spills: Are You Prepared?" The workshop was designed to help ensure all farms have an emergency response plan in place.

Shelby also provided an educational session on "MSU's EnviroImpact Tool for Manure Applications". Through funding from the Great Lakes Restorative Initiative, National Weather Service, and NOAA, Michigan (and other great lakes states) is developing an online tool for the Michigan Manure Management Advisory System <https://enviroimpact.iwr.msu.edu>.



Extension Staff Located in Missaukee County Office:

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Kathy Lee	Agriculture Dairy Extension Educator	231-830-5850	leeka@msu.edu
Laura Quist	4-H Program Coordinator	231-839-5848	quistla1@msu.edu
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**Additional MSU Extension Staff
Serving Missaukee County:**

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Bill Cook	Forestry
Pam Daniels	Disease Prevention & Management
Joanne Davidhizer	Product Center Counseling
Phil Durst	Dairy Production Risk Mgt
Sarah Eichberger	SNAP Nutrition Supervisor
Jim Isleib	Beginning Farmers
Sara Keinath	Youth Workforce Prep
Rebecca Finneran	Consumer Horticulture
Teagen Lefere	Financial & Homeownership Education
Shannon Lindquist	Social & Emotional Health
Jerry Lindquist	Grazing & Forage
Erin Lizotte	Integrated Pest Management
Kara Lynch	Food Safety & Nutrition
Michael Metzger	Ruminants
Dorothy Munn	4-H Supervising Educator
Jill O'Donnell	Christmas Trees
Kathryn Ockert	Pullorum Testing
Bev Przystas	Youth Financial Literacy
Sarah Rautio	Wise Women Gardeners
Tracy Trautner	Early Childhood



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