MESSAGE FROM THE DISTRICT COORDINATOR

MSU Extension serves individuals, businesses and families throughout Michigan. District 8 spans seven counties, with eight different Extension offices. MSU Extension also has a close partnership with MSU AgBio Research, and District 8 is home to two of their research centers; the Clarksville Research station and Montcalm Research center. The two organizations work together to keep farmers and the general public current on the newest technology and management practices.

MSU Extension programs create innovative opportunities for Michigan residents. These programs offer youth and adults access to educational opportunities as varied as dairy herd management, bullying prevention, diabetes prevention, youth college experiences, gardening, human nutrition and animal nutrition. Extension also provides an opportunity for new commissioners to attend New County Commissioner Training which includes workshops on county budgets, policy making, and statutory obligations.

It is a pleasure to work with the over fifty MSU and County staff members housed in these eight District offices. Please contact me with any questions you may have about this report or any MSU Extension programs.

Don Lehman
District Coordinator, District 8

CONTACT US

Gratiot County MSU Extension
219 North State Street
Alma, MI 48801

Ph: (989) 875 5233
Fax: (989) 875-5289
msue.gratiot@county.msu.edu
http://msue.anr.msu.edu/county/info/gratiot

MEASURING IMPACT

CONNECTING WITH RESIDENTS

4-H Club Program (Youth) .......................................................... 845
Health and Nutrition Program (Youth) .................................... 260
Health and Nutrition Program (Adults) .................................. 571
4-H Program Adult Volunteers ............................................. 92
Agriculture Program ............................................................... 198
Governance and Home Ownership Program ......................... 38

TOTAL IMPACT ........................................................................ 2,004

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 8.8 million connections. More than 149,000 adults* and 203,000 youth† participated in MSU Extension programming in the 2015-16 programming year.

More than 3.7 million people viewed more than 7.2 million pages on the MSU Extension website‡. Of those, more than 760,000 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 1.3 million newsletters covering 90 topic areas were distributed to about 16,900 email addresses.‡ You can sign up for these informative newsletters by visiting msue.msu.edu and clicking on “Newsletter Sign Up” or by texting MSUE to 22828.

MSU Extension uses social media channels to reach people with educational content. Currently, Extension reaches more than 3,500 Facebook followers and more than 2,800 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 4,000 likes and on Twitter with more than 1,300 followers.

‡From July 1, 2015, to June 30, 2016
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.

**Growing true leaders**

With innovative ideas, exuberant energy and the ability to look beyond preconceived obstacles, youth have the capacity to change the world. However, many lack the skills and confidence to empower these assets into motion. They need experiences and training that help them to feel ready and capable to lead.

Michigan 4-H helps to prepare current and future leaders by offering numerous opportunities for leadership development. From the club experience to statewide youth councils, all youth have the chance to serve in a leadership role. Those experiences and various leadership trainings provide youth with skills to last a lifetime and empower them to stand up today as true leaders in their families, schools and communities.

In the past year:

- 25 youth formed the Michigan 4-H State Youth Leadership Council, becoming statewide champions for 4-H.
- 32 youth were trained as teen leaders in the 4-H Ag Innovators Experience. These youth cultivated important leadership skills as they delivered programming to 1,200 of their peers.
- 40 youth learned how to become advocates for themselves and 4-H through the 4-H Teen Spokesperson training; 86% of those surveyed indicated they feel confident in standing up for issues that are important to them.
Developing Youth and Communities, continued

Spring Education Series that introduced 4-H members to archery

Gratiot County’s Non-Typical Shooters 4-H Club received a $500 grant to install target cameras and screens to enable audience members to see the results of shooters’ shots. This allows the audience to see the results before the shooter retrieves his or her arrows; it creates more excitement in the sport and allows potential shooters to see shots that end up on target. This On-Target Grant from the Michigan 4-H Foundation was funded by the Thomas H. Cobb Shooting Sports Fund.

Cloverbud Day

40 youth, ages 5-8 years old attended Cloverbud Day. The theme this year was ‘4-H Grows Here.’ Sessions included healthy eating habits, plant growth, arts and crafts, and much more! Cloverbud Day participants were also provided an opportunity to swim at the Alma High School pool.

Coldwater Lake 4-H Camp

18 youth attended the overnight fun at Coldwater Lake Camp in Weidman, Michigan for 20 hours of fun outdoor recreation and education. Dr. Pol was our guest speaker.

4-H State Exchange Program

The is a multicultural club that provides youth with the opportunity to experience other 4-H programs and opportunities in another state as well as travel in our own state while hosting. The club of 15 Gratiot County 4-Hers ages 14-19 years old spent 7 days in Larimer County Colorado. In 2017, Gratiot County will be hosting the Larimer County Colorado 4-Hers!

4-H Exploration Days

Gratiot County was the third largest delegate sending 73 youth to 4-H Exploration Days! This program is designed for young people ages 11 to 19 and involves about 2,500 participants from all parts of Michigan in a multitude of hands-on learning sessions, field trips and recreation opportunities at Michigan State University campus.
Building communication skills for a lifetime

Communication is an essential element of every aspect of life – personal and professional. 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. Youth who practice and enhance their communication skills in adolescence will find these skills to their advantage in future employment and adulthood.

To help young people develop this important life skill, MSU Extension’s Michigan 4-H has made communication an aspect of nearly every area of its programming. Youth are required to record their progress on projects, verbally report their activities and illustrate their understanding in a number of ways. Some Michigan 4-H programs make communication a major focus, further allowing youth to cultivate and enhance these critical skills.

In 2015:

- 40 youth attended the 4-H Teen Spokesperson workshop; 78% of those surveyed indicated they feel comfortable sharing their thoughts and feelings with others.
- 32 teen leaders taught more than 1,200 fellow young people the Water Windmill Challenge as part of the 4-H Ag Innovators Experience.
- Nearly 350 youth participated in 4-H meat and livestock judging programs where they verbally validated their class evaluations.
Engaging youth in science and agriculture

Leadership, science, career exploration and fun are all important aspects of youth development. In 2016, youth in Gratiot County got a taste of all of these by participating in the 4-H Honey Bee Challenge. The challenge engaged youth from across the state along with 24 teen leaders. The 4-H Ag Innovators Experience Honey Bee Challenge focuses on a critical component—honey bees—to growing food and feeding the world. Apples, pumpkins, strawberries, alfalfa, sunflowers, oranges, buckwheat, and almonds are just some of the crops that rely on honey bee pollination.

Nearly 1000 participants said this about the challenge:

- 74% thought it was important to work in groups to complete the task.
- 67% said they used their communication skills in the Honey Bee Challenge
- 89% said honey bees are a good way to increase food production
- 81% improved interest in science
- 91% have better understanding of how to create something to solve a problem

Leaders' Council learns about bees

Nathan Laurenz, a Gratiot County 4-Her presented an informative lesson about bees at a Leaders Council meeting.
Ensuring Safe and Secure Food

When you support MSU Extension’s efforts to enhance residents’ access to an adequate supply of safe, affordable food, program participants will focus on food safety measures in the field and at harvest, learn proper food preparation and food preservation techniques, and bring 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.

Reducing foodborne illness through education of individuals and small businesses

The National Institutes of Health estimates that every year, 48 million people in the United States become ill and 3,000 die from pathogens in food. Causes range from outdated home food preservation practices to unsafe sanitizing practices at public events and small businesses. Since 2013, MSU Extension food safety and preservation programs have taught almost 10,500 Michigan residents safe food handling, food preservation and methods to reduce foodborne illness.

Participants include youth, nonprofit organizations that prepare food for the public and food preservers who want to create safe products for their small businesses.

Through face-to-face and online learning, Michigan communities receive high-quality, research-based education using U.S. Department of Agriculture guidelines for safe food preservation.

- 95% of participants report they will follow research-based and tested recipes for home food preservation.
- 86% of youth participants gained knowledge about food spoilage organisms and learned how the organisms’ growth can be slowed or prevented.
- 85% of participants can correctly list strategies for cross-contamination prevention.
- 91% know correct methods of cleaning and sanitizing surfaces.
Ensuring Strong Communities

When you support MSU Extension, participants learn how to implement best practices in good governance that keeps communities solvent, productive and engaged; learn effective conflict management skills that help leaders and residents work collaboratively on complex issues; and engage youth leaders in decision-making. In the personal finance area, MSU Extension helps youth and adults alike learn the skills they need to increase their savings, manage their spending, and avoid predatory lending and reduce mortgage defaults. All of these outcomes help lower the cost of governmental services and lead to personal and community stability, strong neighborhoods and safe communities.

Improving the fiscal health of Michigan communities

Only with healthy, vibrant communities can Michigan residents be expected to thrive. To help Michigan prosper in a sensible, sustainable fiscally responsible way, MSU Extension launched the Center for Local Government Finance and Policy in late 2015.

The center is led by MSU Extension economist Eric Scorsone, (photo below), who has assisted multiple cities during fiscal crises including Detroit, Flint and Lansing. The center will advise cities during fiscal hardships so communities can find a sustainable path forward. It will also develop fiscal tools and offer outreach to help communities improve their fiscal health. In addition, the center is committed to connecting legislators with experts in public policy and forging partnerships in the public and private sector.

The center’s efforts include:

- Assisting in the development of performance metrics for government budgets, strategic plans and public accountability reporting.
- Providing an overall assessment of long-term and short-term trends in revenues, expenditures, debt, general fiscal health and recommendations regarding adoption of financial policies.
- Publishing an annual local government fiscal health report for communities wishing to improve fiscal health.
- Publishing an annual legislative mandate report that identifies the costs imposed on local governments and their impact on fiscal and operational health.
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. When you support MSU Extension, you help participants understand the economic, environmental and social benefits of purchasing local and regional foods. You also help young people develop business skills that will help them succeed as adults and help communities capitalize on their ecological, social and cultural assets. This fuels the economy by creating and retaining jobs, and helps ensure a healthy tax base.

Building entrepreneurial spirit and skills

As the backbone of the economy, small business owners play a critical role in the prosperity of the nation. But to be a successful entrepreneur, one must have not only the ambition and moxie to take a risk, but also the business sense and skill to make a profit. To ensure the business owners of tomorrow – today’s youth – are triumphant in their future endeavors, they need to learn the entrepreneurial concepts that pave the way for success.

MSU Extension is helping to meet this need by providing youth and the adults that support them with the skills and resources necessary to turn ideas into business ventures. Through simulations and workshops, youth learn how to develop business plans and operate their own companies, as well as how to be more entrepreneurial in their everyday 4-H experiences. In 2015, these programs were delivered to nearly 1,200 people in 59 Michigan counties.

As a result:

- 92% said they learned how entrepreneurial skills could be used in any career, and 60% reported planning to start their own businesses.
When you support MSU Extension, you help participants learn safe food handling practices, increase their physical activity and improve the quality of their diets. Extension programming also helps decrease incidents of violence and bullying. Encouraging these 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.

**Improving nutrition and increasing physical activities in Michigan communities**

Limited income and poor nutrition affect quality of life and can increase healthcare costs. The Centers for Disease Control and Prevention reports that more than 30 percent of Michigan adults are considered obese, and one out of every three deaths in Michigan is caused by cardiovascular disease, influencing the quality of life and adding billions of dollars each year in economic burden.

MSU Extension delivers affordable, relevant, evidence-based education to help residents in urban and rural communities stay healthy throughout their lifespans. Programs teach participants how to buy and prepare nutritious, budget-friendly foods and increase physical activity. In 2015 alone, these programs reached more than 112,000 adults and youth across the state in over 1,600 different locations.

- 79% of youth participants improved their abilities or gained knowledge about how to choose foods according to Federal Dietary Guidelines.
- 79% of adult participants made a positive change in at least one nutrition practice, such as preparing foods without adding salt, or using the Nutrition Facts labels to make food choices.
- 73% of adult participants made a positive change in at least one food resource management practice, such as planning meals in advance or comparing prices when shopping.
Cooking Matters and the $10 Challenge

Hunger and poor nutrition is a concern in households and communities across the state. In Gratiot County, MSU Extension is tackling this problem by teaching people of all ages how to cook nutrient dense meals on a budget.

Cooking Matters was a popular program that reached a diverse audience ranging in age from 8 to 92 years. Participants attended a six week series of classes. Each class consists of an evidence-based nutrition lesson along with a nutrient dense and budget-friendly recipe that the class participants prepare together. The participants then receive a bag of groceries with the ingredients to make the recipe for their family at home.

The participants also have the opportunity to attend an optional class at the grocery store. This class puts to use everything that was learned in the series by going through the major sections of the grocery store and choosing one healthy item from each food group to make a meal that costs less than $10 total. This is known as the “$10 Challenge.”

Cooking Matters for Teens

Cooking Matters for Teens is another program that was offered in Gratiot County over the past year. This program gives teens the opportunity to learn and practice basic cooking skills. The teens attend a six week series of classes where they are encouraged to practice making recipes that are quick, easy and healthy. The teens also practice with food budgeting by attending a virtual grocery store shopping trip. They also receive a recipe and resource book for use at home.
Farmer’s Market tours

MSU Extension also offered farmer’s market tours at the St. Louis Farmer’s Market through a program called Discover Michigan Fresh. Discover Michigan Fresh farmer’s market tours help SNAP-Ed eligible residents get to know their local farmer’s markets and explore Michigan-grown produce. The tours encourage participants to shop at their farmer’s market for nutritious and affordable foods that keep their dollars local. MSU Extension’s nutrition education staff members join tour participants at the farmer’s market where they are taken on a guided tour through the market. Participants meet farmers and talk about ideas for making new farm fresh meals. Often, MSU Extension’s Michigan Fresh fact sheets are used and shared. Staff members explain to participants how they might use items from the market and MyPlate to create nutritious meals. MSU Extension staff can also aid participants in understanding how food assistance benefits are used at their farmers market. Tour participants are given a take-home Discover Michigan Fresh booklet which is full of useful information such as farmer’s market shopping tips, food preservation guidelines and recipes.
When you support MSU Extension’s natural resources education programs, participants learn about income-generating opportunities, ecological principles, natural resource issues and the role of natural resource professionals. They also explore public policy issues related to environmental stewardship. Our programs can lead to increased income for families that retain their natural resource assets, help landowners become better stewards of their land, and protect land management opportunities for future generations. Better land stewardship benefits communities by protecting and enhancing Michigan’s natural resource assets.

**Raising awareness of the benefits of cover crops**

Cover crops are a hot topic in agricultural circles, thanks to an MSU Extension specialist’s message that’s resonating with the right crowd. Dean Baas, a senior research associate, conducts cover crop and organic agriculture research and education.

Cover crops are plants seeded into agricultural fields, either within or outside of the regular growing season, with the primary purpose of improving or maintaining ecosystem quality. Environmental benefits include enhanced biodiversity, increased soil infiltration and attraction of honeybees and beneficial insects.

Researchers are focusing on ways cover crops can be used by farmers to bring diversity to the crop system; to reduce reliance on fertilizers, herbicides and pesticides; and to determine the impact of cover crops on overall operation economics.

Initial studies have shown that:

- Farming benefits include reduced erosion, improved soil quality through increased porosity, soil organic matter and water-holding capacity, as well as the addition of beneficial microbes.
- Cover crops help retain nutrients that otherwise would be lost.
- Cover crops add nitrogen through fixation while combatting weeds and breaking disease cycles.
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.

Preparing youth for future careers in agriculture

As a pillar of Michigan’s economy, agriculture must continue to grow and thrive. One way to ensure this success is to prepare an informed and skilled workforce ready for careers in this essential sector.

To meet this need, MSU Extension offers youth a continuum of learning opportunities in the agriculture industry. These opportunities range from interactive experiences such as 4-H Renewable Energy Camp and World Food Prize Michigan Youth Institute, to educational resources such as the Youth Business Guide to Success, animal marketing curriculum and zoonotic disease prevention tools. Through these experiences and resources, as well as county 4-H projects, youth are educated about agriculture and prepared for careers in this important industry. In the last program year:

- More than 24,000 4-H youth participated in animal, biological and plant science projects in 78 counties.
- More than 850 youth took part in Michigan 4-H pre-college programs with an agricultural focus. These programs, which include 4-H Exploration Days and 4-H Animal and Veterinary Science Camp, among others, are designed to help youth explore potential careers or academic areas.
Season in Review – a look at pest challenges in 2016

In 2016, producers experienced many weather and pest challenges. In December, after the crops were harvested and before plans were finalized for next year, MSU Extension hosted a local program reviewing the pest challenges observed across the state. Producers had an opportunity to discuss insect, disease and weed challenges that impacted their crop production and reviewed recommendations that can be applied to pest management in 2017.

Weather and pests impacted the quality and yield of corn in the Mid-Michigan area. This program provided producers an opportunity to learn about the risks and put plans in place for the next growing season.

Pest and below normal precipitation in June and July impacted corn yield and quality in 2016.
Sugar is a sweet commodity in Gratiot County

Gratiot County has over 9,000 acres of sugar beets. Working with MSU Extension and Sugar beet Advancement, growers have access to current sugar beet production research. On farm research and demonstration compliments small trial research giving sugar beet producers big benefits from this two tier research effort. This approach gives growers the confidence to adopt new technologies more quickly, which can lead to improved yield, quality and income.

On-Farm Research and Demonstration Trials included 7 variety trials, 8 seed treatment, 1 high speed planter, 2 TRAC TILL, 1 population and 1 foliar Baccurat spray.

---

On-Farm Research and Demonstration Trial
- 7 variety trials
- 8 seed treatment
- 1 high speed planter
- 2 TRAC TILL
- 1 population
- 1 foliar Baccurat

---

![Graph](image-url)

**Michigan Sugar Company - Tons/Acre**

![Image of farm equipment](image-url)
Extension Educators Serving Gratiot County

**Staff Located in Gratiot County Office:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tammy Fletcher</td>
<td>HNI &amp; SNAP-ED Instructor</td>
<td>616-527-5357</td>
<td><a href="mailto:fletchta@msu.edu">fletchta@msu.edu</a></td>
</tr>
<tr>
<td>Kami Paksi</td>
<td>County Support</td>
<td>989-875-5333</td>
<td><a href="mailto:paksi@anr.msu.edu">paksi@anr.msu.edu</a></td>
</tr>
<tr>
<td>Joan Taylor</td>
<td>Office Manager</td>
<td>989-875-5234</td>
<td><a href="mailto:tayll182@anr.msu.edu">tayll182@anr.msu.edu</a></td>
</tr>
<tr>
<td>Chris Thompson</td>
<td>4-H Program Coordinator</td>
<td>989-875-5295</td>
<td><a href="mailto:thoml367@msu.edu">thoml367@msu.edu</a></td>
</tr>
<tr>
<td>Roxanne White</td>
<td>Health &amp; Nutrition Program Instructor</td>
<td>989-224-5238</td>
<td><a href="mailto:harrin76@msu.edu">harrin76@msu.edu</a></td>
</tr>
</tbody>
</table>

**Additional MSU Extension Staff Serving Gratiot County:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laura Anderson</td>
<td>Disease Prevention Educator</td>
<td>269-945-1388</td>
<td><a href="mailto:ander359@anr.msu.edu">ander359@anr.msu.edu</a></td>
</tr>
<tr>
<td>Roger Betz</td>
<td>Farm Management Educator</td>
<td>269-781-0784</td>
<td><a href="mailto:betz@anr.msu.edu">betz@anr.msu.edu</a></td>
</tr>
<tr>
<td>Diane Brown-Rytlewski</td>
<td>Horticulture Educator</td>
<td>517-676-7292</td>
<td><a href="mailto:rytlews1@anr.msu.edu">rytlews1@anr.msu.edu</a></td>
</tr>
<tr>
<td>Kittie Butcher</td>
<td>Early Childhood Educator</td>
<td>989-224-5228</td>
<td><a href="mailto:butche36@anr.msu.edu">butche36@anr.msu.edu</a></td>
</tr>
<tr>
<td>Faith Cullens</td>
<td>Dairy Educator</td>
<td>989-224-5249</td>
<td><a href="mailto:cullensf@anr.msu.edu">cullensf@anr.msu.edu</a></td>
</tr>
<tr>
<td>Rebecca Finneran</td>
<td>Horticulture Educator</td>
<td>616-632-7886</td>
<td><a href="mailto:finneran@anr.msu.edu">finneran@anr.msu.edu</a></td>
</tr>
<tr>
<td>Charles Gould</td>
<td>Bioenergy &amp; Agriculture Conservation</td>
<td>616-994-4547</td>
<td><a href="mailto:gouldm@anr.msu.edu">gouldm@anr.msu.edu</a></td>
</tr>
<tr>
<td>Kevin Gould</td>
<td>Beef &amp; Livestock Educator</td>
<td>616-527-5957</td>
<td><a href="mailto:gouldk@anr.msu.edu">gouldk@anr.msu.edu</a></td>
</tr>
<tr>
<td>Paul Gross</td>
<td>Field Crops/Cover Crops Educator</td>
<td>989-772-0911</td>
<td><a href="mailto:grossp@anr.msu.edu">grossp@anr.msu.edu</a></td>
</tr>
<tr>
<td>Tom Guthrie</td>
<td>Swine &amp; Equine Educator</td>
<td>517-788-4292</td>
<td><a href="mailto:guthric19@anr.msu.edu">guthric19@anr.msu.edu</a></td>
</tr>
<tr>
<td>Brenda Long</td>
<td>Housing Senior Educator</td>
<td>616-527-5357</td>
<td><a href="mailto:longb@anr.msu.edu">longb@anr.msu.edu</a></td>
</tr>
<tr>
<td>Joyce McGarry</td>
<td>Food Safety &amp; Preservation Educator</td>
<td>517-887-4587</td>
<td><a href="mailto:mcgarry@anr.msu.edu">mcgarry@anr.msu.edu</a></td>
</tr>
<tr>
<td>David Rowley</td>
<td>Government &amp; Public Policy Educator</td>
<td>989-317-4079</td>
<td><a href="mailto:rowleyd@msu.edu">rowleyd@msu.edu</a></td>
</tr>
<tr>
<td>George Silva</td>
<td>Field Crops Senior Educator</td>
<td>517-543-4467</td>
<td><a href="mailto:silvag@anr.msu.edu">silvag@anr.msu.edu</a></td>
</tr>
<tr>
<td>Fred Springborn</td>
<td>Field Crops Educator</td>
<td>989-831-7509</td>
<td><a href="mailto:springb2@anr.msu.edu">springb2@anr.msu.edu</a></td>
</tr>
<tr>
<td>Marilyn Thelen</td>
<td>Crop &amp; Livestock Senior Educator</td>
<td>989-227-6454</td>
<td><a href="mailto:thelen22@anr.msu.edu">thelen22@anr.msu.edu</a></td>
</tr>
</tbody>
</table>

**MISSION:**

Michigan State University Extension helps people improve their lives through an educational process that applies knowledge to critical issues, needs and opportunities.

MSU is an affirmative-action, equal-opportunity employer, committed to achieving excellence through a diverse workforce and inclusive culture that encourages all people to reach their full potential. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. Issued in furtherance of MSU Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Jeffrey W. Dwyer, Director, MSU Extension, East Lansing, MI 48824. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned. The 4-H Name and Emblem have special protections from Congress, protected by code 18 USC 707.