



Calhoun County 2016 ANNUAL REPORT

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Welcome to the 2016 Michigan State University Extension (MSUE) Annual Report for Calhoun County!

Michigan State University Extension is committed to its mission of assisting people in improving their lives through an educational process—providing knowledge that addresses the needs of our communities. We implement our mission by collaborating with various partners, stakeholders and counties, and our MSU Faculty, Educators, and professional staff work together to deliver creative and innovative ways to reach our diverse population. This is MSUE's strength, and we are honored to work with, and serve our communities.

This year's Annual Report will provide highlights of MSUE accomplishments for 2016. We hope that you will enjoy this report featuring the work we have done in Calhoun County, and join us in our celebration of achievements.

Kind regards,

Julie Pioch

District 13 Coordinator

MSUE Facts!



More than 3.7 million visitors viewed more than 7.2 million pages.



1.3 million newsletters covering 90 topic areas were sent to about 16,900 email addresses.



MSU Extension has more than 3,500 Facebook followers and more than 2,800 Twitter followers.

Research and Education Delivered Locally!

Developing Youth and Communities



Calhoun County 4-H reached a total of 2,603 youth through traditional club participation, short term programs, school enrichment, and after school programs. There are a total of 37 4-H youth clubs, including three new clubs this year.

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). Youth 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. Additionally, 4-H involvement helps youth 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, consumer spending, and increases the likelihood that young people will stay in, or return to, their communities.

Calhoun County 2016 Highlights

- Kathy Fischer, Calhoun County 4-H Program Coordinator, reached a total of 2,603 youth through traditional club participation, short-term programs, school enrichment and after school programs. She has provided leadership and technical assistance to 169 adult volunteers, and manages 37 4-H Youth clubs. Kathy has also increased the number of clubs in 2016 with the addition of three new clubs this year.
- Calhoun County youth and adults took advantage of the 4-H Teen & Adult Horse Leaders Conference held at MSU this year. Participants were engaged in fun interactive learning sessions, as well as hands-on activities that taught them more about horses and how to work with them. This is just one example of the many state-wide programs that 4-H members are able to participate in. In addition to exploring animal systems and learning about animal health, they developed valuable knowledge in leadership skills, and also had an opportunity to meet and make new friends from around the State.
- Calhoun youth attended state leadership and civic engagement programs such as Capital Experience (3), World Food Prize (2), and Exploration Days (65).
- Clover Bud camp has been a huge success and filled to capacity this past summer. This day camp is designed for children ages 5-8, and is modeled after the fast-paced and active learning lives of this age group. Participants learn the 4-H pledge and how they can live by that pledge. They create projects that can be exhibited at the fair, and make friends with other 4-Her's from around the county. This is the beginning of their 4-H career where they not only make friends their age, but they meet many older 4-Her's who become mentors for them throughout the years to come.
- Pennfield Schools continues to be a valuable partner to 4-H to bring our in-school gardening program to kindergarten, 1st and 2nd graders. This year a total of 137 youth learned about plant science, food choices and gardening through this program.



Developing Youth and Communities, continued



- MSU Extension Educators from around the state brought trainings to Calhoun County: Darrin Bagley, Sheila Smith, and Christine Heverly provided volunteer trainings programs for Calhoun 4-H Adult volunteer leaders in Calhoun County.
- In winter 2016, Kathy Fischer taught weekly programs to youth (a total of 24), held in the Calhoun County Juvenile Home. Topics included nutrition, character development, career building, and environmental education.

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 Exploration Days 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 Calhoun County:

- Science in the Classroom was the topic at a workshop for K-12 teachers at the Kellogg Biological Station in Hickory Corners. Agriculture Educators, Marilyn Thelen and Dean Bass, provided instruction on soil health and crops to five teachers from Calhoun County.
- A new program set to launch in 2017 is the Calhoun County 4-H Tractor Operator program. This program will teach youth tractor operation, along with safety, maintenance and repair. Successful completion of the 4-H Tractor Operator program provides completion certificates to 13-19 year olds. 14-15 year olds may be eligible to receive a certificate of training from the US Department of Labor required for operation of a 20 PTO HP or greater, garden or agricultural tractor by youth employed on property not owned, leased, or operated by a parent or legal guardian.



Creative and Expressive Arts Program Bridges Out-of-School Time with the School Year

Forty-seven youth from Albion participated in the 4-H Creative and Expressive Arts program this past summer. The program helps bridge out-of-school time with the school year and provides youth with an opportunity to express themselves through creative arts. With the guidance of seasoned 4-H volunteers, young people in the program write, read and remember story lines, timing, stage presence, and techniques involved in expressing themselves, on stage. They practice public speaking, how to engage an audience, follow directions and team work. The outcome of the program is a public performance written, produced and performed by students using the combined art disciplines learned through the six-week summer program.

Developing Youth and Communities, continued

Those involved in the singing discipline were charged with writing an original song. They were excited and wrote a song entitled “Don’t Let Go of Hope,” which they performed in the final production. This has become a tradition in the program, all disciplines make or write original presentations; however, these young people write and produce songs that will continue to be performed in productions year after year. In the dance discipline, the youth usually learn and perform Hip hop routines; however, this year they learned and produced an exciting step routine that took weeks to learn.

Training for Day-Care Providers, Teachers and Parents Leads to Positive Youth Development

Social and emotional development has been identified as one of the key factors in children’s long-term academic and life success. These key skills include the regulation of children’s emotions, the ability to solve problems, the ability to interact with others both alike and different from themselves. Children’s early life experiences help them learn to identify their emotions, develop strategies for handling life’s disappointments and negotiate the complex world of emotions and society.

Parents and caregivers have the opportunity to support children’s social and emotional development in a variety of ways. From teaching children the words for their emotions, providing problem-solving strategies that can be applied across a variety of situations, and reading books to children where characters work through difficult situations, you can embed these learning opportunities in your child’s day without much additional effort.

MSU Extension educators provided a variety of workshops and published resources to help Calhoun residents build the social and emotional health of young children. These trainings were in the following areas: Building Early Emotional Skills, Setting the Stage: Promoting Positive Social and Emotional Development in Young Children, RELAX: Alternatives to Anger for Parents and Caregivers and Positive Discipline.

- The number of participants reached through face-to-face programs from Calhoun County in 2016 is reported as 142 adults (teachers, parents, caregivers). In addition, Suzanne Pish worked with the Calhoun County juvenile center to provide a series of youth anger management workshops reaching six youth.
- MSU Extension educators, Kendra Moyses and Gail Innis, brought early childhood development education training to 15 daycare providers in Calhoun County in 2016. Understanding brain development, social skills and mindfulness activities help daycare providers nurture young people and prepare them for school success.



Ensuring Safe and Secure Food



MSU Extension's 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.

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, 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. 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 over the last three years. 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. Surveys reveal:

- 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.

Specific programs attended by Calhoun residents in 2016 include:

Food Safety Education for Famers and Food Hubs

With the release of the Food Safety Modernization Act final ruling for produce in late 2015, Michigan farmers and local food buyers have many questions about how the new legislation and the country's increased focus on food safety will affect their businesses. Educators Mariel Borgman, Phil Tocco, and Terry Mclean provided workshops and seminars throughout the state in 2016. Attendees reported that they would make changes in their growing practices and/or share the produce safety knowledge they learned with Michigan growers and buyers. This work is building a culture of food safety in Michigan from farm to fork that will ultimately make our local and regional food supply safer and minimize the risk of food borne illness to consumers. Seventeen

Ensuring Safe and Secure Food, continued

Calhoun County residents and representatives from Calhoun Food hub attended face-to-face programs, others have received one-on-one assistance and reviewed articles and online videos on the MSUE website.

Serve Safe Training

Michigan law requires at least one Serve Safe certified manager per food establishment in Michigan. Six restaurant managers from Calhoun County attended MSU Extension's 16-hour ServSafe Certification Program offered in Kalamazoo and Jackson Counties in 2016 by Educators, Joyce McCrary and Jeanne Nichols.

Cottage Food Law

The Cottage food law continues to be of interest to local farmers and entrepreneurs. Safely processing foods to sell, as well as how to sell the final product for a profit are the topics of the educational programs offered by Food Safety Extension Educators, Jeanne Nichols and Jane Hart, and Product Center Counselor, Mark Thomas. Programs held in Marshall reached 17 county residents; 2 Calhoun residents attended a program in Kent County.

Calhoun Youth Participate in World Food Prize

The World Food Prize Michigan Youth Institute is a one-day event held at MSU where high school youth present research and recommendations on how to solve key global challenges, connect with other student leaders from across Michigan, interact with global leaders in science, agriculture, industry and policy, and meet innovative people working to improve food security around the world. This program is organized in the state by MSUE Brian Wibby and Makena Shulz. Two Calhoun County youth, Alexa Gilbert and Madelyn Heisler from Springport High School, attended the program in May, 2016. They chose their topics from the requirement on a developing country, and one of 20 key factors that affect food security (examples of key factors include plant science, water scarcity, dietary diseases, malnutrition or international trade). With a mentor, they wrote a two-page paper outlining their research findings, and their approach/recommendation to overcome the issue. Alexa's research was a paper on sustainable agriculture in Bolivia, and Madelyn wrote her paper on sustainable agriculture in Kazakhstan. They received feedback from peers and experts on their topics and presentations. This innovative program seeks to inspire and prepare the next generation of global leaders to end world hunger by bringing youth together to discuss their ideas about poverty and global food security while interacting with leading researchers and experts in the field. Top participants in the event were asked to represent Michigan at the World Food Prize Global Youth Institute. Francine Barchett, of Berrien County, who attended both events, found the experiences life changing: *"It's amazing how such important and powerful people of different backgrounds come together to discuss food security and honor those who embrace it to the fullest. How humble they are, and how much they see eye to eye! I will never forget such an experience. I can't wait to see what I can do to empower my community with the tools I've learned,"* Barchett stated.

Ensuring Strong Communities



MSU Extension's efforts in ensuring best practices in good governance keeps communities solvent, help lower the cost of governmental services, and lead to personal and community stability, strong neighborhoods, and safe 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, 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 Quality of Michigan Communities

The Citizen Planner Program of Michigan State University Extension offers land use education and training to locally appointed and elected planning officials throughout Michigan. Citizen Planner is a non-credit course series leading to a certificate of completion awarded by MSU Extension. Advanced training to earn and maintain the Master Citizen Planner (MCP) credential is also available. The Citizen Planner Program is offered in a classroom setting, as well as a convenient web-based offering called Citizen Planner Online.

Citizen Planner participants report the program fosters greater awareness of land use decision makers' roles and responsibilities, resulting in more livable communities, the protection and conservation of natural resources, and better overall land use decisions throughout Michigan.

- Calhoun County was the host to the Citizen Planner seven-week series in Spring 2016. Sixteen Calhoun County residents representing eight local municipalities completed the program in 2016.

Understanding good governance practices by local officials serving in government roles is key to quality policy decision making. Training in open government laws and community engagement impacts citizen's confidence and trust in appointed and elected officials. Each year Calhoun County residents participated in MSU Extension Effective Meetings and Open Meetings Act trainings.

- Five Calhoun County residents participated in other good governance workshops in 2016.
- Four Calhoun County residents take advantage of on-line learning opportunities provided by MSU Extension in a variety of topics, including those related to good governance, land use planning and conflict resolution.

Keeping Businesses Strong



When you support MSU Extension, you help participants understand the economic, environmental and social benefits of purchasing local and regional foods.

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

The MSU Product Center Food-Ag-Bio assists county residents in developing products and businesses in the areas of food, agriculture, natural resources and the bio economy. The innovation counselor has special training to deliver these services to local residents. Business counseling is conducted on a one-on-one basis and may take place at the MSUE office or the client's home or business location. The assistance provided is tailored to meet the needs of the client and may include steps for developing a business plan, navigating the regulatory maze, accessing the supply chain, or seeking funding options. The innovation counselor also assists clients in accessing specialized services they may need that are offered through Michigan State University, including feasibility studies, nutritional labeling and packaging assistance.

Twenty-seven sessions took place in Calhoun County to assist four entrepreneurs. Two businesses were specialty food product businesses, and two were value-added agricultural production businesses. One business received assistance with nutritional labeling for their food products by the Product Center registered dietician. The Product Center provided services to the Farmers on the Move cooperative which is headquartered in Battle Creek. This assistance allowed the cooperative to develop operating procedures to function more effectively in serving the member farmers and market the crops produced. The partnership between MSUE and the MSU Product Center Food-Ag-Bio is providing support for entrepreneurs in supporting economic development across southwest Michigan. Along with campus-based specialists, MSU Extension Product Center Counselors serving Calhoun County include Mark Thomas, and Joanne Davidhizar.

Youth Entrepreneurship

The Calhoun County 4-H Entrepreneurship Club was active in 2016, and had three youth members present their businesses at the Generation E showcase held in Battle Creek in May.

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.

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 2016, 231 Calhoun County adults participated in a series of educational programs that consisted of at least eight hours of nutrition and physical health training, 697 adults participated in one-time meetings; 409 school age youth participated in a series of educational sessions, and 149 youth participated in one-time sessions.
- 79% of youth participants improved their abilities, or gained knowledge on 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.
- Educators assisting with nutrition education in Calhoun included Sarah Johnson, Val Albright, and Leatta Byrd.

Making the Most of Our Natural Assets



Better land stewardship benefits communities by protecting and enhancing Michigan's natural resource assets.

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.

Preventing Invasive Threats by Keeping an Eye on Michigan's Forests

Michigan forests are under attack from many exotic invasive pests and diseases. The Michigan Eyes on the Forest team, consisting of scientists and researchers from the MSU Department of Entomology, as well as past and present MSU Extension forestry professionals, created a sentinel tree program designed to enlist the public to identify and increase awareness of three invasive threats that could cause widespread damage to Michigan's forests.

With a grant through the Michigan Invasive Species Grant Program, volunteers can register a "sentinel tree" on the Midwest Invasive Species Information Network (MISIN) to help keep a lookout for the Asian long-horned beetle, Hemlock woolly adelgid, and thousand cankers disease of black walnut trees. Volunteers help monitor and protect Michigan's forest resources against potential invasive threats by reporting unusual tree decline or dieback, and identifying the presence of invasive pests not known to be established in Michigan.

Roughly 150 people have signed up for MISIN, and more than 40 events have raised awareness. MSU Extension hosted four sentinel tree volunteer training sessions and 19 outreach events. Eyes on the Forest provides materials, displays, and online content as ready-made vehicles for others to share. Over a six-month timespan, various events reached nearly 2,000 people. Four Calhoun County residents have been trained as volunteers for this program.

Clean Boats Clean Waters

The threat of contamination to these abundant and precious water resources from non-native aquatic invasive species is high. Aquatic invasive species (AIS) can disrupt these ecosystems, outcompete native animals and plants for space and resources leading to excessive plant growth, reduced fish populations, and interference with pleasure boating and other recreational activities. The Clean Boats, Clean Waters program trains volunteers to organize and conduct boater education in their community helping to



Making the Most of Our Natural Assets, continued



protect local water resources. Volunteer teams work to educate boaters and other recreational watercraft owners about AIS laws and best management practices for stopping the spread of aquatic species.

- Volunteer training programs provided by MSU Extension natural resources educators held in partnership with the Michigan Lakes and Streams association were held in 2016, training 29 volunteers and partner organizations—laying the groundwork for 2017 outreach.
- Six residents from Calhoun County were trained to identify aquatic invasive species through face-to-face programs in 2016.

Michigan Sea Grant

Through research, education and outreach, Michigan Sea Grant is dedicated to the protection and sustainable use of the Great Lakes and coastal resources and a partnership between MSU Extension and the University of Michigan. The Battle Creek Steelheaders Club was host to Sea Grant Extension Educator, Dan O'keefe, who presented an educational program on the Salmon Ambassadors volunteer program.

The purpose of the *Salmon Ambassadors* volunteer program is to engage anglers in learning about their fishery and providing useful information on stocked and wild Chinook Salmon. Stocked Chinook Salmon in Lake Michigan and Lake Huron are easy to identify thanks to a fin clip. Volunteers check each and every Chinook Salmon caught over the course of the fishing season for a fin clip. They also carefully measure each fish and record the date and location of each catch. At the end of September, volunteers receive a short survey and request to return their completed data sheets. Prior to the 2015 fishing season, 166 anglers had volunteered to participate in the *Salmon Ambassadors* program. As a result, 58 anglers returned surveys at the end of the year, and 34 provided useable data on 1,696 Chinook Salmon caught during the 2015 season. Wild Chinook Salmon were the majority of the catch in most ports.



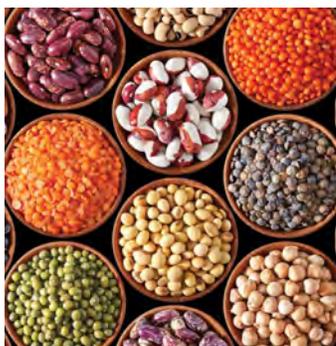
- 47 Battle Creek members attended the program.

Partnership with Calhoun County Parks

Ingrid Ault, MSU Community Development Extension Educator, continues to provide leadership and staff support to the Calhoun County Parks and Recreation Commission to help them achieve their goal of providing a quality county park system that is successfully maintained, used, and enjoyed by all county residents.



Supporting Food and Agriculture



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

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.

According to the 2012 Census of Agriculture, Calhoun County has 224,877 acres in agriculture production; an agriculture product market value of \$133 million dollars, and almost \$10 million in annual payroll. Calhoun farms are big and small and producers grow field crops such as soybean, corn and wheat, as well as dairy and pork. Vegetables, hops, nut trees and greenhouses are also found in Calhoun County. MSU Extension production agriculture educational programs focus on the needs of Calhoun county producers, and provide face-to-face and web-based programs, timely e-newsletters and news articles, and one-on-one consulting to keep producers on track and in the know.

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 is resonating with the right crowd. MSU Extension Educator, Dean Bass, 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.

Supporting Food and Agriculture, continued

- Results from research on cover crops were shared with Calhoun County growers at Field Days held in St Joseph and Branch counties, as well as in Marshall at the Family Farms Conference, Coldwater at Farmers Days, and Kalamazoo at Ag Action.

Other Ag Programming Outreach in 2016:

- Production and management of Barley, Corn and Soybeans, soil health and fertility, and pest management in field crops: 55 attendees at Farmers Day; 16 attendees at Ag Action; 15 attendees at SMART program in Coldwater; 2 enrolled in field crops management webinar series.
- Soil health workshops in the district and including Intertribal Great Lakes Food Summit had a total 10 participants.
- Small ruminant birth management and health symposium had a total of 8 Calhoun participants.
- Nut production had a total of 3 Calhoun participants.
- Greenhouse worker protection standards had a total of 5 Calhoun participants.

MSU Educators providing educational programs and technical support to Calhoun county producers include Dean Bass, Bruce Mackellar, Mike Staton, Mike Metzger, Marilyn Thelen, Tom Guthrie, Beth Ferry, Erin Lizotte, Paul Gross, Eric Anderson, Lyndon Kelly, Roger Betz, Adam Kantrovich, and Mark Longstroth.

Expanding the Hop and Barley Industry in Michigan

With the continued surge of interest in craft brewing as both a hobby and money-making opportunity, Michigan brewers are increasingly seeking out locally sourced ingredients. MSU has helped both hop and barley growers meet this increased demand through research-based education and outreach. In the past ten years, Michigan has grown from producing virtually no hops to being the fourth largest hop producer in the United States. On the barley front, demand for a Michigan-grown product renewed interest in a long-dormant 1916 MSU cultivar Spartan barley. Now, MSU AgBioResearch plant breeders are working to bring it into production.

MSU Extension hosts the annual Great Lakes Hop and Barley Conference to provide new and experienced hop and barley growers, processors and brew masters with the latest in growing and processing techniques to meet the needs of a rapidly expanding brewing industry. The 2016 event:

- Drew 344 registrants and more than 380 total participants—8 from Calhoun County.
- Held three concurrent educational sessions: Hop Introductory Track, Hop Advanced Track and Malting Barley Track.
- Met the needs of attendees with 41% attending the Hop Introductory Track, 30% attending the Hop Advanced Track, and 29% attending the Malting Barley Track.





Pork Quality Assurance Programs

The pork industry is focused on providing a quality product for consumers. In an effort to continuously produce a safe, healthy and nutritious pork product, the PQA Plus program was developed. Educators with Michigan State University Extension aid producers and farm employees with developing good production practices on farms and receiving their PQA Plus certifications. This program, supported by the Extension defines best method practices for improved pig well-being and pork quality, and encompasses the We Care Initiative supported by the Pork Checkoff program. The PQA program certification is offered as a face-to-face educational session for people gaining certification. Educators also have the ability to assist pork producers with gaining their site certification using an on-farm tool used to visually assess the well-being of the farm's pigs. Certified advisors complete this process and provide producers with recommendations for improved management practices. Currently, Michigan has over 1,300 people certified in the PQA Plus program. On an annual basis, participants representing an average of 15,000 sows are put through the PQA Plus program. This equals 360,000 (24 pigs/sow per year) pigs with an average market value of \$200 per head making the approximate value of product protected \$72,000,000 per year.

- 41 Calhoun producers have been certified in the PQA plus program.
- 3 PQA site assessments were completed in 2016.

Another component of the Quality Assurance program is the Youth PQA Plus program, which is geared for youth ages 8-19 who are involved with the pork industry. This program defines best method practices for improved pig well-being and pork quality, teaching youth ten good production practices for good pig care. Youth can become certified in the program by attending a face-to-face session with a certified advisor. With over 6,000 youth enrolled in the Youth PQA Plus program, Michigan accounts for 20% of the total youth certified in the PQA Plus program, nationally.

- All youth showing pigs at the Calhoun County Fair are required to complete the PQA Plus program.

The Transport Quality Assurance (TQA) Training and Certification program is also offered by Michigan State University Educators. The TQA Assurance program was developed to assist producers, transporters and handlers with evaluating and improving their animal handling and movement skills and transportation protocols. This program defines best method practices for improved pig well-being and pork quality. Over 650 handlers have received training from the TQA program.

- Three Calhoun County-based transporters have participated in the TQA program.



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