**MESSAGE FROM THE DISTRICT COORDINATOR**

It is with pleasure that I bring another annual report of the good work MSU Extension is providing in Clare County. Through our partnership with the local county, we are able to bring state and federal funding into the local Extension office to bring resources of the land grant university to this community. Our mission is to help “...people improve their lives through an educational process.” We do this by bringing resources from our four Institutes, or areas, of programming:

- Agriculture and Agribusiness
- Children & Youth (includes 4-H)
- Health and Nutrition
- Greening Michigan (Natural Resources, Leadership Development, and Economic and Community Development)

In 2015, MSU Extension continued to strive to meet the needs of the local communities and embarked on a large Needs Assessment process. In addition to conducting an online survey that netted over 5,000 responses statewide, we conducted “Issues Identification” sessions in each District. In our area - District 6 - we held three sessions in the last quarter of 2015. Almost 100 community members attended the facilitated discussions and answered questions like:

⇒ What do you think are the most important areas for Extension to focus their efforts over the next 3-5 years?
⇒ What are the needs and opportunities in our communities that research and education can make a difference by addressing?

Over the next several months, we will be processing the statewide and local data. We expect it will be very helpful in our program planning and resource allocation decisions. I would be happy to share the results of both the online Focus survey and the Issues ID sessions with anyone who is interested. As always, I thank you for your commitment to MSU Extension and the people we serve in this great state and this county.

Shari Spoelman,
District Coordinator

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**MEASURING IMPACT**

**CONNECTING WITH RESIDENTS**

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<td><strong>TOTAL IMPACT</strong></td>
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**OUR MISSION:**

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

Supporting school and student success

» Student of Promise
MSU Extension was asked to present to the Students of Promise Summer Camp held the second week of June. Fifty youth ranging from 7 to 12th grade (32 from Clare County) learned in-depth programming about Nutrition/Healthy Living and Exploring Careers.

Evaluation Results - 86% of the participants evaluated are aware of the life skills they gained by participating in this work and 80% of the participants could identify life skills learned in the workshop.

Comments from some evaluations regarding how they plan to use the knowledge gained:
“I plan to track all of my eating”
“I plan on trying not to each as unhealthy as I do”
“Use app to help with calories and activities”
“Because I am less active (sort of) during the summer, I will eat less calories.”

» Visual Letters Sent to China
As part of the art exchange, Michigan children are asked to paint or draw “visual letters” for Chinese children their own ages. Thousands of Michigan kindergarten through sixth grade children participated in the 2015 Michigan 4-H Art Exchange with China. Of those thousands, one hundred pieces were selected to send to China. Works of art by Nathan Miracle and Royce Beemer from the Larson-Hillside SPARKS program in Harrison were selected to go to China.

In a continuing effort to grow membership of the 4-H program and increase its impact on youth in our area, several recruitment events were held in 2015. As a result of these efforts, the 4-H program in Clare County had an overall increase of 18% enrollment in the program.
Developing Youth and Communities, continued

Supporting careers through youth programming

» 4-H Teen Lock-In
In April 2015, Betty Jo Krosnicki, MSU Extension Educator, came to Clare County to help youth take the 4-H Ag Innovators Experience - Water Windmill Challenge. Forty-five (45) youth worked in teams to build a model windmill, challenging other teams of youth to compete, and learning about the importance of fresh water in agriculture production. Youth also had the opportunity to attend a Financial Literacy Workshop by Bev Przystas, Extension Educator. One of the ways financial literacy incorporates hands on learning for youth is through a variety of stations. Youth who planned to work at the 4-H food stand during the County Fair were taught how to give back change. Using game currency, money boxes and laminated pictures of a variety of items sold at the concession stand, youth took turns being the purchasers and buying the items, and being the cashier. Cashiers practiced ringing items up on the register and counting back change.

» Mock Interview Day
High school students need the opportunity to practice interview skills in order to be ready for the workforce. Employers appreciate and are more likely to hire candidates who know how to present themselves. Very often, opportunities do not exist in the formal high school system for this type of education; Michigan 4-H is perfectly situated to provide this type of learning opportunity.

To address this need, a Mock Interview Day event for Isabella, Clare, and Gladwin counties is planned and held in mid-March every year. Chaired by staff from MSU Extension, other partners include Michigan Works!, Mid-Michigan Development Corporation, Gladwin Economic Development Corporation, Central Michigan University, and Clare-Gladwin RESD.

On March 23rd, about 70 adults from local businesses volunteered their time to interview students, reviewed résumés, and provided short educational workshops. In 2015, two hundred fifty 11th and 12th grade students from 6 area schools took part in the event, including 43 students from Clare County and numerous business volunteers. After the event, of the evaluations received:
- 98% of the students felt they would do a better job interviewing in the future
- 96% felt they had more confident in their ability to do well in a job interview
- 95% felt more prepared to join the workforce

Highlights from the written evaluations include:
- After today, I feel like I could go into an interview with confidence.
- I feel extremely prepared for a real interview.
- I really enjoyed this whole experience. I’m very thankful I was able to participate.
Preparing children for success

» Going Green Workshop
Fifteen (15) Clare County youth participated in this hands-on event in mid-April 2015 despite the fact that the weather was sunny and beautiful! MSU Extension partnered with the Clare Conservation District to provide forestry education, “All About Trees”, and experiences to increase life skills. Youth participants learned to sew their own jean slippers, create dog chew toys from recycling old t-shirts, make a self-watering planter from a recycled pop bottle, bracelets from pop-tabs, plastic bags storage from recycled milk jugs and more!

» 4-H Science Blast Returns!
Science in Nature was this year’s theme for the 4-H Science Blast held on October 21st. Seventy-five participants came to Jay’s Sporting Goods in Clare to learn more about science through ten work stations: Smoothie bike, Healthy trail snacks, learn the parts of a flower, all about bats, wildlife furs and skulls, birds and beaks, worm composting, the science of snakes, what comes from a cow, and why bees are important.

» Holiday Craft Day
Six (6) 4-H volunteers from the 4-H Council’s Winter Workshop Committee hosted a Holiday Craft Day for youth and families to enjoy at Jay’s Sporting Goods in November 2015. Twenty-two (22) youth and fifteen (15) adults from Clare County participated in this fun hands-on workshop to create holiday projects.

» State 4-H Shooting Sports Tournament
Three local youth represented Clare County at the 2015 State 4-H Shooting Sports Tournament held on August 15, 2015 at the Blue Water Sportsman’s Association near Port Huron. This annual event provides Michigan 4-H shooting sports members with the opportunity to test their skills and earn recognition with other 4-H members from all over the state. Events include BB Gun, Air Rifle, .22 Rifle, Trap, Skeet, Muzzleloading, Target Archery, and 3-D Archery. Wyatt Burmeister, Sears; Andrew Funnell, Clare; and Justin Kinberg, Clare all competed successfully at the tournament. Wyatt Burmeister competed in the 3-D Target Archery – Jr. Open Sighted class shooting a score of 190. Andrew Funnell competed in the 3-D Target Archery – Beginner Sighted class ending with a score of 215. Justin Kinberg also competed in the State 4-H Tournament in the Traditional Muzzleloader class with his .50 Caliber. Justin received a score of 98 to place 3rd in the state, both individually and as a team, in the Traditional Muzzleloader class.

“Developing Youth and Communities, continued

“It is very difficult to say where my life would be today if it was not for 4-H and everything it has to offer... I am so thankful I have had the opportunity to be involved with 4-H.”
- Crysta Spivey, Farwell, MI.

MSU Extension provides resources aligned with Michigan science education standards to teach confidence, leadership and responsibility.
Youth influencing community

» Clare County 4-H Youth to Serve on the District MSU Extension Council

New in 2015, MSU Extension sought to increase its participation in the District Extension Council. One youth, 4-H member Vanessa Foster from Farwell, volunteered to serve as a youth representative for Clare County. Serving on this council is an opportunity for youth to learn leadership skills and demonstrate their ability to serve as an engaged citizen in their community. We are proud to have Clare County be the first county in District 6 to recognize the importance of youth involvement in helping to guide programming outcomes for the betterment of the community.

Making an impact at the fair through 4-H

» Lessening the Impact of the Statewide Poultry Ban on Youth Exhibition

On June 1, 2015, the Michigan Department of Agriculture and Rural Development (MDARD) issued a statement cancelling all poultry shows and exhibitions held in Michigan as a precaution against the spread of avian influenza. This decision affected all 4-H poultry shows at county and regional fairs, as well as other local 4-H events because co-mingling animals from various flocks and facilities at these types of events provides an opportunity for diseases to spread quickly. And on June 8th, the Michigan Department of Natural Resources announced the first cases of highly pathogenic avian influenza (HPAI) H5N2 had been confirmed in the state. The disease was found in free-ranging Canada geese in Macomb County.

Even though the disease is currently only in wild bird populations, no avian species were allowed to be displayed as part of any 4-H project, whether at a show, a club or group meeting, a petting zoo, or at any other event or venue. The affected birds included, but were not limited to, those that are part of Michigan 4-H’s poultry (such as chickens, pheasants, turkeys, quail, water fowl, guinea fowl and pea fowl) and exotic bird projects (such as emus and ostriches). As an extra precautionary measure, MSU Extension also did not allow the display of any live birds that were part of the 4-H small animals program known as ‘pocket pets,’ including canaries, parrots, and parakeets.

MSU Extension understood that the cancellation of 4-H poultry shows across the state was disappointing to the many 4-H youth and volunteers who had invested their time and talent into poultry projects. While unfortunate, the decision is in the best interest of the state’s poultry farmers, backyard hobbyists and 4-H families who have poultry. In order to provide opportunities for 4-H’ers with avian-related projects to showcase their work in the project area, MSU Extension created a number of alternative opportunities to live poultry shows, such as quiz bowls, skill-a-thons, poster displays, interview judging, the use of bird models and other specialty contests.
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.

Teaching residents about food safety

From the farm to the kitchen table, food safety is an important issue. Foodborne illness outbreaks occur crossing all socioeconomic lines from production and consumption to preservation of foods. Foodborne illness costs the U.S. economy billions of dollars each year in lost productivity, hospitalization, long-term disability and even death. MSU Extension food safety education programs train participants to prevent incidents of foodborne illness associated with unsafe food handling practices.

» Food Preservation is both a popular hobby and a small business opportunity, but people who preserve food without following scientifically proven food preservation techniques increase the risk of foodborne illness. Because of the risk of foodborne illness, including botulism from failure to use safe home-canning techniques, it is important to continue to provide up-to-date guidelines for safe home food preservation.

Michigan State University Extension food preservation workshops cover a variety of topics customized to each workshop’s target audience. Using up-to-date research methods, participants learn how to successfully and safely preserve food. We provided the following food preservation classes to 112 residents of Clare County in 2015:

- 2 Blanching and Freezing classes: 10 participants
- 1 Canning class: 4 participants
- 1 Jam and Jelly class: 4 participants
- 1 Food Preservation overview class: 9 participants
- 1 Dehydration class: 9 participants
- 2 Cooking for Crowds classes: 20 participants
- 3 Food Safety presentations: 56 participants
- As well as Cottage Food Laws and Serv Safe classes.

As a result of attending the food preservation workshops:
- 95% know where to locate research based/tested recipes for home food preservation.
- 96% will follow research based/tested recipes when canning food at home.
- 97% will properly use processing techniques to safely can low and high acid foods.
- 87% will use correct processing times to safely can low and high acid foods.
Ensuring Safe and Secure Food, continued

» **Cooking for Crowds** is an educational program for nonprofit groups that prepare food for their members or for the public as fundraisers. The curriculum shows the food safety risks that can develop when preparing and cooking large volumes of food, and teaches participants how to reduce those risks. Participants learn how to prevent unsafe conditions that may cause food-borne illness when planning, purchasing, storing, preparing and serving food. Participants in the workshops receive a manual and a food safety participation certificate of completion. Cooking for Crowds was taught at the Arthur Township Hall, and to day care providers through the Great Start Collaborative to help them ensure safe food preparation procedures while preparing meals.

» **MSU Extension Expo At the Market**

Local staff and Extension Master Gardener volunteers took part in Carnival Day at the Farwell Craft, Arts, & Farmers Market in August 2015. More than 40 youth and adults participated in hands-on demonstrations and activities including 4-H science experiments, a 4-H petting zoo, spinning the 4-H Life Skill Wheel, making seed bombs, **free pressure canner testing**, and on-site blanching and freezing **demonstrations**. Participants also had the opportunity to learn about protecting their child’s identity, living online safely, joining 4-H, and becoming a Master Gardener volunteer.

Helping feed the Community

» **Community Nutrition Network**

Nancy Petree, SNAP-Ed Nutrition Instructor, co-chairs Community Nutrition Network (CNN); a coordinating council of volunteers working together to combat hunger in Clare County. In this role, Nancy leads a committee of 9 dedicated volunteers, recruits 21 other volunteers that rotate each month, partners with Clare County, St. Athanasius Parish, and McGuire Chevrolet to serve as host sites. CNN ensures the involvement of other community partners including Gateway Manufacturing, Do It Best Center, Greater Lansing Food Bank, and Mid Michigan Community Action Agency. Financial support is received from many area businesses and individuals including MidMichigan Health, Clare United Methodist Church, Chemical Bank, Clare County United Way & Volunteer Center, Strike Out for Hunger campaigns, and many others. This monthly food distribution serves approximately 250 families from the area who would otherwise face hunger in their life.

Free monthly food distribution in Clare County coordinated by CNN volunteers, funded by local businesses, and supported by community nonprofits.
KEEPING PEOPLE HEALTHY

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.

Working to improve nutritional health in youth

» Show Me Nutrition
This evidence-based curriculum of six to eight sessions provides youth in grades prekindergarten to 8 with age-appropriate literacy-based education in areas of nutrition, food safety, physical activity, body image and media influence on health choices. In Clare County this curriculum was taught in:
- Farwell Elementary Sparks
- Clare Primary
- Mid-Michigan Community Action Headstart
- Harrison Headstart

» Cooking Matters for Teens
Local chefs and MSUE program instructors work with participants in this hands-on, six-part series teaching the basics of selecting nutritious, budget friendly ingredients and preparing healthy meals. Adult and teen participants take home a bag of groceries at the end of each class. Cooking Matters has been featured by First Lady Michelle Obama’s Let’s Move! campaign and recognized by the U.S. Department of Agriculture for excellence in nutrition education. Locally, this was taught at Farwell Middle School Sparks.

» Youth Nutrition Results
Teachers of children in preschool to grade 2 were asked to complete a survey documenting their observations about youth behaviors after participating in our nutrition education programs. The evaluation tool used was the Teacher Observation and Behavior Report (adapted from the University of Missouri Extension).
- 99% of the teachers reported that the children increased their awareness of the importance of good nutrition
- 68% reported that the children were making healthier meal and snack choices
- 85% reported that the children were willing to try new foods
- 73% reported that the children were eating more fruit
- 67% reported that the children were eating more vegetables

Clare County Nutrition Education Numbers 2015

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Teaching valuable healthy-eating skills in adults

» **Eat Healthy, Be Active**
Healthy food can be delicious and physical activity can be fun. This evidence-based curriculum is an opportunity for adults to learn the skills needed to make healthy eating and regular physical activity part of their lifestyle. Participants learned the importance of vitamins, minerals, and the 5 food groups. This was taught at all four (4) Senior Centers in Clare County in Lake, Clare, Lake George, and Harrison.

» **Cooking Matters**
This six-part series teaches the basics of selecting nutritious, budget friendly ingredients and preparing healthy meals. This curriculum was taught at Michigan Works, St. Luke’s Lutheran in Harrison, and to the parents of Harrison Middle School Sparks program, teaching the participants about healthy eating habits and basic cooking skills.

» **Project FRESH and Market FRESH for Seniors**
MSU Extension provides the nutrition education portion for Market FRESH for Seniors and WIC Project FRESH. This series provides information on how to choose, store and prepare fresh, locally grown fruits and vegetables. WIC-eligible individuals receive coupons to purchase fruits and vegetables from local farmers markets. There were 1,120 coupons distributed to the seniors of Clare County and 999 coupons books were redeemed. 2,000 Project FRESH coupon books were distributed to participants of WIC and 1,423 of the coupon books were redeemed for fresh local produce or: Redemption rates: 89% for seniors and 71% for WIC participants.

After attending the SNAP-Ed food presentation workshop:
- 94% of the participants intended to eat more fresh vegetables per day.
- 95% percent of the participants intended to eat more fresh fruit per day.
- 15% of participants reported that they hadn’t been to a farmers’ market before.

As result of attending the MSU Extension SNAP-Ed presentation 98% intended to buy fruit and vegetables at the local farmers’ market.

» **New Partnerships**
New programming partnerships in 2015 included the Health Improvement Planning Committee (HIP), Farwell Middle School, and Harrison Middle School.
Helping Michigan residents become better stewards of our inland lakes

» Shoreline Educator Network (SEN) Training

Michigan has more than 11,000 inland lakes, which are among its most beautiful and precious resources. To marshal all of the passion and energy so many people and organizations have regarding Michigan’s lakes, MSU Extension helped residents learn how to become better stewards and better protect Michigan’s inland lakes. Workshop topics included aquatic invasive species, plant identification, algae blooms and water quality.

The course and its curriculum was developed in partnership between MSU Extension, the Michigan Department of Natural Resources, the Michigan Department of Environmental Quality, the Michigan Lake and Stream Associations, the Michigan Natural Shoreline Partnership, the MSU Institute of Water Research and the Michigan Chapter of the North American Lake Management Society.

Twenty-six participants completed the Natural Shoreline Educator Training for Professionals in April 2015 at the Clare-Gladwin RESD. MSU Extension staff member Marybeth Denton coordinated the one-day workshop for organization representatives from across the state (and Indiana) to become educators in the Shoreline Educator Network (SEN) that is part of the Michigan Natural Shoreline Program. SEN Educators from 15 counties can now teach Homeowner workshops for property owners who live in and around inland lakes and streams. Seven of the twenty-six SEN Educators trained have committed to provide education to residents in Clare County.

“Excellent workshop and materials. Thank you! I can’t wait to share with my riparian friends and colleagues.”

“I often have opportunities to engage in conversations with shoreline property owners and city and township leaders about shoreline issues. This has been very helpful in preparing me for these conversations. Thank you!”

Local volunteers responsible for beautifying Welcome Center

Michigan Department of Transportation officials kicked off National Work Zone Awareness Week at the Clare Mackie Rest Area in March 2015. Master Gardener volunteers met with Greg Johnson, MDOT chief operations officer, and Bill Mayhew, MDOT Service Center Manager (pictured here), to discuss landscape improvements for the future.
Making an impact at the local level

» Fundamentals of Planning & Zoning Course
Michigan Citizen Planner provides time-tested educational programs on important local issues that are proven to be comprehensive without being overwhelming. The program is offered locally to provide a convenient way for busy volunteer community leaders to obtain the latest technical knowledge and information they need to perform their duties more effectively and responsibly. In September and October, this course was offered in Mt Pleasant, Isabella County. Five (5) Clare County officials took the opportunity to participate in this seven-part series led by Kurt Schindler, Extension Educator.

Learning to manage your landscape the ‘Smart’ way

» Introduction to Smart Gardening Webinar Series
In an effort to accommodate local demand for interest in the Smart Gardening initiative, MSU Extension staff member Marybeth Denton coordinated two introductory trainings in 2015. Within the two series, one hundred and twenty-four (124) participants from 28 counties signed up to take the online course to become an Extension Master Gardener-Smart Gardening Volunteer (EMG SGV). Participants received five hours of online (or on-site) training on smart plants, smart soils, smart lawns, and smart vegetable gardens. Those who completed the course received designation as an EMG SGV, a certificate, nickel-plated pin and tool kit full of materials to use their knowledge to share with others in their communities. Twelve (12) Clare County Extension Master Gardener volunteers completed the course to become an advocate for Smart Gardening in our community.

» Smart Gardening Outreach
EMG volunteers used their knowledge in smart gardening practices to provide information at the Clare Welcome Center (Mackie Rest Area) in June during National Pollinator’s Week. Over 300 residents of Michigan received specific research-based information on how to be a smart gardener with their lawns, soils, plants, and vegetable gardens.

“We cannot say enough good things about the SMART program. It is really excellent material. This makes the best use of MG volunteers and the vast knowledge of the MSU Extension experts. Congratulations on such a winning program. It is really SMART!!! Thanks Very Much!”

—Smart Gardening Series participant

One of many ‘smart’ choices for landscapes is using perennial native flowers that support pollinators. Some examples (shown left) include Purple Cone-flower, False Blue Indigo, Butterfly Weed, and Brown-eyed Susan.
Strengthening Michigan’s financial capacity

In April 2015, Teagen Lefere was selected to assume the leadership role with MSU Extension in Clare County as the Finance & Homeownership Education Program Instructor. Lefere provides financial and home ownership education expertise, foreclosure prevention counseling and assistance, and serves as a resource for industry specialists and other financial and homeownership partners.
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.

Bridging the gap between farm to fork

» **Mid-Michigan Farm & Garden Show**

The annual Farm & Garden Show, held in March, was a huge success in 2015 with over 50 Business Exhibitors and over 800 attendees. With attendees from 21 counties, including 62 attendees from Clare, the show continues to grow and offer a chance to visit with various Agribusinesses from around the state. This show started in the Edick Dairy Farm Shop in 1976 and has continued to be a fun and experiential learning event since its creation. Michigan State University Extension employees continue to support this event by being on the planning committee and helping with various activities throughout the year, and the day of the event.

» **Family Fun Day at the Kitty Kurtis Ranch**

Family Fun Day on the Farm was held at Kitty Kurtis Ranch in Harrison on August 15, 2015. According to Vicki Donavon, from Clare County Farm Bureau, there were 250 people that attended this one-day event.

Attendees received a behind the scenes glimpse of farming. The event included activities for the entire family, including face painting, making earth bracelets, taking a tour of tractors and other types of farm equipment, getting up close to animals for the first time, and many other learning sessions.

MSU Extension Educator Kable Thurlow demonstrated the Rainfall Simulator. Attendees were surprised at how well grazed pastureland allowed water to infiltrate, versus running off and carrying valuable nutrients with it.

Visits to local farms help youth and adults learn about where food comes from.
Supporting value-added agriculture

» Grass Fed Beef

Grass Fed Beef production in Michigan is a growing industry. For many years small producers have been selling and marketing grass fed beef, but there were very few places for them to obtain research based information to help them improve the practice. Thanks to Dr. Jason Rowntree and his team of Extension Educators Jerry Lindquist and Kable Thurlow and Lake City AgBioResearch farm manager Doug Carmichael, information on grass fed beef production is now available from MSU. In fact, MSU has become known as one of the research leaders in the grass finished beef industry across the nation.

The MSU team has conducted much of their research with the University cattle herds at the Lake City and Chatham Ag BioResearch centers. They have analyzed the many aspects of grass feeding and finishing beef without grains including: production systems, cattle nutrition, cattle genetics, grazing methods, carcass and meat qualities, economics, and consumer preferences. The team has also worked on a North Central SARE - Sustainable Agriculture Research & Education - grant with 17 farms in northwest Michigan to help these farms establish a system for grass fed beef production and to learn from their findings. Through four years of training, these farms have evolved to the point where seven are now producing grass-fed beef. The farms, in conjunction with the MSU research farms, have produced over 250 head of finished cattle that were supplied to the grass-fed market. In general, the average carcass grade of cattle has been USDA High Select and the average carcass yield at 19 – 21 months of age has been 53 -54%. Price premiums of 25% above the general cattle market have been received for the hanging carcasses.

Does it taste good? Informal and formal interviews with buyers and consumers of the product have been conducted. From the butchers to the food wholesale buyers to the chefs and the consumers, the reviews have been good to excellent. For example, one butcher that received four heifers from one of our cooperative farms said, "Before I butchered these cattle I had a bad opinion of the quality of grass-fed beef. You guys at MSU have shown me there can be quality beef produced in a grass-fed way." A major food wholesaler in Northwest Michigan has increased their annual purchases of grass-fed beef from the MSU project from 40 carcasses per year to 70. They say this is because their retail demand for the product continues to grow.

Growing and managing successful food plots for wildlife

» Food Plot Day

MSU Extension staff in Clare County offered its services at Jay's Sporting Goods' Food Plot Day in Clare on Saturday, April 11, 2015. Forty-five (45) residents from nine counties were reached through soil sample test boxes, venison bulletins, oak wilt information, land leasing and custom work rates, cover crop research data, and whitetail research information for land owners.

"... the grass-fed beef coming from the MSU project is some of the BEST I have had in close to 30 years in the business ... the taste, texture and flavor of your work is something that I hope continues on for many years to come".
- Traverse City chef
Woodland Farm Pasture Walk

In June of 2015, MSU Extension Educators Jerry Lindquist and Kable Thurlow developed this program hosted by Woodland Farm with two locations in Clare and Isabella counties. The farm is owned and operated by Tony and Beth Wood. The Woods are also a 4-H family in Clare County. Attendees came from all over the state; however, the majority of them were from Clare County. They ranged from traditional beef producers, to those that were thinking about grass fed beef and wanted to learn more. Some were already producing grass fed beef, and wanted to learn about Tony Wood’s operation (Tony is a SARE Grant Cooperator). Tony Wood shared his experiences with attendees to help them learn about successful production of grass fed beef, how to produce high quality hay that works well in a grass finishing situation, and how to market their product.

MSU Extension Educators spoke about pasture rotation, hay production, and grass finishing. They also spoke about cattle groups, (yearlings, cows, and calves) watering systems, mineral feeding options, and soil fertility.

Woodland Farm currently has about 50 head of cattle. Cattle are grass fed, rotationally grazed throughout the growing season and fed baled forage during the winter months. Finished weight steers and heifers are marketed as grass fed freezer beef to local customers. 60 acres are rotationally grazed, and 100 acres dedicated to hay production.

Fighting back against emerging pests

IPM Academy Online Webinar Series

Michigan State University Extension has been offering a series of free, on-demand integrated pest management webinars since July 2013. Viewers are able to request up to five recertification credits towards their pesticide applicators license in the state of Michigan. There are currently 17 webinars available (listed below starting with the most recent). Twenty-six (26) county residents have participated in these online webinars.

- MDARD Nursery Program Update
- Summer 2015 Nursery Update
- Becoming an Insect Investigator
- Top Diseases and Insects in Nursery Crops
- Growing Bee-Friendly Plants in the Greenhouse
- Tactics for Vegetable Disease Management
- Hop IPM
- What’s Wrong with My Vegetable Plants?
- Chestnut IPM
- Introduction to Integrated Pest Management
- Integrated Pest Management Resources
- Entomology 101
- Plant Pathology 101
- Soil Science 101
- Plant Science 101
- Pesticides 101
- Insect Scouting in Fruit Crops

Working together to eliminate these invasive species will be essential to lessen the loss of the Michigan tree fruit crops in the future.

Hands-on Hop Scouting Workshop

In August 2015, Erin Lizotte, MSU Extension Educator, hosted a free workshop at the Northwest Michigan Horticultural Research Center to teach best scouting practices for hop pests and diseases, which is critical to environmental and economic sustainability. The training included scouting demonstrations for current hop growers, a review of the major pests of hop, hands-on scouting for and identifying them, and a discussion about management considerations.