Message From the District Coordinator

MSU Extension (MSUE) in Cheboygan County continues to provide local educational programming and impacts to meet Cheboygan County and Michigan's needs. Extension staff members work diligently to maintain programming and reach as many residents as possible each year. Educators and all staff have worked hard to innovate creative and effective ways of providing programming at reduced costs.

This report provides highlights of MSU Extension's work in Cheboygan County during 2012-2013 within the structure of our four programmatic Institutes:

- Agriculture and Agribusiness Institute
- Children and Youth Institute
- Greening Michigan Institute
- Health and Nutrition Institute

MSU Extension has changed in many ways since our beginnings in the early 1900’s. But we have not changed our focus of connecting education and research on campus to the people and businesses in the communities we serve. Thank you for your continued support of this critical partnership.

Sincerely,
Patrick I Cudney, District 3 Coordinator

2012 Participation Numbers

<table>
<thead>
<tr>
<th>Program Type</th>
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<tr>
<td>4-H Children &amp; Youth programs</td>
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<td>4-H Members (Traditional Club Enrollment)</td>
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Cheboygan County 4-H — In 4-H, youth learn through opportunities in which they master life challenges, cultivate independence with guidance from caring adults, gain a sense of belonging within a positive group, and share a spirit of generosity with others. 4-H programs look to volunteers to help our young people learn the life skills they need to help them succeed in the 21st century while also having fun!

» Veterinary Science Camp — The idea for this camp was birthed from three teens in the Cheboygan County 4-H Program. The teens worked with the 4-H Program Coordinator and wrote a grant proposal for an MSU Participation Fee Grant. We were awarded a $10,000 grant to start this camp. During the planning stages, we determined that it would be beneficial to make this camp available to all youth in Northern Michigan. “Crazy About Critters” Vet Science Camp was held on July 16-18, 2013 at the Ocequeoc Outdoor Center. Camp was attended by 38 campers (ages 9 to 12 years), 17 teen counselors and 10 staff for a total of 65 participants from eight counties. 17 were from Cheboygan County. The Teen Counselors learned leadership skills, empathy, responsibility, teamwork, and stress management. The campers learned how to suture; create a pet first aid kit; the ways cow’s milk can be used, including making homemade ice cream; what is contained in an owl’s pellet; frog dissection; the sterilization process for surgery; symptoms and how to diagnose the problem; types of careers available in Veterinary Science and general camp events like crazy games, skits, campfire songs, water balloon wars and archery. 80% of the youth said that they would like to learn more about science. 59% said that they would like to have a job in science.

» 4-H Robotics Elective Class — FAST Trekkers 4-H Club received a $5,000 grant to purchase Lego Mindstorm Robotic Kits. As part of the grant proposal, this club wanted to partner with area schools in learning about robotics. Carl Franzon, leader for FAST Trekkers 4-H Club, partnered with Jason Friday, teacher at Cheboygan Middle School, to offer a 6 week 4-H Robotics Elective Class at Cheboygan Middle School. 4-H borrowed 10 Lego Mindstorm Robotic Kits from other counties to add to the 6 that they had purchased in order to maximize the hands on approach to this class. We had 22 youth participate in the class. Mr. Franzon and Mr. Friday utilized the 4-H Robotics Curriculum, which walks the youth through a discovery of how each part of the robot works and teaches them how to create an engineering notebook. At the end of the 6 weeks, the youth were polled to see how many were interested in an afterschool robotics club. Nine indicated interest and 4-H plans to start this club during the 2013-2014 school year.
Rabbit/Cavy Clinic and Show — The 4-H Small Animal Committee for many years has sponsored a spring rabbit/cavy show. The purpose of the show is to give youth a chance to practice their showmanship skills and compete for prizes. This year a youth member did a presentation at a Small Animal Committee requesting the addition of an educational clinic and some educational games prior to the show. The committee agreed. The Rabbit Clinic and Show was held on May 11, 2013 at the Cheboygan County Fairgrounds. It began in the morning with a clinician teaching the youth about rabbit care, breeds, and showmanship. For one of the new educational games, they brought in rabbits that had a characteristic that would disqualify them. The youth had to identify what the disqualification was. For instance, they had an obvious example - a rabbit without ears. They also offered a skill-a-thon and educational poster contest. There were 18 youth and 23 adults in attendance from Cheboygan, Presque Isle and Otsego counties.

4-H Horse Clinic and Show — For 35 years, the 4-H Youth Equine Program Committee has been organizing the 4-H Horse Clinic and Show that is held over a weekend in June each year. The goal of this event was to give 19 youth and 9 adult riders an opportunity to spend time with professional horse trainers and learn about fitting and showing, equitation, trail riding, jumping, horse first aid, speed events, etc. Then, at the end of the weekend, they are use their new skills to complete for prizes during the Horse Show.

4-H Great Lakes Natural Resource Camp — This nationally recognized camp was held July 29 to August 3, 2013 in Presque Isle, MI. This year, 4 youth from Cheboygan attended this camp. The youth learned about coastal ecology, fisheries management, limnology, wildlife, invasive species and forestry. They also had opportunities to participate in kayaking, sailing, snorkeling, and archery. The evening programs focused on team building, environmental policy making, teaching others and empowering youth to take on leadership roles. One of the Cheboygan youth that attended was chosen to be the Samsung Summer Science Program Scholar for Cheboygan County 4-H and received a $1,000 grant. She is currently planning an education event on invasive species for Cheboygan County.

4-H2O Community Event — Cheboygan County 4-H received a $1,000 grant from PIE&G’s Community’s First Grant for this event. 4-H partnered with Hammond Bay Anglers and Alverno Fire Department to offer a fishing educational experience for youth during the 2013 Cheboygan County Fair. The grant funds were used to purchase 150 rainbow and brown trout and rent a tent to provide shade for the fish pond. Hammond Bay Anglers brought in their portable pond and Alverno Fire Department filled the pond with lake water. 4-H member, Kayleigh Manning, is learning about different rabbit breeds during the Spring 4-H Rabbit/Cavy Clinic and Show.
Approximately 125 youth learned about the basics of fishing from the Hammond Bay Anglers. They were allowed to keep any fish that they caught. Some families reported back that they enjoyed a wonder fish dinner that evening with fish caught by their kids!

**Introduction to Robotics Event** — This event was also held during the 2013 Cheboygan County Fair. Sarah Adcock from Thunder Bay National Marine Sanctuary, National Oceanic & Atmospheric Association assisted the Cheboygan County 4-H FAST Trekkers Club in teaching youth and adults about how to build a Remote Operated Vehicle (ROV or underwater robot). They were taught that there are three things needed to build a successful ROV: 1) a frame to give stability, 2) motors to give thrust, and 3) buoyancy. The youth had to work as a team to create their design and then test how well it functioned in the water. The youth were able to make revisions to their designs in hopes of it functioning more successfully each time. We had approximately 25 adults and 75 youth participate in this event. The youth had a terrific time testing and revamping their designs. It was a fun way for them to learn engineering, teamwork, critical thinking, and problem solving skills.

**Cheboygan County Fair 2013** — 4-H youth brought 33 horses, 1 steer, 8 sheep, 12 swine, 2 alpacas, 5 goats, 35 rabbits, 9 chickens, 1 cavy, 5 pocket pets and 5 dogs for a total of 116 animals to the 2013 Cheboygan County Fair. The youth also entered approximately 393 exhibit projects that included items such as, arts and crafts, woodworking, educational posters, sewing, vegetables, club displays, videos, animal record books, etc. Many of the 4-H youth also participated in open show events during the week of fair. The youth, their families and the adult volunteers value their experiences during fair and give back by donating approximately 20 hours in organized fairground work bees throughout the year to help with clean up, minor repairs and preparation of the fairgrounds. Many give much more than this outside of these organized events. During fair, they volunteer as barn superintendents and the youth are assigned barn duty time to make sure the barns are clean and animals are well-cared for. They donate approximately 230 hours in an effort to help the Cheboygan County Fair Board with having a successful fair.
America is facing a national shortage of young people with skills in the areas of science, technology, engineering and math (STEM), which is resulting in a significant workforce shortage in STEM fields. Michigan State University Extension 4-H Youth Development has a strong history of mobilizing volunteers to work with youth through hands-on learning experiences, which makes the program a natural fit for helping children generate an interest in science which then propels them to a desire to gain knowledge and skills.

» 4-H Snapshots — 4-H projects provide youth with the opportunity to build life-skills that may be applied to future career choices. The MSU Science Team is working on creating one-page, informational brochures called 4-H Snapshots. The new 4-H Snapshots provide information to parents, youth, and volunteers on various Michigan 4-H project areas. To date, the MSU Science Team has created 4-H Snapshots on dogs, goats, poultry, rabbits, horse and pony, dairy cattle, horticulture, photography, swine, and sheep. These resources are free and available on the Michigan 4-H web page.

» 2013 4-H National Youth Science Experiment, Maps and Apps — Science curriculum and kits are available resources for county use. The newest addition to MSU Extension resource library is the 2013 National Youth Science Experiment, Maps and Apps. This experiment introduces youth to the power of geospatial technologies and their unique ability to help us understand and improve communities. The experiment is an exciting activity to engage young people in helping to improve our environment, with the help of geographic information systems (GIS) and global positioning systems (GPS).

» 4-H ROV Teacher Workshop — Since the ROV Teacher’s Workshop, educators have shared what they learned with others in their communities, offered ROV workshops, or recruited youth to help them in seeking additional club members and grant funding. Many of the teachers and volunteers who participated in this initial workshop have planned further ROV trainings, afterschool STEM - ROV teams, or plan to incorporate programming in their classroom this school year. Other educators who attended are looking to expand on their learning by acquiring a (free for students) solidworks CAD program to begin using with their ROV designs. One 4-H Program Instructor used the workshop as a model for two summer camp sessions in Onaway and Alcona. This group is forming an ROV STEM club.

From the initial 14 adults and teens who participated, more than 162 adult and teen educators have been involved in furthering STEM – ROV activities in their communities. This number of participants is expected to increase exponentially as teachers follow through on their plans to incorporate ROV engineering and design programming into school and after-school programming.
After the workshop, 4-H Teams participated in the 13th Annual Great Lakes Regional MATE ROV Competition at the Thunder Bay National Marine Sanctuary in Alpena, MI. (April 20–21, 2013). The Marine Advanced Technology Education (MATE) Center coordinates this international student underwater robotics competition and a network of 20 regional ROV contests that take place across the U.S. and in Canada, Hong Kong, Scotland, and Japan.

Several Michigan Counties created 4-H Robotic and Engineering Clubs in response to the need for qualified workforce marine engineering in their communities. These technologies include some of the largest growing job sectors in the country providing door-opening opportunities for aspiring youth.

Their efforts paid off. In the scout division (K to 8), teams swept the division taking 1st, 2nd, and 3rd. In the Ranger division (5th to 1st year college), youth took 1st and 4th overall. The first place team also took first in poster design, mission score, and missed 1st place in the engineering interview by five points. Best of all, the Junior High team won the Great Lakes regional, and was invited to compete at the International MATE ROV Competition in Seattle, Washington [summer 2013]. The Michigan 4-H Team was the youngest competing at the ranger level. Despite this they took 15th place overall in this international competition. 4-H youth on ROV Teams are eagerly preparing for the 2014 MATE ROV International Competition, scheduled to be held in Alpena County during the spring of 2014.

The Mate ROV Competition serves as an excellent example of how non-traditional (4-H), traditional education (schools), community organizations, and local business can maximize their impacts, and move Michigan forward through successful partnerships and collaborations. Through this STEM programming, youth have the opportunity to be part of a collaborative learning community that is fueling the ocean STEM workforce pipeline. These experiences provide direct access to colleges and STEM careers. In some cases duel-enrollment credits and post-graduation opportunities are also available.

During the summer of 2013, one youth ROV team received a special visit with the marine technology company Oceaneering (the largest employer in the world for marine technology). During the visit, the ROV Team was treated to an excursion on the vessel Storm, piloted a commercial ROV, and talked to an Oceaneering representative about job and opportunities. ROV Teams have also been using the underwater robots as a research tool to conduct local watershed research.

Youth are currently meeting regularly, with planning underway for a December ROV Teacher Workshop. The workshop is being sponsored by Michigan 4-H, the Straits STEM Hub, the North East Michigan Great Lakes Stewardship Initiative (NEMGLSI), and the Thunder Bay National Marine Sanctuary.

Michigan 4-H was very successfully represented at the MATE ROV competition, with almost half of participants being registered 4-H youth.
4-H Discovery Camp is a summer camp program for youth ages 13 to 19. The purpose of 4-Discovery Camp is to:

- Educate youth on current issues and technologies impacting energy and the environment within Michigan's agriculture sector.
- Develop problem solving and critical thinking skills through team work and hands-on-learning.
- Expose youth to degrees and jobs in these new and exciting fields.
- Develop and expand career and personal interests.
- Foster participants’ ability to meet new people and make new friends from different places and backgrounds.
- Develop social and academic skills needed for a successful transition to college and life as an adult.

This year campers spent five days exploring ideas, research and hands-on opportunities in the field of energy as it relates to natural resources and agriculture.

In post camp evaluations:

- Ninety-five percent of campers reported feeling more knowledgeable about bioenergy.
- Seventy-three percent of campers indicated that they are more likely to pursue a degree or career in a bioenergy related field.
- Sixty-eight percent of campers anticipated changes in personal energy use.
- Eighty-six percent of campers plan to apply the knowledge they learned during 4-H Discovery Camp.
- Seventy-one percent of campers plan to teach others what they learned.

Of the campers who participated in a solar car challenge during Discovery Camp:

- Sixty percent of youth indicated that they would like to be an engineer when they grow up.
- One-hundred percent of youth knew that a solar panel converts sunlight to electricity.
- Ninety percent of youth knew that a multi-meter is a device that can be used to measure voltage, current, or resistance.
- Seventy-two percent of youth knew that when two batteries are connected in series, their voltages add together to give double the amount of voltage.

4-H Discovery Camp is one of the only youth camps in the county that focuses on exposing youth to opportunities and careers in bioenergy.
» **Cutting-Edge Training** — An important area that Extension offers is cutting-edge training. One example this year was the National Extension Conference on Volunteers, held in Frankenmuth, MI, May 20-23, 2013. During this training, Extension staff learned more about the latest research and trends in volunteerism, gaining innovative ideas for reaching new volunteers, investigating best practices for developing and retaining current volunteers, and strengthening volunteer management efforts.

During a second opportunity, 4-H professional staff participated in the 4-H Science e-Academy. Simply put, the “e” reflects the use of the Internet for a specific activity. This e-Academy reflects the evolving paradigm of providing professional development utilizing educational technologies and the Internet.

» **4-H Exploration Days** at Michigan State University: Every year, approximately 2,500 youth and chaperones from across Michigan counties, come to stay at MSU for 4-H Exploration Days. This MSU pre-college program is designed to:

- Increase responsibility, confidence, independence, accountability, problem-solving, decision-making and time management skills.
- Increase communication, team work, citizenship, and leadership skills.
- Foster ability to meet new people and make new friends from different places and backgrounds.
- Develop and expand career and personal interests.
- Increase college exploration and access to the Michigan State University campus and its resources.
- Develop social and academic skills needed for a successful transition to college and life as an adult.
- Give youth opportunities to try things that aren’t available in their county.

Impacts from 4-H Exploration Days indicate that the program increased youth participants interest in and readiness for college. Highlights include:

- Ninety-four percent plan to attend college.
- Eighty-six percent said the program better prepared them for college.
- Eighty-five percent said they’re excited to go to college.
- Eighty-one percent increased their knowledge of the different majors, career paths, and opportunities available at MSU.

Youth report out to the rest of the group at the Food Science Investigations workshop session during Exploration Days. They created a poster and brochure to market their Michigan-made products.
The Agriculture and Agribusiness Institute is a distinctive resource helping farmers and agricultural businesses and the entire agri-food industry learn to effectively manage production, financial and environmental systems for success, from the individual farm to the state’s natural resource base to the consumer’s dinner plate—all of which comes together to ensure that food and agriculture continue to keep the economy viable.

» **Soil Analysis** — Soil analysis through MSU’s Soil and Plant Nutrient Lab allows producers to make informed decisions about nutrient management that take into consideration the agronomic, economic and environmental implications of fertilizer use. In the last year, MSU Extension Cheboygan Co. has provided custom fertilizer recommendations to nine clients based on the analysis of 23 soil samples representing 231 acres of farmland.

» **Cover Crop Workshop and Field Day** — Cover crops can reduce soil erosion and increase nutrient recycling on farmlands, thereby decreasing the soil and nutrient loads entering our lakes and waterways. Cover crops also contribute to crop production through improvement of soil quality and fertility, pest management and water availability. On April 10th, 2012 MSU Extension held a cover crop workshop at the Rogers City Area Senior Center. Fifteen participants received information on the benefits of cover crops and strategies for integrating cover crops into their farm systems from MSUE Educators Paul Gross, Christina Curell and Dr. Dale Mutch. MSU Extension and the Cheboygan-Presque Isle Natural Resource Conservation Service office collaborated to follow-up the spring workshop with a field day event in Cheboygan County on October 16th. Matthew Bonnett welcomed guests from across Northern Michigan to his farm near Levering to share his experiences with cover cropping. Participants were introduced to the Midwest Cover Crops Council’s online cover crop selector tool and had an opportunity to view cover crop trial plots.

» **Entrepreneurial & Sustainable Farm Tour of Northeast Michigan** — Farm families, in order to be successful and sustainable, need to utilize the resources at their disposal in ways that are agronomically productive and economically viable, as well as environmentally friendly, socially acceptable and community minded. It is easy to understand why these standards are desirable, but much more difficult to meet them when faced with the uncertainty and risk of an agricultural enterprise. MSUE’s 2013 Entrepreneurial & Sustainable Farm Tour held September 17th & 18th featured eleven farm operations located throughout Northeast Michigan, including Cheboygan’s Michigan Cranberry Company, which have explored and seized opportunities to enhance the profitability of their agribusinesses while being socially and environmentally responsible. By seeing and hearing these success stories first hand, the 40 tour participants will be better equipped to achieve their own sustainability goals through targeted changes that suit them and their farm operations.
» **MSU Extension Master Gardeners Recertified in 2013** — The MSU Extension Master Gardener Volunteer Program is a horticulture education and volunteer leader training program. Master Gardeners are committed to improving the quality of life in Michigan through horticulture-based volunteerism and beautifying communities throughout the state. In order to maintain their certification, participants are required to volunteer at least 15 hours each year with gardening related community projects and complete at least 5 hours of additional educational training. Twelve Cheboygan Co. residents renewed their Master Gardener certifications in 2013.

» **Northwest Michigan Orchard & Vineyard Show** — Over 290 people, including four Cheboygan County residents, attended the educational sessions at the 2013 NW Michigan Orchard & Vineyard Show held in Acme, Grand Traverse County. Sessions covered a broad range of production, pest management and marketing issues. 76% of participants found the financial planning sessions to be helpful and plan to adopt new financial management strategies as a result. 87% of evaluation respondents felt that the information presented would help them maintain or grow their farm business.

» **Wine Grape IPM Kick-Off** — This spring program was attended by grape growers from throughout the Grand Traverse Bay region. The main topic of this year’s program was soil biology and soil health, with speakers from a private agricultural consulting firm and a commercial composting company.

» **Northwest Michigan Horticultural Research Station Annual Open House** — Dr. Paolo Sabbatini from the MSU Department of Horticulture joined local MSUE staff to present information on over a dozen new grape varieties being tested at the station in Leelanau County. Grape growers and winemakers from across northwest Michigan were on hand to see and taste the new varieties.

» **Great Lakes Fruit & Vegetable Expo Grape Sessions** — MSUE educators from northwest Michigan are involved in the planning and facilitation of this annual December event held in Grand Rapids. Many northwest Michigan growers attend to obtain information and make contacts that benefit their farming operations.

» **Vineyard Sprayer Workshop** — A dozen participants were informed about techniques and equipment useful for the calibration and adjustment of vineyard airblast sprayers. A device called a “patternator” was used to visualize sprayer output patterns. Local MSUE staff were assisted in this program by a state-wide pesticide application/safety educator and a representative from a private spray application technology firm.

» **American Society for Enology and Viticulture, Eastern Branch Annual Meeting** — This was the first time this meeting had been hosted by Michigan for several decades. It was a fantastic showcase for the Grand Traverse region and all Michigan wineries. MSUE staff assisted with local arrangements and regional tours for participants.
» **Grape Research & Demonstration Projects** — Grape variety trials and growing practices research continued in 2012. Due to changes in emphasis and funding at the MSU department of Horticulture, fewer of the grape varieties being tested at the Northwest Michigan Horticultural Research Center were processed into wine on campus. Cooperative arrangements were made with several NW Michigan commercial winemakers to produce test wines from the 2012 grape research plots. Four students in the Viticulture and Enology Science & Teaching Alliance (VESTA) received many hours of hands-on experience in the experimental vineyard.

» **Saskatoon Grower Support** — During 2012 MSUE educators assisted in the development of the Saskatoon Berry Institute of North America, a new organization started by growers and marketers of saskatoons from northern Michigan. Pesticide recommendations for Michigan production of this crop were prepared and provided to growers for the first time in early 2013.

» **Hops Research, Education, and Outreach** — In 2012 Michigan State University Extension in the Grand Traverse Region continued to provide statewide leadership for hops research, education, and outreach. MSUE secured Project GREEEN funding to further its Hops Variety Trial at the Northwest Michigan Horticulture Research Station. MSUE also hosted its 4th annual Northwest Michigan Hops tour that was attended by over 80 participants from the Midwest, Colorado, and Canada. Additionally, we were able to bring Jason Perrault, a 4th generation hops grower and one of the best hops breeders in North America to the Great Lakes Expo, held in December in Grand Rapids, MI. Finally, MSUE hosted Integrated Pest Management Academy at MSU in February, with a specific focus on pest and disease management in hops production.

» **Farm Information Resource Management (FIRM)** assists farmers, agriculturally-related businesses, industries, families, and individuals improve their lives and achieve their goals through an educational process that applies management, production and economic knowledge to critical issues, needs, and opportunities. The FIRM team was involved in the following in the Northwest Michigan region in 2012:
  
  - Landowners received detailed information about oil and gas leasing and development. Individual consultations enabled participants to more deeply understand some of the critical points in the lease that may impact them when an oil and gas well is placed on their farmland.
  
  - The FIRM team created the 24 month Fruit Cash Flow Budget Planner, an Excel program that allows a fruit producer to project income, expense and cash flows for business and succession planning. This is also required by lenders as part of qualifying for the 2012 MI Emergency Loan program.
  
  - For the district as a whole, approximately 16 producers were counseled and given printed information about cropland leasing and lease rates.
Climate Variability Meetings — Increasing world population is placing more pressure on farmers to increase food production locally as well as around the globe. However, recent research has shown localized changes in climatic conditions over the last three decades, and these changes are making food production less reliable than in the past. Notable changes in the climate include warmer temperatures, more frequent severe weather events, more precipitation, and an earlier onset of spring. These changes in climate have resulted in pest survival over the winter and potentially more pest generations per season. Increased erosion due to extreme precipitation events, longer and more variable growing seasons, and periods of excessive wetness and drought. All of these changes pose a threat to producing a crop year-in and year-out, compromising the ability of Michigan farmers to meet the needs of our growing population while maintaining the sustainability of livestock and cropping systems.

To address some of these important issues, a Michigan State University Extension (MSUE) team, consisting of both field staff and campus specialists, hosted four meetings around the state targeting four unique segments of Michigan’s agriculture: fruit, crops and livestock, state and federal governmental agency staff, and the agri-business community. Each of the meetings were a full day event that included a brief morning overview of the most current research about climate variability and production practices that promote sustainable production of food and fuel around the United States. During the afternoon, a listening session allowed participants to openly discuss climate-related issues, impacts on Michigan agriculture as a whole, and recent weather events on local farms. Questions were designed to establish what the needs of each of these segments are so that we can prioritize how MSUE can best assist growers and producers. 100% of participants agreed that the discussion on climate variability and agriculture was beneficial to them and their farm operation.

Research from communication experts highlights the importance of dialogue with stakeholder groups when addressing complex topics like sustainability and climate variability. Our interdisciplinary team decided that the optimal strategy for discussing these difficult issues and their impacts on Michigan agriculture is to ask farmers about their current and future challenges in producing sustainable and economical food and fuel. Now that the team has gained a better understanding of the key challenges impacting Michigan producers, we can tailor Extension programs, research, and outreach to meet the immediate and future demands of the agricultural community.
Good Food - Safe Food: Reducing the Potential for Antibiotic Residues in Milk or Meat — From December 2012 through February 2013, the MSU Dairy Team conducted 13 half-day meetings on reducing antibiotic residues in milk and meat. This topic was suggested by the Extension Dairy Advisory Team and supported by them as timely and important. Each Dairy Educator played important roles in promotion, organization, finances and instruction. The meetings were intended to correspond with the planned January 2013 release of an FDA report on a study of residues in milk. The agenda explored the issues of residues in both milk and meat and practical preventative aspects including valid veterinary client patient relationship (VCPR), development of protocols and communication on farm with all involved. The agenda was planned to involve a local veterinarian on the program at each site. A bound conference proceedings was produced and provided to each participant. Meetings were supported by industry. One veterinary health company had a representative at eight meetings. MSU Extension took a leadership role in putting on these meetings that would not directly impact producer profitability nor production and are not new regulations. Yet they are important to the industry because of the need for consumer confidence in the safety of food.

The total attendance at these meetings was 187. These meetings were particularly well supported by the Michigan Department of Agriculture & Rural Development (MDARD) Animal Industry Division which sent their field and administrative staff to these meetings. Michigan Milk Producers Association (MMPA) likewise sent their field staff, laboratory and key staff, and two board members to the meetings. An estimated 90 producers attended.

The Good Food - Safe Food program was offered as a pre-conference session at the Great Lakes Regional Dairy Conference. This is the first time that a pre-conference session has been offered at GLRDC. The session was included in the GLRDC flier at no charge and admission was free. The program was well attended by a total of 62 out of 400 GLRDC attendees.

The meetings spurred discourse on the topic by professionals working with a number of dairy producers. Ten private practice veterinarians served as speakers on the program. Four additional private practice veterinarians attended. It is estimated that these veterinarians work with approximately 250 dairy farms with more than 80,000 cows. As a result, MDARD planned and hosted a one-day conference for food animal practice veterinarians entitled “When is Drug Use Appropriate?” That meeting will be followed up with additional workshops for veterinarians with the purpose of encouraging greater adherence to VCPR intent and greater use of drug protocols for farms. MMPA has told us that their field representatives will talk with members on-farm about the issues and avoidance of potential residues. A 6-month follow-up survey will be conducted to determine actual impacts of the program.
Agriculture Labor Programs were offered in five locations within Michigan in 2013. Three of the locations included Traverse City, Shepherd and Sandusky. MSU Extension Educators work to tailor the program to the specific needs in the various areas of the state and the various commodity groups. The TC location program was significantly different from the Shepherd and Sandusky location as it focused mostly on a fruit grower audience and their unique needs with a shrinking migrant labor force. This variance was directed by grower input, and the program was planned around an overall effort to assist producers in the NW Lower Peninsula that have experienced great hardship because of last year’s fruit freeze. The TC location also had several grower speakers focusing on how they manage diverse labor pools and also sharing technology that they use to make labor management more efficient. The final difference in the TC location is that the Ag Labor Management portion of the program covered the entire programming time, whereas in the Shepherd and Sandusky location this was limited to the morning with an Ag Labor Safety program being conducted in the afternoon. The Ag Labor Safety program is a partnership between MSU and Michigan Farm Bureau.

The Shepherd and Sandusky locations were specifically marketed toward dairy producers in these heavy dairy areas, although all producers were welcome to attend. Attendance at these two locations was less than expected (13 & 11 respectively), but we see this as a first effort to reach the dairy audience with this very important program. All three locations utilized speakers from the MI Workforce Development Agency, ICE, and MSU Extension (Stan Moore common speaker). This allowed us to summarize the evaluation questions that were repeated over the three programs and perform statistical analysis on the combined responses. The common denominator of the three programs revolved around “Understanding Ag Labor issues and complying with Farm Labor Laws.”

The survey results represent 26,060 acres of agricultural production in Michigan. Results showed a statistically significant change in participants knowledge of agricultural labor law regulations, preparedness for a labor inspection, skills necessary to work with multiple sources of labor (TC location only), understanding of what skills and tools they need to manage labor more effectively, belief that employee retention on their farm would increase in the future (TC only), and willingness to explore hiring from a different source of labor than they had in the past. On a scale of 1 – 5, with 1 being strongly disagree and 5 being strongly agree, respondents indicated that they would implement some of the concepts learned at the program with a rating of 4.42. Respondents also indicated that their knowledge of agriculture labor state resources improved (3.71 with 1 being no change and 5 being greatly improved), as well as their knowledge of agriculture labor regulations (3.69). Finally, at the TC location, respondents indicated that their skills in agriculture labor management increased (3.72).
Understanding and Investigating Horse Cruelty — Michigan State University Extension collaborated with the Michigan Humane Society, Director of Statewide Initiatives, Linda Reider to deliver a Michigan Partnership for Animal Welfare - Understanding and Investigating Horse Cruelty Workshop held at Cherryland Humane Society in Traverse City on February 27, 2013.

Due to drought conditions in some regions of Michigan in 2012, hay availability for horse owners became limited. Limited hay availability caused hay prices to rise dramatically. Therefore, in the fall of 2012, the Status of Michigan Horses Interagency Working Group was formed. Agencies represented in the Interagency Working Group include Michigan State University Extension, Michigan Department of Agriculture and Rural Development, Michigan Farm Bureau, Michigan Horse Council, Farm Service Agency and the Michigan Humane Society. The goal of the Interagency Working Group was to evaluate what potential issues were occurring within the Michigan Equine Industry. Based on the consensus of the working group, contacts with horse owners searching for feed resources, reports of thin horses and horse owners searching for alternatives for horses they no longer preferred or could afford to take care of were identified as issues. In turn, realizing that law enforcement agencies would be on the front lines when potentially dealing with some of these issues, a workshop entitled Understanding and Investigating Horse Cruelty was developed. Educational topics of the workshop included: 1) Best Practices for Evaluating Basic Equine Health and Body Condition presented by Karen Waite, MSU Equine Extension Specialist, 2) Handling – Making it Safe for You and the Horse presented Tom Guthrie, Statewide MSU Extension Educator, Equine 3) Working with Your Local Prosecutor; Horses as Evidence and Handling the Media presented by Debby MacDonald, Chief Investigator and Detroit Shelter Director for Michigan Humane Society and Terry MacKillop, current and past president and legislative liaison for the Michigan Association of Animal Control Officers (MAACO), director of Roscommon County Animal Control and Shelter. Educational presentations were followed by a roundtable discussion with participants entitled: Putting it all together for best outcomes for horses and cases to wrap up the workshop.

A total of 33 participants consisting of animal control officers, sheriff deputies, prosecuting attorney and Humane Society employees representing 20 Michigan counties attended the workshop. Horse experience level of participants ranged from experienced and owning horses of their own to no experience.
The focus of work in the Greening Michigan Institute is on leveraging natural and human assets for prosperity. This institute is comprised of four work groups: Sustaining Community Prosperity, Government and Public Policy, Natural Resources and Community Food Systems.

» **Financial Literacy Programs** — MSU Extension addresses financial health of individuals and families through community-based educational programs. The overarching goal of these efforts is for Michigan consumers to become aware of their personal financial profile, to adopt sound financial practices — including managing a spending and savings plan and utilizing financial products and services in a beneficial manner and identify goals and the steps necessary to reach self-sufficiency.

Evaluation results reveal that the financial education program was effective in reaching the goals of positively changing financial practices among Michigan residents. Participants of the MSU Extension financial education programs show significant changes in the frequency of writing spending plans, keeping track of spending and income, saving money regularly, reviewing credit card bills for accuracy, and paying off new credit card charges monthly. Other outcomes shown in the evaluation results include participants reporting the ability to pay down their debt, obtain a housing payment that fits within their budget, and making choices today that will make retirement a reality.

» **Housing Education Programs** train Michigan residents to be better consumers and help to secure and retain home ownership in the state. Sustainable housing is important to individuals and families. Homeownership education and counseling gets buyers into lower-cost mortgages, increase credit scores, reduce defaults, improve borrowers’ financial standing, and increase the likelihood of troubled borrowers seeking foreclosure prevention assistance.

Based on evaluation results, housing education was effective in reaching the goal of helping Michigan residents secure and retain homeownership as well as avoid foreclosure or to proceed with foreclosure as informed consumers. Michigan residents that completed MSUE housing education programs reported, as a result of the program, saving money to prepare for homeownership, an improved credit score, setting aside funds for home maintenance, and shopping around periodically for the best home insurance coverage. Other program outcomes show residents were able to identify the best mortgage type for their situation and gained new skills to calculate reasonable monthly housing costs based on household budgets. Housing education participants also reported greater confidence to make informed decisions including reviewing fees and rights related to homeownership and foreclosure processes. During 2012, MSU Extension served 4,212 people in Michigan through 416 financial literacy and housing education series and workshops.
**Placemaking & the New Economy** — In the new or global economy, the rules and strategies for economic development have changed. Communities that will be successful and have prosperity are those that understand and adapt to those changes. Because Michigan has historically done well with the automobile economy and associated manufacturing, the incentive to make this shift has not existed. As a result, Michigan is behind the curve in adjusting to the new global economy.

In the global economy, attracting talented workers is an important economic development strategy. Research on housing markets and demographics has demonstrated the demand for quality of life and places is what attracts talented workers. Talented workers are what bring employers to a community, or those talented individuals become employers. Those talented individuals are very mobile, and can choose to live anywhere, and they do. Only those communities that measure up to what they want will be successful in the new economy. Placemaking is a series of action steps and strategies to help make a region and its communities places where talented individuals wish to locate, which in turn brings prosperity to a region and community.

The process of Placemaking involves many organizations (public, private, and not-for-profit) in a community and region. But the two main actors are the economic development office and the planning commission/department. The Placemaking signature program is targeting training to help local officials understand this dynamic and to put into place actions (master plan, zoning, economic strategies) to start this process in regions and communities. This Placemaking signature program is still being rolled out. A number of pilot sessions were done in 2012. A large multi-organization effort on Placemaking will take place later in 2013-15.

**Michigan Northern Counties Association** — Bringing county commissioners together from 33 counties in northern lower Michigan to learn about issues important to county government, and to share information and learn from the experiences of others has long been the goal of the Michigan Northern Counties Association (MNCA). Recent topics include: the Affordable Care Act, Building Trust, Vanishing Great Lakes Water Levels, DNR Public Land Management Strategy, Recycling and the impacts of these issues on county government services. Monthly meetings also include a legislative update from the MI Association of Counties.
New County Commissioner Workshops — Since 1968, MSU Extension, in partnership with the Michigan Association of Counties, has conducted the New County Commissioner Workshops following the biennial election of commissioners. The program offers information and learning opportunities on county structure and process, budgeting and finance, county administration, courts, and more. Commissioners and others from Cheboygan County participated in the program in 2012.

Cheboygan Board of Commissioner Strategic Planning — MSU Extension Educator John Amrhein facilitated a planning session for the Board of Commissioners in April 2013. The board reviewed the county’s mission and vision statements, and identified and prioritized 6 goals for the coming year. In keeping with their practice regarding roles of the board and staff, they are relying on the administrator and staff to propose action steps to achieve those goals; and will depend on reports from departments and agencies, constituent comments, administrator’s input, and other communications they receive to evaluate progress towards those goals.

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 MSUE educator has special training as an innovation counselor to deliver these services. 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 things like developing a business plan, navigating the regulatory maze, accessing the supply chain or seeking funding options. The educator also assists clients in accessing specialized services they may need that are offered through Michigan State University like feasibility studies, nutritional labeling and packaging assistance.

In Cheboygan county, 47 counseling sessions took place to assist seven local entrepreneurs in starting new businesses and expanding existing businesses. The partnership between MSUE and the MSU Product Center Food-Ag-Bio is providing support for entrepreneurs in supporting economic development across the state.
The Health and Nutrition Institute provides education for families around several areas: Disease Prevention & Management, Social Emotional Health & Well Being, Improving Nutrition & Physical Activity, and Food Safety.

» **Chronic Disease Self-Management (PATH)** — Participants of PATH (Personal Action Toward Health) programs report improved symptom management including decreased worry, decreased fearfulness about future health, and fewer frustrations about health problems. At the end of the series, PATH participants show decreased symptoms of fatigue, decreased shortness of breath, and decreased self-reported pain. Other program benefits show increased physical activity and improved communication with physicians including preparing a list of questions to ask during a healthcare visit. Participants report higher self-efficacy after attending the program and show improved self-rated health scores. During 2012, there were 27 PATH series held statewide reaching 305 people in 27 counties.

» **RELAX Program - Anger Management** — RELAX: Alternatives to Anger is designed to actively engage adult learners in a group setting to increase knowledge and skills around anger management and give them constructive ways to deal with anger. Aspects of promoting social emotional health are woven throughout the training and include expressing emotions, navigating stress, resolving interpersonal conflict, taking another’s perspective, feeling capable and whole and building skills for forming and maintaining satisfying, healthy and supportive relationships. This program is also available online. During 2012, fifty-five RELAX series took place statewide reaching 695 participants.

» **Community-Based Nurturing Parenting** — Research shows that babies who receive affection and nurturance from their caregivers have the best opportunities at healthy development. Designed by Stephen Bavolek, Community Based Nurturing Parenting is for parents, grandparents, childcare providers and others who care for children. Participants learn what nurturing is and how to be a nurturing parent, enhance positive relationships with children, how to discipline without spanking, methods to handle stress and anger, child growth and development, understanding the brain development in children and teens and how to help build youths self-esteem. Community Based Nurturing Parenting is an evidence-based program for parents and caregivers to strengthen and build parenting skills that promote positive family relationships. This program takes place in a variety of community settings. During 2012, twenty-one Nurturing Parenting series reached 549 participants statewide.

» **ABC’s of Bullying Prevention: Addressing Bullying in Community Settings** — This half-day workshop is designed for adults who live with, care about and work with young people, including parents, caregivers and those who work in schools, youth and family agencies, youth organizations (such as 4-H, Scouts, and Boys and Girls Clubs), juvenile justice, faith-based communities, recreation departments and other
community groups. During the workshop, participants explore how bullying is affecting their communities; examine bias and harassment through the lens of differences; and explore key strategies for addressing these complex issues at the personal, interpersonal, institutional and cultural levels. They also learn about programs and resources that can be used in community settings, including other components of the Be SAFE initiative. Eight community workshops with 315 participants were offered during 2012.

» The Supplemental Nutrition Assistance Program - Education (SNAP -Ed), formerly known as the Family Nutrition Program, provides nutrition education to Bridge card eligible adults and children in group settings either as part of a series or one time presentations. This program aims to create behavior change around dietary quality and increasing physical activity while stretching food dollars. Our program is accountable to the US Department of Agriculture and the Michigan Department of Human Services with the ultimate goal of promoting healthy weight management and obesity prevention.

476 adults and 240 youth in Cheboygan County received nutrition education in a variety of venues through partnership with schools, the health department, senior centers from January 2012 to December 2012. There were a total of 2197 contacts with these groups in total.

Adult Impacts:
- 90% of adults who participated in the nutrition education classes improved the dietary quality of their daily food consumption.
- 54% of adults followed safe food handling practices.
- 79% of adults reported an improvement in their food resource practices.
- 90% of adults learned new ways to incorporate more fruits and vegetables into their meals and snacks.
- 92% of adults reported that they will eat more fresh fruits and vegetables.

Youth participating in MSUE Nutrition Education classes were more likely to:
- Read the nutrition information on food labels.
- Chose a healthy snack when they have the choice.
- Increase in choosing foods from all five food groups.
- Consume fruits or vegetables.

22 Adults graduated from an eight weeks series featuring the Eating Right is Basic curriculum. This program that teaches adults about nutrition, benefits of physical activity, and how to stretch food dollars.

8 Students from Straits Area Youth Promotion Academy (SAYPA) completed a 6 week Cooking Matters for Teens class. Cooking Matters teaches hands-on cooking skills with a local chef, gives practical nutrition information and some food budgeting strategies to help teens develop useful skills they will need in the future.

105 Adults participating with Woman’s, Infants and Children (WIC) program also received nutrition education when they engaged in the Project FRESH program and received $30 in coupons to spend at the local farmers’ markets.
552 Seniors received nutrition education when they participated in the Senior Project FRESH/Market FRESH (SPF/MF) program in 2013. This program provides low-income seniors with coupons that can be exchanged for eligible foods at farmers’ markets, roadside stands, and community supported agriculture programs. SPF/MF contributes over $8000 to our local economy through farm markets and individual farmers. Over 446 phone calls were made through the MSU Extension office to answer questions and schedule classes for the SPF/MF program.

405 Individuals attended the PROJECT CONNECT event at the Armory in Cheboygan. This event connects individuals & families to free on site community services, including health and medical screenings, children’s & parenting services, financial & legal, housing & food assistance, employment & education, personal haircuts, public transportation, entertainment, and lunch!

545 Seniors receive a monthly nutrition newsletter when they participate in the Commodity Supplemental Food Program (CSFP). A CSFP box provides commodity food packages for mothers, infants, children, and elderly persons 60 years of age who meet income eligibility requirements.

129 Youth and 70 Adults participated in an educational and fun activity event during FAMILY FUN DAY at the 2013 Cheboygan County Fair. The Fair Board, Human Services Coordinating Body, and MSU Extension partner to bring this fun event to the Quonset hut on the first Monday of the County Fair.

203 Seniors attended the Cheboygan Senior Expo and those interested were given information about reducing sodium in their diets from the MSU Extension SNAP Ed Instructor’s display.

51 Youth from 3 Headstart classes joined in the Jump into Foods & Fitness (JIFF) series at the end of the school year. JIFF is a 4-H Youth Development program that includes eight sessions to help students learn the importance of nutrition, increased physical activity and food safety.

263 Students participated in a 6 week series of classes highlighting Show Me Nutrition (SMN) program that is a comprehensive nutrition curriculum teaching youth about healthy lifestyles, including physical activity and better choices for snacks and meals. East Elementary Third graders and West Elementary Kindergarteners participated during the school year.

Mrs. Gimble’s 3rd grade class participated in the Show Me Nutrition program.

“Thank you for coming in for six weeks. I thought it was fascinating that grape Faygo has so much sugar. I’m really happy that you got to come into the classroom. It was really fun learning all about nutrients. My favorite part was the small and large intestine. We got to wrap it around the classroom. It was really fun having you here!”

“Thank you for doing the nutrition class with us. It was a very interesting class. My favorite parts were when you talked about body cues along with the digestive system. I never knew what carbohydrates did for your body and you taught me that. I had a fun time with you in nutrition class.”

“Thank you for teaching us about good foods and our organs. Some thing fascinating is that food only takes 7 seconds to go down our esophagus. My favorite organ wise guy is the kidney brothers... My favorite class was when you showed us how long the intestine is. I can’t believe it is 25 feet long. I didn’t know Faygo soda has so much sugar. You taught us so much! Sometimes I got so hungry, I would eat anything. Your class is very fun! I wish you came more than six times… I think my dad should lay off the Faygo for a while.

~ 3rd graders at East Elementary
Senior Living is a healthy-living focused news article is submitted each month in the Senior Living section of the Cheboygan Daily Tribune which circulates to approximately 4000 households.

Volunteer Income Tax Assistance (VITA), a program that prepares income taxes for low-income residents that began through the MSU Extension/SNAP ED program in 2003 and continue to partner for support, completed 1086 returns with a total in refunds brought back to our community of $1,412,519 this year per/Bill Kerr VITA Coordinator.

7 Senior Adults completed a new program called Eat Smart Live Strong in a six week series highlighting well-being, healthy food choices, and 30 minutes of activity each day.

4 Adults participated in Cooking Matters at the Store. This grocery store tour at Wal-Mart discusses strategies for saving money while making healthy food purchases for struggling family budgets.

Food Safety — MSU Extension food safety education programs help prevent incidents of food borne illnesses and ensure a safer food supply for consumers – whether that is at food retailers, restaurants, farmers’ markets or community meals served by organizations.

In Cheboygan County, food consumers can have increased confidence seeing cottage food products sold by someone with a food safety certificate related to producing cottage foods because of proper ingredient handling and product labeling. Twelve people attended a Cottage Food Law class held in March.

As a result of attending the cottage food law workshops:
- 96% of participants indicated more frequent handwashing as a result of the class.
- 95% of participants reported increased knowledge on how to prevent cross contamination.
- 97% of participants reported increased knowledge of when it is not safe to prepare food.

The MSU Extension Cooking for Crowds program helps non-profit groups that prepare food for their organization or for the public as part of food fundraisers. The class is designed to educate non-profit groups about the risks that may occur when cooking large quantities of food. Education helps prevent foodborne illnesses and creates a safer environment for food service to the public. The average participant in 2012 served food to 300 individuals during the three months preceding their attendance at the MSUE program. Over 90% of participants served more than 100 individuals, and 75% served more than 400 people. Seventeen adults attended a two hour Cooking for Crowds class in March of 2013 at Grebe Village.
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