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

Staff housed in Iron County
Rebecca Krans
Extension Educator
Currently Vacant
4-H Program Coordinator

Message From the District Coordinator
MSU Extension (MSUE) in Iron County continues to provide local educational programming and impacts to meet Iron 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 Iron County during 2012 –13 within the structure of our four programmatic institutes:
» Agriculture and Agribusiness Institute (AABI)
» Children and Youth Institute (CYI)
» Greening Michigan Institute (GMI)
» Health and Nutrition Institute (HNI)

MSU Extension has changed in many ways since our beginnings in the early 1900s. However, 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,
Doug Brahee, Interim District 1 Coordinator

MSU Extension maintains a vibrant and relevant web presence with hundreds of new informative entries every month. All MSU Extension educators throughout the state contribute to this effective and efficient way of providing on-time educational information to everyone with web access. Find the website at http://msue.anr.msu.edu/. We integrate new technologies into all of our educational programming, workshops and communication streams on a regular basis, from our Facebook presence to our Twitter utilization for producer crop alerts. The website records more than 70,000 hits every month as Michigan residents rely more and more on web-based learning opportunities.

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**2012 4-H Program Participation Numbers**

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-H Program (all delivery methods included)</td>
<td>187</td>
</tr>
<tr>
<td>(non-duplicated)</td>
<td></td>
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<tr>
<td>4-H Club Membership</td>
<td>128</td>
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<tr>
<td>4-H Adult Volunteers</td>
<td>35</td>
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<tr>
<td>4-H Youth Volunteers</td>
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<td>Short Term/Special Interest Members</td>
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<tr>
<td>Camping Programs (overnight, quilt, photo camps)</td>
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<tr>
<td>School Enrichment Members</td>
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<td>4-H Clubs</td>
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**The Iron County 4-H Program** currently has 128 youth enrolled in ten 4-H clubs. In 2011-12 these clubs, short term events and committees were supported by 35 adult and 2 youth volunteers. The current time is a rebuilding time for Iron County 4-H and enthusiasm and excitement are running high. Animal and plant sciences, civic engagement, community/volunteer service, leadership, personal development, communications and expressive arts, and food and nutrition are some of the foundational educational disciplines offered. These can take the form of various projects including forestry, field crops, gardening, crafts, food preservation, citizenship, junior leadership, and outdoor education along with numerous others.

Ongoing 4-H educational programs will continue to build on the solid base of volunteers and the broad array of youth educational opportunities in Iron County. Exploration Days, 4-H Capital Experience, National 4-H Congress, and the 4-H International Exchange Programs are state and national events that continue to be available to youth in Iron County. Youth leaders and teens have a plethora of learning opportunities offered at Kettunen Center and Iron County adult leaders and youth have the opportunity to participate. Locally based youth educational events include 4-H teen leader and club officer training, the regional 4-H Leadermete Conference, 4-H camping opportunities, and the Iron County Fair.
These activities provide youth the opportunity to both develop and practice life skills, which will enable them to be academically successful and move on to promising careers. Hundreds of Iron County youth have the opportunity to experience educational activities and programs each year.

The awards banquet is the recognition component of the county 4-H program. Friends and family members attended Achievement Day in the fall of 2012 and witnessed their 4-H’ers as they received achievement awards. Volunteers also received awards and recognition. Twenty-five youth and adults were honored.

**4-H Exploration Days** at MSU provides youth aged 11 to 19 with the opportunity to experience life on a college campus. The 4-day event held in June each year gives more than 2,400 4-H members a chance to live in the dorms, experience a college setting, and be self-directing and responsible for getting themselves where they need to be. In both 2012 and 2013, Iron County had participants at Exploration Days. In 2013 there were 13 attendees from Iron County. Participants traveled by charter bus, stayed in the dorms, participated in classes and workshops, attended a statewide awards ceremony and were involved in a community service project.

**The Iron County Fair**, held in August, is an opportunity for 4-H clubs and individual members to display 4-H projects as well as their clubs’ community service activities at the facilities in Iron River. Members in 2013 were kept busy with promotional 4-H displays, 4-H projects, and providing the public with an opportunity to see and experience the accomplishments of dozens of 4-H youth. Just over 50% of 4-H youth participated during the 2013 fair. They exhibited everything from livestock to baked goods and horses to poultry. These end products, for those involved in the 4-H club delivery method for the youth program, give members experience in many valuable life skills such as time management, patience, teamwork, competition and responsibility which they will use many times over later in life.
Building the capacity of volunteers and of communities to effectively and successfully work with youth is of top priority. MSU Extension partners with other youth-serving agencies to provide programming and professional development experiences using a research-based curriculum. We make equipping adults to work with youth in engaging, age-appropriate, quality and positive youth development activities a priority. As the Iron County 4-H youth program continues the building process, new volunteers move through the Volunteer Selection Process to assure that we provide for safe and inviting places for youth to participate. We provide new professionals with current, relevant and up-to-date researched information on program delivery and youth-learning capacities. During the last 12 months, 11 youth and adults took on the challenge to learn new teamwork skills. After they took the workshop, they went to the application phase of the skill building workshop and put their skills to work as leadership of the Iron County 4-H Council. Eight more took advantage of workshops improving their leadership and civic engagement skills.

Science and Environment. More than 80 youth participated in training and workshops around ecology and the environment in 2012. That number increased to more than 120 in 2013 as workshops were provided in TechXcite and Science Blast. The session consisted of EcoBot, an environmentally friendly robot, wildlife identification by fur and bone structure, and maps and apps for reading and following maps. Science Blast explored a number of scientific experiments meant to challenge and excite about the world of science. There were a number of inquiries as to how to join 4-H after these events.
Programming in the Agriculture and Agribusiness Institute (AABI) focuses on enhancing agriculture production throughout the state as an important component of the state economy and bioeconomy while protecting natural resources. Programs target all production scales including commercial and consumer agriculture.

Increasing economic activity by increasing and expanding agricultural operations is a key focus for the Upper Peninsula AABI staff. Additionally, AABI and GMI (Greening Michigan Institute) staff members have been working together to help facilitate this economic growth through efforts to assist existing farmers in expanding operations and to empower beginning farmers to increase farm start-ups. MSU Extension encourages farmers to increase revenues through efforts to improve production methods with sound environmental stewardship, produce profits through financial management and develop more marketing opportunities with local customers and external markets. Iron County producers participated in a wide variety of workshops and educational sessions since mid-2012. Among those that had Iron County participants were forages, soils, potatoes, grain production and livestock production.

Implemented in the Upper Peninsula by the AABI staff, the Beginning Farmer series consists of five consecutive webinars. Participants joined the webinar by computer from the comfort of their own homes or attended one of the three to five local sites where they viewed the webinars in a group setting. The sites varied depending on the date of the delivery. Sessions covered grazing, grass-finished beef, field crops and hay, field-grown vegetables and the utilization of hoophouses. Iron County residents participated in this series and the series is to be continued into the next program year. The most popular sessions were the hoophouse development, field-grown vegetables and grass-finished beef.

The Ag for Tomorrow conference takes place annually in Escanaba in early March. In both 2012 and 2013 Iron County producers attended. The conference draws producers from throughout the Peninsula and often nearby Wisconsin. The conference offers a new set of 20 to 24 workshops to choose from each year, ranging from commercial dairy production to field crop production and from agri-tourism to entrepreneurship in sustainable farming operations. A keynote speaker presents as well.
A survey of people who had attended two or more of the conferences revealed the following:

» 55 percent indicated that they had connected with new stakeholders in the food supply chain.
» 63 percent indicated increased economic activity and 46 percent made new investments in their agricultural businesses.
» 68 percent indicated they have increased income.
» 55 percent applied new methods to decrease production costs on their farms.
» A full 75 percent indicated that they had implemented a new best management practice.

Managing agriculture business focuses on making labor both productive and efficient. The MSU Product Center Food-Ag-Bio provides services such as one-on-one counseling as well as exploring business concepts, working with venture start-ups, including some specialized services such as product testing, market analysis and feasibility studies. An offshoot of this effort is the capacity building of the cottage food industry within Michigan. Developing entrepreneurs and businesses – whether new ventures or business expansion – remains high on the goal list. As stated elsewhere in this report, Iron County residents have had a number of one on one consultations with Product Center staff.

As many new producers begin to immerse themselves in the direct market/ farmers market venues that have sprung up all over the state, more and more people are using the MSU Horticulture Hotline as a source of information for home horticulture and small producer questions. A number of Iron County residents turned to the hotline. Iron County sent participants to the Market Master training. The MSU website (http://msue.anr.msu.edu) also provides the opportunity to click to the Migarden site (http://migarden.msu.edu/), which provides hundreds of documents to meet the needs of the home gardener in an easy-to-use format.
Protecting natural resources is also fully integrated into production education. Issues on the horizon are increasing the efficiency of water availability, condition, and usage, as well as concerns about nitrogen and the environment. The social responsibility of producers, processors and marketers, as well as consumers are all emerging as issues for the future. Focusing on optimizing nutrient use with plant needs is essential with the goal of addressing soil health and protecting the environment. MSU Extension is addressing reducing sedimentation and runoff with the implementation of cover crop rotations. Sixteen Iron County residents have utilized the MSU soil lab on numerous occasions to determine correct fertilization application rates, which may contribute to less excess nutrients being washed into our fresh water streams. MSU Extension supplies a primer on how to get your soil tested located at http://msusoiltest.com/. It also provides a description of how to understand your results.

The AABI is interested in educating consumers regarding farm production and all aspects of community food systems. MSU Extension provides numerous opportunities through the Breakfast on the Farm (BOTF) educational event and production, marketing and packaging expertise for producer-to-consumer products. Building producer capacity in supplying local community food systems has sparked the interest of many small producers in a number of locations in the state. In 2012, MSU Extension brought Breakfast on the Farm (BOTF) to the eastern Upper Peninsula, and in 2013, Extension staff provided support to the Farm Bureau-led Breakfast on the Farm event in Menominee County. The team is currently exploring the possibility of bringing BOTF back to the UP in 2014.

U.P. Ag Connections: A monthly newsletter directed toward agricultural issues across the entire U.P and beyond is distributed to a total of 1,136 agribusinesses and individuals monthly. 54 Iron County residents receive the newsletter. This one newsletter provides a single source of educational information for the entire agricultural community.
Greening Michigan Educational Programs

The GMI has resources and expertise in a number of areas available throughout the state. Sustainable natural resource management and a stable and safe food system are two of the principles upon which GMI is based. Economic vitality for the state of Michigan, fiscally sustainable households, and communities and local governments that are well prepared and ready to face the current and upcoming challenges are an important part of their mission.

MSU Extension addresses the financial health of individuals and families through community-based educational Financial Literacy Programs. The overarching goal of these efforts is for Michigan consumers to become aware of their personal financial profile and to adopt sound financial practices. These practices include managing a spending and savings plan, utilizing financial products and services in a beneficial manner, and identifying the 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 debts, obtain a housing payment that fits within their budgets, 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 and helps to improve credit scores, reduce defaults, improve borrowers’ financial standings, 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 MSU Extension housing education programs reported, as a result of the program, saving money to prepare for homeownership, improving credit scores, setting aside funds for home maintenance and shopping around periodically for the best home insurance coverage. Iron County had several participants in the program in 2013.
Greening Michigan Educational Programs

Other program outcomes show residents were able to identify the best mortgage type for their situations and gained new skills to calculate reasonable monthly housing costs based on household budgets. During 2012, MSU Extension served 4,212 people in Michigan through 416 financial literacy and housing education series and workshops. With the recent legislative special appropriation targeted to financial literacy, the 1st District has recently had one of our educators move into the housing education role for the district.

**Natural resources literacy, enterprise development and property protection** are topics addressed through signature programs in natural resource leadership development, volunteerism, addressing ecosystem threats, sustaining forestry best practices, natural resource business development, and Firewise training and planning for individuals and communities. MSU Extension strives to explore new opportunities as they emerge in natural resource-based enterprises. More than 50 Iron County residents participated in educational programming, learning skills in protecting, preserving and utilizing natural resources, including forest resources in 2012. Sixteen of those attended the Sustainable Forest Conference where they had the opportunity to develop skills in forest management, exploring forest pests, and optimal harvesting methods. Twenty nine of them attended MSU Extension sponsored workshop at the 2013 Loggers Jamboree where they gained skills in identifying forest invasive pests and forest tree health. Others participated in in gathering information and skills in forest health, invasive insets of the forest, disease that affects our forests and how to deal with the changing forest in a new climate. Several explored opportunities in making their home and property more safe from wildfires through the Firewise educational opportunities.

The **Michigan Sea Grant College Program** (MI Sea Grant) is a collaboration between MSU and the University of Michigan, with support from the National Oceanic and Atmospheric Administration. MI Sea Grant delivers programs that help foster economic growth and the protection of Michigan’s coastal and Great Lakes resources. MI Sea Grant collaboratively works with communities to provide programming in maintaining and developing productive and efficient use of natural resources around and in our Great Lakes. Programming may include water safety, fish marketing, aquatic plants, invasive plant identification and control as well as a wide range of related issues. Due to record low lake levels on both lakes Michigan and Superior, MI Sea Grant has conducted several lake levels fluctuation educational programs. Many sectors are impacted with lake level conditions, and regulatory issues with the State of Michigan and the United States Army Corps of Engineers often surface. MI Sea Grant continues to track levels and has been
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heavily involved in working with the State of Michigan to help meet the needs of coastal communities. MI Sea Grant staff in the Upper Peninsula field numerous questions on aquatic plant control, aquaculture and invasive species from residents throughout the region and the state.

**Food, and Resource Economics.** With the goal of accelerating innovation and growth for Michigan business, industry and entrepreneurs in food, agriculture and bio-manufacturing, the **Product Center** stimulates and develops business innovation and economic growth through business counseling, in-depth market analysis and technical assistance for new entrepreneurs and existing businesses. Sustaining community prosperity through growing new entrepreneurs, business development, finance and homeowner education, support of tourism through targeted training, and leadership development/civic engagement for the general populations. The use of best practices, knowledge and experience along with collaboration from internal MSU and external partners supports clients in the creation of successful ventures. The Product Center continues to provide one-on-one counseling for aspiring entrepreneurs and small businesses in the food, agriculture and natural resources sectors. In 2013, the Product Center provided 14 one-on-one counseling sessions to aspiring or growing businesses in Iron County. Eleven Iron County residents participated in educational sessions on entrepreneurial marketing and how to start a small business.

**Building and sustaining community food systems** featuring public education on understanding local food systems, efforts to make healthy local foods more accessible, and the development of local food councils. MSU Extension educators assist in the development and support of the Western UP Food Hub, as a part of the UP Food Exchange, supporting development and activities of regional food councils. The context of the exchange is based on production, distribution, and access. The Upper Peninsula is fortunate to have both an educator with a focus on sustainable community food systems, as well as the Upper Peninsula Research and Extension Center located in Chatham which has as part of its mission to both support and create sustainable food systems within the Upper Peninsula of Michigan. Iron County residents are included in the Western Food Hub of the Upper Peninsula.
Building capacity in governance/public policy and community leadership is a core program in the Greening Michigan Institute. Staff deliver a variety of educational programs (including new county commissioner training, Citizen Planner, governance training/technical assistance, and place making among many others) to provide opportunities for capacity building in community decision making for all levels of local government. Since 1968, MSU Extension, in partnership with the Michigan Association of Counties offers introductory programming for newly elected county commissioners. The program offers information and learning opportunities on county structure and process, budgeting and finance, county administration, courts, and more. The Citizen Planner program will be available to the Western UP counties on an annual basis. New Commissioner training is held every other year to coincide with the commissioner election cycles with the next one scheduled for November 2014. In 2012-13 fourteen Iron County leaders participated in one or more public policy/citizen planner and community leadership activities. The workshops they participated in ranged from the new commissioner training to ‘Planning and Zoning Essentials’ to ‘Mining Restriction on Zoning Authority’ and a course on ‘Land Division Review’. Four participated in a Place Making seminar at the Michigan Municipal Leagues Educational Summit.
The Health and Nutrition Institute (HNI) provides education for families around several areas: Disease Prevention and Management, Social Emotional Health and Well Being, Improving Nutrition and Physical Activity, and Food Safety.

**Food safety education programs** train participants to prevent incidents of foodborne illness association with unsafe food handling practices, which may result in fewer medical expenses and potentially less down time for food businesses due to temporary closure by local health departments. Programs in Cooking for Crowds, ServSafe and the cottage food laws and the food prep expectations that go with it are all options. Food preservation for home application from freezing to home canning are always popular with neighborhood and community groups. Iron County residents participated in both the 8 and 16 hour ServSafe programs in both 2012 and 2013.

Health and Nutrition staff help residents address disease prevention and management through educational opportunities related to Michigan’s most critical chronic diseases including diabetes, heart disease and obesity. Preventing and managing chronic disease is the top health challenge of the current century. With a prevalence of diabetes and obesity among Michiganders, Extension will focus on providing educational programs that will assist with the prevention and management of chronic diseases over an extended period of time. These include PATH (Personal Action Toward Health). 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. A PATH series was again delivered in Iron County in August-September of 2013.

**Food preservation education** contributes to safer food sources, especially those produced locally by Michigan residents. As a result of food preservation workshops, 89 percent increased knowledge of how to use proper processing techniques to safely can low- and high-acid foods, 87 percent learned the correct processing times to can foods safely, and 76 percent gained knowledge of how to use proper techniques for freezing foods. Participants also reported learning where to locate research based/tested recipes for home food preservation, how to follow research based/tested recipes when canning food at home, and how to select high quality foods for preservation. In the last few months MSU Extension staff have answered numerous questions from consumers on food preservation techniques. The MIgarden website, http://migarden.msu.edu/, offers tips and techniques for preserving vegetables and fruits, along with production tips and suggestions.
From July 1, 2012 through June 30 2013, 143 adults in Iron County received nutrition education at senior centers and public housing locations. Senior Project Fresh allows 67 sets of coupon books for Iron County. All were distributed and we have about an 82 percent redemption rate. Each book is worth $20, which results in more than $1000 being spent by seniors on healthy, fresh, local foods at the Iron County Farmers Markets and other cooperating producers. MSU Extension Iron County also conducts nutrition education for the Iron County WIC Project Fresh program and the distribution of their coupon books.

Adult programming uses the Eating Right is Basic curriculum that also includes hands-on activities with participants. SNAP-Ed (Supplemental Nutrition Assistance Program-Education) is also actively involved in health fairs and other public activities where they can inform and educate the public about quality nutrition throughout the county.

Partnerships have been built with a large number of Iron County agencies and organizations as we collaborate to support families with the greatest needs. In addition our collaborations are designed to build the capacity of participants to make wise decisions in their food buying and preparation habits. These collaborations also help those involved to avoid any duplication of services. Those that have been valued partners in Iron County are many and include the Department of Human Services-Iron County, Iron Health Department, Farmers Market of Iron County Senior Project Fresh, Windsor Center (Community Center in Iron River), North Star Healthcare Systems, Iron River Senior Center, and the Crystal Falls Senior Center.

The Supplemental Nutrition Assistance Program - Education (SNAP-Ed) provides nutrition education to Bridge card eligible adults and children in group settings either as 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 United States Department of Agriculture and the Michigan Department of Human Services with the ultimate goal of promoting healthy weight management and obesity prevention.
In pre and post test research among adults who have participated in the nutrition programming throughout the Upper Peninsula:

» 43 percent report planning their meals ahead of time before going grocery shopping
» 42 percent indicated that they use a meat thermometer to measure the doneness of meat
» 39 percent of the adults indicated that they are active for at least 30 minutes per day on four or more days a week.
» 38 percent indicated an increase in the number of times that they utilize food labels to compare fat and caloric values
» 38 percent of the respondents eat at least 1.5 cups of vegetables each day
» 31 percent prepare more foods without adding salt.

Adults and youth who participated in MSUE Nutrition Education classes were more likely to:

» Read the nutrition information on food labels.
» Choose a healthy snack when they have the choice.
» Increase choosing foods from all five food groups.
» Consume fruits or vegetables.