$\frac{\text{MICHIGAN STATE}}{U N I V E R S I T Y}$ Extension



Cass County 2016–2017 ANNUAL REPORT

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MESSAGE FROM THE DISTRICT COORDINATOR

It is my pleasure to compile the 2016-17 Annual Report for the Cass County Board of Commissioners. It has been another great programming year with impactful work taking place in the county, throughout my district and in the state. As always, I want to thank the commissioners and county administration for your continued support of our educational programs. We have a strong team assembled in Cass County, and don't forget that there are educators throughout the state that



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are also offering educational programs to Cass residents. You will see much of their work highlighted in this report. We continue to reach people not only in face-to-face programs, but also through our web-based classes and through timely articles on the MSUE website. Please feel free to contact me at any time, especially if you want to talk about expanding our educational impact in Cass County! Cheers to another successful year!

 FUNDING

 2016-17 Budget
 \$ 154,541.00

 (County Assessment)
 \$ 80,863.00

 2015-16 Budget
 \$147,298.28

 (County Assessment)
 \$ 80,062.50

Julie Pioch District Coordinator, District 13

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Find other experts in MSU Extension at www.msue.msu.edu

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Developing Youth and Communities



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). This year the 4-H program in Cass County has reached 794 youth with 219 adult volunteers and 30 teen leaders. We have been fortunate enough to have youth experience a variety of different opportunities for the 2016-2017 year: we sent 4 youth to Citizenship Washington Focus; awarded two \$500 college scholarships for youth in Cass County 4-H; sent 50 youth and 7 chaperones to 4-H Exploration Days, which is the largest pre-college preparatory experience in Michigan; and had about 700 youth involved in the 4-H program exhibiting various projects at the Cass County Fair, including animal science, homemaking, and public speaking to name just a few.

Growing true leaders

Statewide, 4-H youth from Cass County have been recognized for their achievements and leadership abilities. We have two 4-H members as State Youth Leadership Council members; Erin Kramer, student advisor, and Elizabeth Stockwell, member. Amy Wyse was selected as one of sixty pre-college scholarship recipients for her participation at Exploration Days, with a \$2,000 scholarship applied to her freshman year as an MSU student. Benjamin Shelby and Madison Weedon were selected to represent Cass County with their essays based on the statement, "Because of 4-H I can..." We had 8 state award delegates represent Cass County in a variety of project areas. Shelby Guarino brought home the Senior Division State Award for Communication and Expressive Arts; Elizabeth Stockwell, the Senior Division State Award for Leadership and Personal Development; and Antony Guarino won the Junior Division State Award for Technology and Engineering. Congratulations to all our outstanding Cass County youth!





Developing Youth and Communities, continued

Building communication skills for a lifetime

The Cass County Horse Judging Team has remained competitive, both state wide and nationally, for the past 3 years. Caitlyn Cass, Allison Ives, Emily Prugh, and Amy Wyse comprise the Senior Regular Horse Judging Team, placing first at the state competition in March and then moving on to compete at the national competition



this month where they received the Reserve Grand Champion status, placing second only to the judging team from Michigan State University.

Aside from the obvious benefits of learning about horses, horse judging also provides the opportunity for students to learn life skills, like objective reasoning, decision making, sound reasoning, public speaking, and learning how to work on a team.

Community partnerships

Upcoming in the month of October, we have the annual "Off the Street Trunk or Treat" event where between 800 and 1000 youth participants came from Cass County and surrounding communities to participate in 2016. This year, the event was held on October 21, once again partnering with the Cass County Parks department to hold this event in conjunction with their annual Harvest Fest with approximately 1,000 visitors.



Community volunteers, 4-H'ers, and leaders worked together to put on a spectacular event at T.K. Lawless Park, serving the entire Cass County area. Hard work, many hands, and loads of fun made it an afternoon to remember! It also brought in a pick-up truck-load of donated food items for our local food pantries.

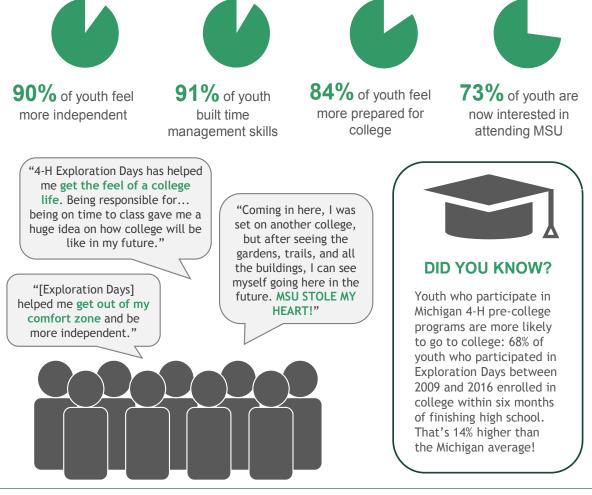
Developing Youth and Communities, continued

4-H Exploration Days 2017 Impact Report



Exploration Days is a three day campus-based pre-college program that is designed to help youth build the skills they need to successfully transition to college and to life as an adult. Youth participants stay on campus in MSU residence halls and attend action-filled classroom and field trip sessions on a wide variety of topics, including animal science, business & entrepreneurship, international language & culture, performing & visual arts, and science, engineering & technology.

Nearly 2,000 youth attended Exploration Days in 2017, 50 of those were from Cass County, along with 7 chaperones. Post-event evaluations revealed that participating youth gained important life skills like decision making, problem solving, and communication. Youth also reported feeling more prepared to attend college.



Contact: Laura Potter-Niesen, Educational Program Events Coordinator, (517) 432-2963, potterla@msu.edu



Extension

Developing Youth and Communities, continued

Growing success in our backyard with SMC



On May 26th, as part of Southwestern Michigan College's Educational Talent Search program, Growing Success, a session teaching youth about careers in agriculture was held at SMC in Dowagiac. 103 Cass County youth learned about "Cheese... from cow to consumer and the jobs along the way.' The emphasis on those jobs and careers are also part of the Career Pathways traditionally taught in Michigan in the area of natural resources and agriscience.

Bridging the ocean—Korean exchange program

Each year, Michigan 4-H hosts many different international exchange opportunities from 24 nations and 6 continents. This year, Cass County was able to enjoy a 4-H exchange student from Korea for four weeks in the summer.

Throughout their adventures and experiences, the family gained a new appreciation for language and communication barriers that exist when learning about different cultures. They became immersed in the culture and are excited to continue learning as both families continue to communicate.

"I loved that my family committed to this and we made many new memories together," stated the Cass County mom.

Anyone interested in participating in this program, please visit <u>https://</u> www.states4hexchange.org/





A fun hands-on activity helped 103 students in the 6th— 8th grades from Brandywine, Cassopolis, Dowagiac, Edwardsburg and Marcellus learn about all the jobs involved with making cheese from the cow to the consumer.

Outbound exchange programs are immersion programs as opposed to sightseeing trips. Youth live with their host families and truly immerse themselves in the culture for a rich. educational experience. 4-H exchange participants encounter daily life as part of a family, emphasizing the cultural experience.

Keeping Businesses Strong



The MSU Product Center Food-Ag-Bio assists county residents in developing products and businesses in the areas of food, agriculture, natural resources and the bioeconomy.

In CassCounty, 6 business counseling sessions took place to assist one client.

Building entrepreneurial spirit and skills

As the backbone of the economy, small business owners play a critical role in the prosperity of the nation. But to be a successful entrepreneur, one must have not only the ambition and moxie to take a risk, but also the business sense and skill to make a profit. To ensure the business owners of tomorrow – today's youth – are triumphant in their future endeavors, they need to learn the entrepreneurial concepts that pave the way for success. MSU Extension is helping to meet this need by providing youth and the adults that support them with the skills and resources necessary to turn ideas into business ventures.

MSU Product Center

The MSU Product Center Food-Ag-Bio assists county residents in developing products and businesses in the areas of food, agriculture, natural resources and the bio economy. Extension educators are specially trained as innovation counselors to deliver these services to local residents. Business counseling is conducted on a one-on-one basis and may take place at the MSUE office or the client's home, farm 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 innovation counselor also assists clients in accessing specialized services they may need that are offered through Michigan State University like feasibility studies, nutritional labeling, food science, and packaging assistance.

Michigan Cottage Food Law

Michigan's Cottage Food Law permits those with an entrepreneurial spirit the chance to sell certain foods, made in their home kitchens, to the public at local farmers' markets. The workshops that were offered by Michigan State University Extension combined the business and food safety features of preparing and selling cottage foods safely and successfully. In the workshop participants learned what foods can be legally produced as well as how to label and sell them. MSU Extension Educators provided techniques to develop and maintain a successful small business. Two residents of Cass County attended this program in 2016-17.

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.

<u>Supplemental Nutrition Assistance Program</u> <u>Education and Physical Activity Education</u>

Michigan State University Extension SNAP=Ed nutrition instructors teach youth, teens, adults and seniors how to make health a priority through an instructional series. The goal of the SNAP-Ed program is to increase the likelihood that those eligible for SNAP benefits will establish healthy eating habits and increase their time spent involved in physical activity, while staying within their limited food budget.

Between October 1, 2016 and August 31, 2017 MSU Extension provided interactive direct nutrition education to a total of 118,466 unduplicated individuals from across Michigan through the SNAP-Ed program.

- Out of the total number of participants reached with direct nutrition education (YTD) 86% were SNAP eligible participants (n=101,356). Our goal for the year is to reach at least 65,000 SNAP eligible youth and adults with direct nutrition education. As of August 31th we had reached 156% of our outreach goal for the year.
- The total number of contacts with SNAP-eligible participants (units of service) through direct education YTD is 320,379.
- SNAP-Ed programming has been conducted at 1657 different venues throughout Michigan, including summer SNAP-Ed programming at camps, fair grounds, summer feeding sites, and parks.
- Additionally 1,533,068 individuals have been reached year-to-date with nutrition education through indirect methods, such as written nutrition materials delivered face-to-face and nutrition messages sent through electronic media and radio PSAs.

SNAP-Ed and 4-H partner at Cass County Fair

Taking advantage of a pre-organized "Kiddies Day" at the Cass County Fair, 4-H Program Coordinator, Stephanie Consford and Health & Nutrition Program Associate, Nora Lee teamed together with an educational booth to bring information on both programs to parents and children participating in all the activities of the day.



SNAP-Ed is a free nutrition education program to reduce hunger and food insecurity and promote healthy



Keeping people healthy, continued



The SNAP-Ed program in Cass County participates with the WIC-Project Fresh program in Dowagiac

SNAP-Ed in Cass County

Nutrition Education taught throughout Cass County within schools and working with numerous agencies, teaching health and nutrition to clients.

During the 2016-2017 program year:

- 49 Adults completed a 6 week series
- 233 youth completed a 6 week series
- 289 Adults were present for a one time presentation
- 534 Youth were present for a one time presentation

MSU Extension has networked and programmed with numerous agencies such as:

- Great Start Program (new), Cassopolis
- United Way (new), throughout Southwest Michigan
- Sam Adams Middle School (Summer School), Cassopolis
- Cassopolis Schools (Summer Lunch Program), Cassopolis
- Northpoint (ISD), Dowagiac
- Patrick Hamilton School, Dowagiac
- Sister Lakes Elementary, Dowagiac
- A.C.T.I.O.N. Ministries, Dowagiac
- Feed America Food Truck, Dowagiac
- Stepping Stone- Youth Center, Dowagiac
- Cass County Fair- Kiddie Day, Cassopolis
- WIC- Project Fresh, Dowagiac
- Rotary Villa Apartments, Dowagiac
- Stone Lake Manor, Cassopolis
- Stone Lake Woods Apartments, Cassopolis
- Cedar Sands Apartments, Dowagiac

With the help of these programs, 1,105 youth and adults have received Nutrition Education in Cass County Michigan this year



It's Michigan Fresh...for you!

We have experiments and the series of the se	on recommended varieties, storage, food safety and preserving techniques for fraits and sogitables, and on planting and maintaining year loos and garden. Michigan is the leading producer of der benus and several varieties of	The state's food and agricultural system generates 59/4. billion in account activity each year. Production agriculture, food proceesing and related businesses employ more than 1 million Michigan readants.
	arrinal Bowers, including generations and petunias, and Easter Illies. We're also No. 1 in the nation in production of blueberties, cucumbers for pickles,	With dozens of fruits and suggetables produced in Michigan, sourcing Michigan-produced fruits and segetables is possible nearly year
	Ningers grapes and test cherries. Michigan produces more than 200 commedities on a commercial basis, making the state second only to California in agricultural diversity.	round. The goal of Michigan Fresh is to help you and your family eat, penerve, grew and learn about all that's Michigan fresh.
Enver or gardee questions? Visit migarden mex.edu. Calitati lise 1-388-978-3464.	Fact sheets are available on the Michigan Firish website at bit/by/mssemitheah and at many fammer' markets across the state. Video demonstrations at bit/by/mitreshridee.	

Keeping people healthy, continued

Supporting Child and Family Development in Cass County

Parents and caregivers are the first to have an influence on a child's development and future academic success. To help ensure children are ready for school, caring adults can do much to develop their early math, science and pre-literacy skills. Through MSU Extension's early childhood education programs, parents and caregivers are equipped with the tools and knowledge necessary to enhance children's skills in these important areas and to become their best resources and advocates. Trainings available for parents, caregivers and childcare professionals in this area enhance math, science and literacy development in early childhood.

• One program was held in 2017 in Dowagiac on the importance of outdoor play reached 30 Cass County childcare providers

A child's social and emotional skills, including the regulation of his or her emotions, capacity to solve problems and ability to interact with others have been identified as key factors in long-term academic and life success. With the support of MSU Extension resources and education, parents and caregivers have the opportunity to enhance the social and emotional health of children in a variety of ways. Trainings available for parents, caregivers and childcare professionals cover topics such as positive discipline, mindfulness, play-based learning, and other social and emotional skill development.

• 1 Cass County caregiver participated in Let's Talk: Parent and Provider Communicator Training taught in Lansing in 2017.

ServSafe Managers Certification

Michigan Department of Agriculture and Rural Development and our local health department work hard to make sure safe food is prepared and served in restaurants and other food establishments. MSUE also helps by offering a national food safety certification program called ServSafe Manager training. This training is for those serving food to the public or who want to make themselves more employable by getting this managers certification.

Topics covered in the ServSafe Managers training include food safety, personal hygiene, temperature control, preventing cross-contamination, cleaning and sanitizing, food preparation, storing food, thawing, cooking, cooling and reheating food. These topics are covered in both the eight and the 16 hour classes offered by MSUE food safety educators.

Participants in ServSafe classes take a 90 question exam. They must pass with a 75 percent in order to receive their national ServSafe certificate. Research has shown that those food establishments who have a certified food safety manager have fewer food borne illness outbreaks.

• Two 16 hours ServSafe courses were offered in Kalamazoo County in 2016-2017 in which 6 Cass County residents participated.



Michigan food establishments that serve food to the public are required to have a certified manager under section 29 of the food law, 2000PA92, MCL 289.2129. Food establishments are to continually employ at least one certified manger per establishment. This certified manger must be a full-time employee of the establishment.



Ensuring Strong Communities



MSU Extension trainings help municipalities with adopting public policy regarding medical marijuana facilities. While the trainings provide unbiased information regarding this very controversial topic, municipalities are able to more clearly understand what will be expected of them as they form their public policy.



When you support MSU Extension, participants learn how to implement best practices in good governance that keeps communities solvent, productive and engaged; learn effective conflict management skills that help leaders and residents work collaboratively on complex issues; and engage youth leaders in decision-making.

Regulating medical marijuana facilities: a workshop for local government

MSU Extension developed and delivered this training in quick response to recent legislation that requires local governments to make significant public policy decisions on barring or accepting and regulating five new types of commercial medical marijuana facilities. This series of workshops in the spring of 2017 trained 864 individuals statewide, including 60 at the site in Van Buren County. A similar training was delivered in September 2017 in Berrien County. Nearly 90% of evaluation respondents reported feeling more confident or much more confident to address this topic in their community as compared to before the workshop. In total, 89 people from District 13 attended this program, I resident from Cass County.

Walkability workshop

This workshop helps Michigan communities learn about and implement a strategic economic development initiative for the new economy focused on the benefits of a walkable community. The Van Buren County location attracted 22 participants, which included 3 from Cass County.

New County Commissioners Workshop

Since 1968, MSU Extension and the Michigan Association of Counties have offered an educational program for new county commissioners following the November election. In late 2016, a team of MSUE educators offered the New County Commissioner Workshop at seven locations around the state. The workshop consists of four hours of training on the fundamentals of county government plus time for networking with other county officials, MAC staff, and MSUE educators and directors. Overall, 92% of the 213 attendees indicated that they found the program valuable for their professional (or personal) growth and development. Two commissioners and the county administrator from Cass County attended in 2016.

Making the Most of Our Natural Assets– Water Quality Programs

When you support MSU Extension's natural resources education programs, participants learn about income-generating opportunities, ecological principles, natural resource issues and the role of natural resource professionals. They also explore public policy issues related to environmental stewardship.

Michigan Clean Boats, Clean Waters Program

MSU Extension is the education outreach partner for the Michigan Clean Boats, Clean Waters (MICBCW) program. Operating statewide, several trainings were held throughout the state. The MICBCW program trains volunteer leaders in recruiting and training local volunteers to inspect watercraft at local lakes to help prevent the spread of aquatic invasive species (AIS).

Over the last year (2016-2017) we recently finished online video training hosted at <u>www.micbcw.org</u> and updated curriculum for this program. It is now available free to everyone desiring to promote the "stop aquatic hitchhikers" message. Michigan Clean Boats, Clean Waters volunteer heroes actively participate with the Department of Natural Resources Landing Blitz events every July. We continue to work with volunteers to inspect boats at local landings for plants attached to prevent the spread of AIS. This year we have delivered presentations to local lake association groups about the MICBCW program and other programs available to them through MSU Extension.

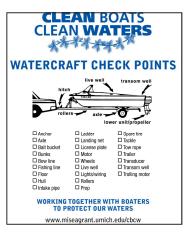
Statewide programming both in person and online reached over 235 individuals across the state, as well as through participation with the State Landing Blitz Week.

Natural Shorelines Partnership Natural Shoreline Landscaping

Protecting Your Shoreline: A workshop for inland lakefront property owners was held in cooperation with the Michigan Natural Shoreline Partnership, local county conservation district offices, and local organizations. This program provides four hours of intensive instruction in shoreline landscaping and erosion control techniques. Featured workshop topics include healthy lake ecosystems, designing and maintaining natural landscapes on lake shorelines, bioengineering techniques to address high impact shorelines, using native plants in shoreline landscapes, attracting fish and wildlife to your shoreline, shoreline invasive plants to watch for, Michigan rules and regulations, and local examples of natural shoreline projects. This program is part of a statewide effort with multiple simultaneous sessions held throughout the state annually. Nine residents from Cass County participated.



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



Supporting Food and Agriculture



Out of 130 occupations studied, laborers and farm owners had the highest rate of death due to stress-related conditions like heart and artery disease, hypertension, ulcers and nervous disorders. The number of households that are choosing to raise a portion of their own food, livestock or gardening for pleasure or relaxation continues to increase in Michigan. When you support MSU Extension, you help to provide educational programs that supply participants with the knowledge to develop and sustain a profitable and efficient business, as well as, safe and effective production practices. Participants also learn how to optimize and reduce the use of pesticides and fertilizers, and how to conserve and protect water resources.

Responding to Stress in Farming Communities

The National Institute for Occupational Safety and Health recently examined 130 occupations and found laborers and farm owners had the highest rate of death due to stress-related conditions like heart and artery disease, hypertension, ulcers and nervous disorders. In 2016, the CDC reports that out of every 100,000 farmers, 90 commit suicide that is six times higher than the National rate of suicide with non-farmers. Michigan has seen an increase in suicides and suicide attempts over the last year since the commodity prices have fell drastically.

Phase one: Mental Health First Aid training is a full-day, hands-on, certification course that can help those people working with farmers and farm families to recognize the signs and symptoms of mental illness and emotional crisis. Two classes were offered during 2016 and 35 MSU Extension and Industry professionals are now certified in Mental Health First Aid.

Phase two: MSU Extension has developed a workshop specifically designed for people who work with agricultural producers and farm families who want to know more about managing farm-related stress and learn ways to approach and communicate with those in need. Educators will be discussing the present agricultural market situation with an overview of how this has affected a farm's financial situation and cash flow, communication techniques, highlighting impact of stress on our body and state of mind, providing information on how to recognize some warning signs of depression, self harm and mental illness.

Since October 2016, workshops have been offered throughout the state of Michigan and Indiana which included 300 participants. A session held In Lawrence at the Van Buren Conference center was attended by 27 farmers or ag professionals (1 from Cass County). As a result of the program:

- 72% of participants increased their understanding of the current agriculture financial situation; 27% of participants were already very informed on the issues facing Michigan agriculture.
- 87% increased their understanding of the impact that stress has on their own bodies.

Responding to stress in farming communities, continued

- 91% were now able to recognize warning signs of depression, suicide, and mental illness.
- 95% learned where to send people for help in the community, and of those, over 50% said their awareness of community resources greatly increased.
- 95% of participants will use MSU Extension resources and training in the future.
- 94% of participants were already familiar with MSU Extension prior to this workshop; 68% had previously participated in an MSU Extension workshop on a different topic.
- 89% of participants left the workshop more aware of MSU Extension resources and opportunities.

FSMA Produce Rule Grower Trainings

The Food Safety Modernization Act (FSMA) regulates growers of fresh produce in the United States for the first time in history. A greater awareness of food safety on the farm will lead to safer food and a decrease in foodborne illnesses. Produce growers have obtained the required certification to comply with the Food Safety Modernization Act (FSMA) requirement by attending a MSU Extension Produce Safety Alliance Training between November 2016 and August 2017. More trainings are scheduled for fall and winter 2017. 101 growers have received certificates in District 13 to date; 1 from Cass County.

Southwest Irrigation Network

For 2017 there were 14 farming operations enrolled in the Southwest Irrigation Network (SWMIN). Sixty-five fruit, vegetable and field crop sites were monitored on a weekly basis across Berrien, Cass and Van Buren Counties. Producers were provided weekly reports as to the status of the moisture at their sites. Weekly irrigation recommendations were given to maximize water use efficiency at each site and for each crop stage. Recommendations were based on current soil moisture, crop stage and rainfall forecasts.

Spotted Wing Drosophila

Spotted Wing Drosophila is a small vinegar fly from Asia that can cause significant damage to local fruit crops in Cass County. MSU Extension staff has been monitoring this insect since it appeared in Michigan in late 2010.

For more information regarding this tiny pest, check out: http://www.ipm.msu.edu/ invasive_species/spotted_wing_drosophila



Telfarm Assists Farmers with Business Financials— Telfarm is a Michigan State **University Extension** accounting software that is specifically designed for farms. It makes it possible for farm managers to closely monitor the financial progress of their operations. MSUE educators use this system to teach producers and others good financial management concepts. Cass **County offered Telfarm services to** 2 farms in 2016-2017.





MSU Extension, working together with commercial pork producers, was able to put in place a successful vaccination program for Cass County Fair exhibitors to help reduce the incidence of influenza at the fair.

Working together to protect pigs, people and the public in Cass County

Cass County, Michigan is a leader in Michigan's pork industry, with an inventory of over 153,300 animals it ranks 3rd in production for the state. Along with this inventory comes a varied range of production types including traditional pasture raised pork, conventional commercial pork, other types of extensive pork production and 345 youth swine projects which where exhibited at the 2017 Cass County Fair. In the past the pork industry has been divided, where commercial swine production and exhibition producers were not on the same page regarding health, good production practices or biosecurity. However, in Cass County for 2017 this was not the case.

During producer's meetings in early 2017 MSU Extension educator Beth Ferry took on the controversial topic of swine influenza as it pertains to farm workers and those that exhibit at jackpot shows and county fairs. Swine influenza, sometimes referred to as swine flu, is a virus that commonly circulates in the pig population. Influenza viruses are classified by the types and further classified by strains. Like people, pigs are susceptible to many strains of flu. Swine influenza is a zoonotic disease and can occasionally be transmitted to humans. Human infection with flu viruses from pigs are most likely to occur when people are in close proximity to infected pigs, such as in pig barns and livestock exhibits housing pigs at fairs. Although swine influenza is a concern for commercial producers, most producers have a plan in place and manage this disease through the use of vaccination. Whereas youth exhibitors at county fairs are not as aware of the disease and how it spreads, nor the methods used to control it.

Through an MSU Extension led conversation with Cass County commercial pork producers, it was agreed that the best thing to do was to minimize the chance of influenza infection at the county fair by requiring vaccination of all pigs exhibited at the fair. Producers would benefit from this by decreasing the possibility of a new strain of the disease being introduced in the area and to their farms. It would also negate any of the "bad" press that historically has come along with influenza outbreak in a public setting. Youth exhibitors and fair attendees would be better protected from the zoonotic strains of the disease and coming down with influenza themselves. However, vaccination has a cost and one that normally would be passed on to the exhibitors.

Working with MSU Extension, the commercial producers in Cass County provided recommendations to the fair board and swine superintendents regarding vaccination. This included what types of vaccine to use, proper timing and distribution of the vaccine and suggested biosecurity practices that should be put into place to minimize transferring any disease between animals while the vaccination clinic took place. The cost of vaccinating all of the pigs intended to be exhibited at the Cass County Fair, along with providing all of the biosecurity and vaccination supplies was generously covered by a Cass County producer. This investment from the producer showed commitment to a high health status in Cass County, as well as, providing support for the youth involved in agriculture.

Working together to protect pigs, people and the public in Cass County, continued

MSU Extension was able to work with both facets of Cass County's pork industry and create a working partnership between the two that benefited each group. Focused on reducing the risk of an influenza outbreak at public events, Michigan State University Extension also worked to implement biosecurity practices to reduce transmission of any virus, created signage to encourage people to use proper hygiene practices and educate youth exhibitors and parents at fairs. Beth Ferry was a key contributor to the development of the informational <u>swine influenza website</u>, which is currently used as a resource by MSU 4H program coordinators, Michigan Department of Agriculture and Rural Development, local health departments and the public.

Asiatic Garden Beetle Damage/ Control/ Impact Evaluation

White grub pest of rotated corn production, causes stand loss, plant unevenness, and delay in pollination through aggressive root feeding. Quantifying yield losses: Averaging 10-25% in fields with infestation. Grant proposal in joint with Ohio State to evaluate management practices. Located several fields in Van Buren, Cass and Kalamazoo counties to potentially conduct research projects. Developing scouting techniques and thresholds for treatment based on spring grub observations and field history. Marestail can be used to help focus scouting; heavy marestail populations in soybeans draw may adult beetles to soybean fields to lay their eggs. Research needed: control of winter annual weed species to reducing "green bridging" overwinter survival of this pest; control of adult egg laying populations through correctly timed insecticide sprays of soybeans in fields near infested corn fields. This is a newer pest, with little research conducted in the Midwest.

Herbicide Resistant Weeds

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Weeds, insects and diseases continue to develop resistance to crop protection programs. The most common herbicide resistant weed species we deal with in Van Buren County is glyphosate and ALS Inhibitor resistant marestail. However, we have several fields that we identified with multiple herbicide resistant common waterhemp in Southwest Michigan in 2017. These weeds pose a significant threat because they can only be controlled by a limited number of expensive herbicides in corn and soybean production. Dealing with these weeds can often mean the difference between operating with a small profit potential or a significant loss. MSUE has been working with growers to learn how to develop more intensive strategies including increased tillage, broader crop rotations and targeted herbicide applications to provide answers in reducing the spread of these expensive to control weed species.



MSU Extension offers many programs through-out the year to give clientele the most current information available. One of the most popular events is Ag Action, held at KVCC in Kalamazoo. This event allows individuals to attend up to three educational classes (17 were offered in 2017) during the day, ranging from agricultural to backyard growers.

In 2017, 23 participants were from Cass County.



Farmers participate in MSUE research to help assess risks, compare seed performance, and share data to help improve yields.

Western Bean Cutworm Damager/Control/ Impact Evaluation

Western Bean Cutworms have been a resurgent pest in southwest Michigan that damage corn ears through larval feeding on ears. We have been evaluating the incidence of ear feeding, the sizes of the larvae in the field in August and September, which can help us to evaluate duration of moth flight, efficacy of insecticide applications, and evaluating the effectiveness of different Bt events at controlling this pest. Corn fields evaluated in Van Buren County indicate we had heavy infestation in 2017, with incidence of ear feeding ranging from 15% to 80% in fields .



Other Cass County Field Crops, research, field evaluations

- MSUE Corn Variety Performance Trial George Brosman, Cooperator, Vandalia MI. Dr. Mani Singh, Bill Widdicombe, Lori Williams, MSU Department of Crop, Soil and Microbial Sciences
- Soybean Sudden Death Syndrome Transect and Field Evaluation in 2016 Bruce MacKellar, Martin Chilvers. As SDS continues to spread, we help growers assess risk in SW Counties.
- MSU Irrigation Research-Lyndon Kelley, Steven Miller-Ag Engineering, Herb Miller Cooperator. Testing Irrigation Scheduler against different soil moisture sensors. Data to be share at Michiana Irrigators Meeting in December.
- Soybean High Yield Practice Evaluation-Eric Anderson, James DeDecker-Herb Miller Farms in Cass County, many other farms in southwest Michigan. Looking at ways to improve yields.

MSU educational programs

- Southwest Michigan Field Crops Pest Control Update Program, February 22, 2017 at the Dowagiac Conservation Club. 67 growers in attendance. MSU Specialists shared research and pest management insights for anticipated challenges during the 2017 growing season.
- Irrigated Crop Update-Sponsored by Co-Alliance, held in Niles. Discussion of topics important for irrigated field crop producers, including irrigation water management, scheduling for corn and soybeans, water use during critical growth stages, system management and pest control considerations. Lyndon Kelley, Eric Anderson and Bruce MacKellar- 22 growers were in attendance.
- MSU/Purdue Irrigated Corn and Soybean Production Program, February 4, 2017. Joint program with Purdue looking at all aspects of producing top yielding irrigated field crops. 16 growers from Cass County Participated. Lead Educators-Mike Staton, Lyndon Kelley, Bruce MacKellar.
- Soybean Harvest Field Day, Sept. 27, 2016 near Edwardsburg. Lead Educator, Mike Staton. Sponsored by the Michigan Soybean Promotion Committee. Growers looked at new harvest equipment in operation. Discussed ways to limit harvest yield losses on soybeans. Around 42 growers were in attendance.

Reported impacts

- 87% of the participants completing an evaluation indicated learning new information that they intended to utilize on their farm operations in the coming year at these programs.
- Over the last 3 years, more than 85% of the corn growers in attendance at MSUE meetings in S.W. MI reported splitting their nitrogen applications, applying N to corn when the crop uptake was greatest, reducing risk for N losses to surface and groundwater resources.





There are approximately 800 farms in Cass County, each averaging about 236 acres. The average farm size in Michigan is 191 acres.