



## SUPPORTING THE ANIMAL AGRICULTURE INDUSTRY IN MICHIGAN

### \$5.12 BILLION

Economic impact of the animal agriculture industry in Michigan

### 805,000 JOBS

Related to the animal agriculture industry in Michigan

## PRIORITY

### A R E A S

- **Managing risk and preparedness**
- **Producing safe food**
- **Enhancing agriculture and agribusiness**

## IMPACTS

Michigan State University (MSU) Extension works to increase farmers' success while protecting the environment and ensuring food safety.

MSU Extension serves the animal agriculture industry by engaging in research, education and outreach that enhances the quality of life for residents throughout the state.

MSU Extension's agriculture literacy efforts strive to improve consumer knowledge and trust in animal care, food safety and modern food production methods.



### 80.5%

of solar development program participants increased their confidence in using and applying information to address solar development on their land or in their community.



### 45.4%

of horse owners showed an improvement of knowledge in general horse care from education delivered by MSU Extension.



### 80.0%

of pigs are owned by Michigan producers who have taken steps to mitigate the risks of foreign animal disease by participating in secure pork supply planning.

To support programming for animal agriculture, contact the leadership for agriculture and agribusiness programming; Ron Bates at [batesr@msu.edu](mailto:batesr@msu.edu) or Marilyn Thelen at [thelen22@msu.edu](mailto:thelen22@msu.edu).

### 136

horse owners in Branch County have been educated on proper horse care over the last year.

### 553

farmers and landowners over a two-year period participated in informational solar programs that provided valuable, practical knowledge for attendees.



## EMERGENCY RESPONSE TO ACCIDENTS INVOLVING LIVESTOCK

Millions of animals are transported weekly across the United States for various reasons. Michigan has a diverse animal agriculture industry and several large meat processing plant locations. As a result, animals are routinely transported across and into the state as part of the production process.

Transportation comes with associated risks, one of which is a livestock transportation hauler being involved in an accident. Although this type of situation is not a frequent occurrence, when it does happen, it poses risks to those driving by the accident scene, the public who gather around the event, those responding to the accident who may not have any experience with animals and the welfare of the animals involved in the accident. Responding to these accidents is never an easy task. It can quickly turn into a chaotic event if the local response team is not prepared or trained to handle such an occurrence.

MSU Extension's Emergency Response to Accidents Involving Livestock (ERAIL) team recognized this need and has addressed it by creating specific resources and training for first responders. Through one-day intense training sessions that solely focus on responding to accidents involving livestock, MSU Extension has built a network of trained responders in 30 counties in Michigan and has provided training for participants that represent seven states. These trainings focus on managing the scene of an accident, organizing volunteers and working to ensure public safety and animal welfare. During the training, participants learn about extrication of trapped animals from trucks and trailers, management of a rollover accident incident, chain of command and safe handling of large animals. The program consists of both in-class and hands-on activities, which program participants credit with the effectiveness of the training.

The in-person training sessions received an overwhelmingly positive response, with most participants involved in these trainings indicating that they have developed or refined their skills and they now feel better suited to responding to a livestock transportation accident. These trainings gave attendees an excellent opportunity to network with local law enforcement groups, as well as formulate key questions for continuous improvement of the systems that they are each involved with.



Participants come from varied professions. All participants that completed the survey responded that because of the training they are better prepared in their jobs to address livestock transportation accidents and plan to share critical information with their teams.

### WHAT DOES THE FUTURE LOOK LIKE?

MSU Extension is working toward developing a virtual training opportunity that will allow information on emergency response to accidents involving livestock to be more accessible to everyone in Michigan.

Livestock transportation haulers and law enforcement officers may not be able to attend face-to-face trainings and may be the first on the site of an accident. Electronic modules will allow participants to work through the information at their own pace. Modules include video and graphic examples, interviews from experienced responders and training protocols from industry experts on animal handling and welfare.

The ERAIL team at MSU Extension also understands the need for local responders to have access to specific equipment to assist them with responding to an accident involving livestock. Many times sourcing this type of equipment in the middle of a chaotic situation is nearly impossible. MSU Extension has worked to identify and source the equipment critical to building an effective and efficient response to accidents involving livestock. The response team's goal is to fully fund and equip six response trailers located in areas of the state by highways that see the majority of animal movement. With one trailer fully funded and seed funds designated for two additional



trailers, this effort is steadily gaining traction and will allow for response teams to have access to the tools they need.

MSU Extension will continue to provide training opportunities and resources in this area and will continue to build a network of highly trained people with the skills and tools to effectively and efficiently respond to accidents involving livestock in Michigan. This will help minimize the risks associated with these events for those involved in the response as well as minimize the economic and animal welfare risk factors that face the animal agriculture industry when these types of events occur.

80%

of education program participants found the training they received applicable to their operations or occupations.

81.8%

of participants found that the information shared created an awareness about the important issue of responding to accidents involving livestock.

91%

of participants increased their skill set and will implement new methods of accident response following the training.

95.5%

of participants plan to provide training based on the information shared for their local organizations.

**“With our vast number of livestock operations in Michigan it is important that we are prepared to respond to unplanned events that may arise. The work that the MSU Extension’s Emergency Response to Accidents Involving Livestock (ERAIL) team does better positions the pork industry and the entire animal agriculture industry in Michigan to safely and effectively respond to these types of situations.”**

— Mary Kelpinski  
CEO of Michigan Pork Producers Association

## SAFE FOOD: ENGAGING FARMERS IN ON-FARM FOODS SAFETY PRACTICES, ENSURING SAFE FOOD PRODUCTION FOR CONSUMERS

The animal agriculture industry is dedicated to producing products that are safe, healthy and nutritious for consumers. Farmers who raise animals specifically for consumption follow guidelines and adhere to strict regulations to guarantee the safety of food products. MSU Extension educators provide farmers with resources and information to help them make decisions and implement practices on the farm that directly support safe food production.

The application of on-farm food safety practices is one of continuous improvement, assessment and validation, and one that farmers in Michigan identified as an area for prioritization through a biannual needs assessment process. Using evidence-based information, MSU Extension educators train farmers on a variety of food safety topics such as using antibiotics judiciously and responsibly, abiding by veterinary feed directive regulations and keeping records that reduce the risk of violative drug residues. Farmers look to MSU Extension to provide education and resources that support food safety. MSU Extension animal agriculture educators focus on implementing food safety components in each of their outreach efforts. This includes a major emphasis on helping farmers avoid any drug residues in milk or meat products. Examples of the types of programs that assist with delivering these concepts follow.

### SMALL RUMINANTS FOR SMALL FARMS PROGRAM

Small Ruminants for Small Farms is an annual program hosted by MSU Extension. This program emphasizes methods and practices that improve the quality and safety of the products produced on the farm. Guidance is given through this programming effort to assist farmers with understanding the importance of a veterinary-client patient relationship as well as the new veterinary feed directive requirements and record-keeping systems to



monitor antibiotic usage and reduce the risk of violative drug residues. This educational event is a helpful tool for farmers of various production systems, sizes and market chains so that they can network and learn about on-farm safety practices that will benefit their operations.

## FARM PROGRAM

The National Farmers Assuring Responsible Management (FARM) program is a voluntary continuous improvement program for dairy farms. Providing opportunities for those involved in the dairy industry to receive the trainings required for this program has been a focus of MSU Extension educators who specialize in this area. This program helps ensure animal welfare and a safe food supply by providing oversight in the areas of animal care, environmental management, antibiotic use and workforce development. Specific emphasis has been made on employee training and development opportunities for the dairy industry, which is a vital component of the industry and a requirement for the FARM program.

Bilingual programming opportunities are also offered by educators, creating opportunities for Spanish-speaking employees who make up a large contingency of the labor force.



## PORK QUALITY ASSURANCE PLUS PROGRAM

The Pork Quality Assurance (PQA) Plus program is the flagship program of the pork industry. Certification and on-farm assessment of animal care and food safety is required by commercial processing plants through this program, which in turn provides access to market availability for the producers. MSU Extension provides the state-wide management of this program, which includes comprehensive training of the advisors that implement this program on farms. They also directly provide education for pork producers and their employees on many different areas of on-farm food safety and animal care practices. On-farm assessments allow MSU Extension educators to review production practices and assist the farmers with enhancing them to meet food safety standards.

**32%**

of small ruminant farmers plan to adopt practices to improve the quality and safety of the products they produced on their farms.

**93%**

of small ruminant farmers will implement a management change that would improve the safety of the products produced from their farm.

**80%**

of the pigs raised in Michigan are allowed market access because of PQA Plus certification granted by MSU Extension educators.

**1,317**

farmers and employees have received PQA Plus certification through MSU Extension over a three-year period.

**366**

employees from dairy farms across Michigan received FARM training from educators with MSU Extension's dairy team in 2019.





## ENHANCING MICHIGAN AGRICULTURE AND AGRIBUSINESS

Focused on enhancing agriculture and agriculture business in Michigan, MSU Extension provides meaningful programs and educational materials that help promote this industry. Increasing profitability, improving skills of the agricultural labor force, assisting farmers with making important business decisions and finding ways to mitigate risk are ways that the MSU Extension educators are able to contribute to one of Michigan's most prominent industries.

This is done through the vast relationships MSU Extension educators build with farmers, government agencies and support industries for the agricultural sector. By continuously providing opportunities for those involved in agriculture, MSU Extension uses various methods to transfer knowledge while focusing on improving the skills of people who are the core of Michigan's agricultural labor force. They quickly identify issues and areas needing to be addressed to promote farm profitability and sustainability.

MSU Extension animal agriculture educators build knowledge and skills through comprehensive trainings offered throughout the state spanning various industries. Programs and activities that deliver evidence-based knowledge, along with informal educational programs and hands-on trainings are delivered to the agricultural sector, enabling them to make practical decisions to benefit their operations. Extension educators also offer certification programs, provide instructional materials and develop innovative instructional methods to address the needs of the animal agriculture industry.

The programing and efforts of MSU Extension are expansive. Because of this, designated educators can focus on specific species or areas, completing work that is specialized and impactful.

## PROTECTING YOUR EQUINE INVESTMENT

Training for the equine industry occurs through a program series focused on improving the ability of horse owners to identify compromising issues that may affect their animals. This program resulted in the improvement of body condition of the horses owned by program participants, which directly corresponds with reducing the veterinary service expenses that a horse owner may incur.



## ENERGY-FOCUSED PROGRAMMING

Other examples of specialized programming include efforts to increase farmer and landowner understanding of the renewable energy landscape, nuances of solar leases, zoning considerations and accompanying tax implications. Participants in these programs indicated that they had increased confidence in using and applying quality information to address solar development on their land or in their communities.



## ANIMAL DISEASE PREPAREDNESS

MSU Extension is also involved with planning and preparedness for farms in response to foreign animal diseases. This work is done at both a state level and for individual operations, guiding the development of secure pork supply plans and mitigating the risks associated with disease outbreaks.

**MICHIGAN STATE UNIVERSITY** | Extension

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