

Michigan Allied Poultry Industries

- Cage Free:
 - Understanding and encouraging performance of behavior that leads to positive welfare
 - Hen movement through cage-free systems: ensuring easy and safe movement among vertical tiers
 - Hen distribution among and use of resources to optimize stocking rates and system design
 - Feed additives for improved health/livability in cage free birds
 - Calcium/ phosphorus requirements of older (65+ week old) hens for better shell strength
- General:
 - Extension project aiming to mitigate avian influenza and other poultry related disease by strengthening biosecurity measures within small and commercial poultry operations
 - HPAI vaccination options
 - Environmental E-coli mitigation strategies
 - Using no-antibiotic methods to reduce the incidence of enteritis
- Nutrition:
 - Assessing how feed additives (i.e. enzymes, probiotics, prebiotics) perform in a real-world farming environment, considering all the variables present on a working farm, rather than controlled farm settings (research farm)
 - Feed formulations based on digestible P and digestible Ca to enhance nutrient utilization, minimize environmental impact by reducing excess mineral excretion, and meet precise dietary requirements for poultry.
 - Feeding non-bound amino acids in commercial diets at increasing inclusion levels
 - Strategies to maintain intestinal health and reduce intestinal health disorders in a non-antibiotic era
 - The interaction of pro and prebiotics when poultry are also being treated with an antibiotic
- Floor Birds:
 - Strategies to reduce foot pad dermatitis

Michigan Cattlemen's Association

- Cattle Health and Well Being (including but not limited to):
 - Bovine TB-Improved prevention methods, improved testing.
 - Bovine Respiratory Disease - Improved detection methods, control and preventative protocols, antibiotic alternatives.
 - Animal Welfare and cattle handling improvements
- Beef Industry Environmental Sustainability (including but not limited to):
 - Producer and processor waste and resource management.
 - Maximizing beef's role in carbon sequestration.
 - Role of cattle in soil and ecosystem health.
- Beef Economic Sustainability (including but not limited to):
 - Creation of value from MI's traceability program.
 - Maximizing feeding and grazing efficiencies.
 - Incorporating technology to improve beef production and producer decision making.
- Industry Outreach
 - Creation of or improvements to resources available to the industry including increased collaborations with outside sources (e.g., other land grant universities).

Michigan Farm Bureau

- Development of new animal health protection tools to manage current and emerging diseases, with an emphasis on the role of vaccines in disease protection.
- Workforce development and education: Training for jobs and careers in animal agriculture.
 - Marketing roles in the livestock industry to those entering the workforce to generate interest and retention for the industry's labor force needs.

- Development of new tools to enhance food safety.
- Enhancement and growth of the Michigan meat packing and dairy processing industries.
 - Research in treatment options for wastewater management, with a focus on cost-effective options for small livestock processing facilities.
- Development of new automated tools to address labor issues in the livestock and dairy industries.

Michigan Horse Industry

- Youth and adult outreach/education in horse health/management and promotion of the industry.
- Land-use and environmental management as it relates to horse facilities and equine recreational use.
- Research in the areas of preventative health management, gastrointestinal disease, and nutrition.

Michigan Meat Association

- Workforce development
 - Training and resources for entry level and current employees with credit and non-credit programs with hands-on and lecture sessions (e.g., meat cutter training, animal welfare and humane handling, humane harvesting, operational processing techniques)
- Emerging issues
 - Investigations (research and extension) in identification, controls or prevention of issues or topics that affect meat, poultry, and game animal food safety (e.g., chronic wasting disease and bovine tuberculosis, pathogenic microbial identification and control, parasite, prions, diseases, genetic and muscle abnormalities)
- Operational processing, wastewater disposal options, and food safety controls
 - Investigations of practices or product characteristics for food safety control involving biological, chemical, or physical hazards (e.g., extended shelf life, reduced oxygen packaging, fermented meat products, antimicrobial agents, chemical residues, foreign and natural objects).
 - Investigations into the best available technology for wastewater treatment prior to discharge to meet updated EGLE standards (e.g., nutrient uptake from crops receiving slaughterhouse or meat processor wastewaters)
- State licensing for inspected meat facilities or assistance for USDA-inspection upgrades of current facilities.
 - Strengthen existing procedures to provide technical assistance to existing firms wishing to become federally inspected and/or investigate procedures to develop a state-approved food safety system for custom slaughterhouses (e.g. checklist for custom slaughterhouses to evaluate current facility vs. what is required for USDA approved license, technical design service and funding for plant improvements, evaluate options for process wastewater disposal to satisfy current EGLE requirements)

Michigan Milk Producers Association

- Alternative uses of milk
- Tar spot effects on corn silage
- Use of High Oleic Oil soybeans in dairy cattle diets
- Assistance with the dairy industry's sustainability efforts, including research on both feed and reproductive efficiency as it relates to sustainability.*
- Workforce development
- Research related to the HPAI virus in manure

Michigan Pork Producers Association

- Emerging/Foreign diseases (e.g. H5N1, African Swine Fever) and implications for a secure pork supply.
- Consumer acceptance of production practices (research on alternative housing methods, castration/pain mitigation and animal care and handling) and strategies for enhancement of consumer image of swine industry.
- Environmental Issues (manure management, air quality, water availability, mortality management (large scale in relation to a disease or marketing challenge).
- Precision Farming as a means to labor shortages
- Antibiotic/Antimicrobial alternatives

Michigan Sheep Producers Association

- Improving sheep production efficiencies emphasizing these focal areas: forage utilization, nutritional management, reproductive management, health programs, and development of new and refinement of existing production systems.*
- Development of tools to allow producers to track and improve production and sustainability metrics
- Producer education programs focused on flock expansion and improvement of production efficiencies including the involvement of producers in on-farm research.
- Producer education programs and applied research on the use of sheep in vegetation management of solar arrays.
- Identification of methods to improve product quality (meat, milk, wool)

Michigan Department of Agriculture & Rural Development (MDARD)

- MI reportable animal diseases (including but not limited to the economics, biosecurity, pathogenesis, control, treatment, and prevention)
- Animal welfare (including but not limited to species standards, impact on health and public perception)
- Environmental sustainability (including but not limited to nutrient management, water quality, wastewater management, climate change, and regenerative agriculture)
- Emerging contaminants and diseases (including but not limited to evaluation of impact and risk to agriculture)

Michigan Soybean Committee

- Maximize the value (biological and financial) of soybean meal in livestock nutrition and health including, but not limited to, bypass protein and amino acids.
- Utilization of livestock manure as a crop nutrient source – specifically, the effect of protein sources on nutrient composition of animal waste.
- Effect of protein sources in animal diets on meat quality, rate of gain, overall animal health and milk production.
- Increase the use of soybean products (meal, hulls, oil, etc.) in the animal agriculture industry.

*Shared priorities of the Michigan Soybean Committee