Animal Disease Testing

PROGRAM MANAGER: **Gina DeWitt| 517-337-5082 | dewittg@michigan.gov**

The Animal Disease Testing program provides testing in support of MDARD's efforts to monito and eradicate livestock disease so that Michigan Animals can be moved and sold throughout the U.S. and internationally.

The Animal Disease Testing program provides Equine Infectious Anemia testing to certify equines traveling in Michigan and throughout the U.S. are free of Equine Infectious Anemia and controlling the spread of the disease.

IMPACT FOR MICHIGAN:

This program helps protect the livestock industry from economic losses due to animal disease transmission.
This program ensures Michigan livestock are free of specific diseases before entering the food chain to protect people, the food supply and animals.
Ensuring animals are free of disease facilitates the free and legal import and export of livestock in Michigan.

ACCOMPLISHMENTS:

- A second technician was officially trained and certified by the National Veterinary Services Laboratory (NVSL) for Equine Infectious Anemia (EIA) testing. This will ensure the trade and export of horses will continue to be facilitated in the absence of a single employee.
- Continued high standard of testing of testing for diseases in Michigan by having100% recertification of all analysts for all tested diseases and turned 99.9% of all samples within goal.

MEASURING SUCCESS:

Metric	FY 2015	FY 2016
Equine Infectious Anemia Testing	21097	18137
Other Animal Disease Testing	1364	1019
Proficiency Tests	98%	100%
Turn Around Time Met or Exceeded	97.2%	99.9%

PROGRAM GOALS:

- Train two new analysts and have them obtain 100% on certification proficiency tests.
- 100% recertification for current analysts
- 100% meeting goal turn around time
- National Animal Health Laboratory Network membership

KEY STAKEHOLDERS

- Michigan Citizens.
- MDARD Animal Industry Division
- Private Veterinarians
- USDA
- DCPAH

LEGAL AUTHORITY:

- Public Heath Code, Public Act 368 of 1978, Part 124, as amended

Equine Drug Testing

PROGRAM MANAGER: Gina DeWitt| 517-337-5082 | dewittg@michigan.gov

The Equine Drug Testing program provided animal drug testing support and expert testimony for harness racing, thoroughbred racing, horse pulls and livestock shows in Michigan.

IMPACT FOR MICHIGAN:

The Drug Testing program ensured all horse racing interests competed on a level playing field and increased participant confidence in all animal events..

ACCOMPLISHMENTS:

- The Lab maintained its excellent customer service and capabilities by achieving 100% accuracy on Proficiency Testing and completed 100% of all sample testing within its goal

MEASURING SUCCESS:

Metric	FY 2015	FY 2016
Racing Samples	2037	1977
Fair & Livestock Samples	251	220
Proficiency Test	100%	100%
Turn Around Time met or exceeded	99.5%	99.8%

KEY STAKEHOLDERS

- Michigan Citizens
- Michigan Gaming Control Board
- Michigan County Fairs
- Michigan Public Livestock Exhibitions
- Michigan Horse Pulling Associations

LEGAL AUTHORITY:

- Public Act 279 of 1995, Horse Racing Law
- Michigan County Fairs Rules and Regulations

Food And Feed Safety

PROGRAM MANAGER: **Gina DeWitt| 517-337-5082 | dewittg@michigan.gov**

The Food and Feed Safety program supports animal and human food safety/security and consumer protection by providing analytical data and technical expertise to document the safety, legality, authenticity, identity and quality of human food, animal feed, alcoholic and non-alcoholic beverages offered for sale in the State of Michigan. This program also provides analytical data to the Michigan Liquor Control Commission (MLCC) for enforcement of under-age drinking laws and detection of adulteration of distilled liquor

IMPACT FOR MICHIGAN:

Drugs and other additives when misapplied can negatively impact animal and human health, livestock animal productivity and marketability of food products by businesses.
The data generated assists MDARD, FDA and the MLCC monitoring and enforcement activities related to food and feed safety.
Laboratory test data is required to establish and maintain an integrated food safety system.
Consumer, livestock and pet health are directly impacted by the safety of the food supply.
The food supply is vulnerable to intentional tampering and adulteration and testing can identify those issues to minimize impacts and provide evidence..

ACCOMPLISHMENTS:

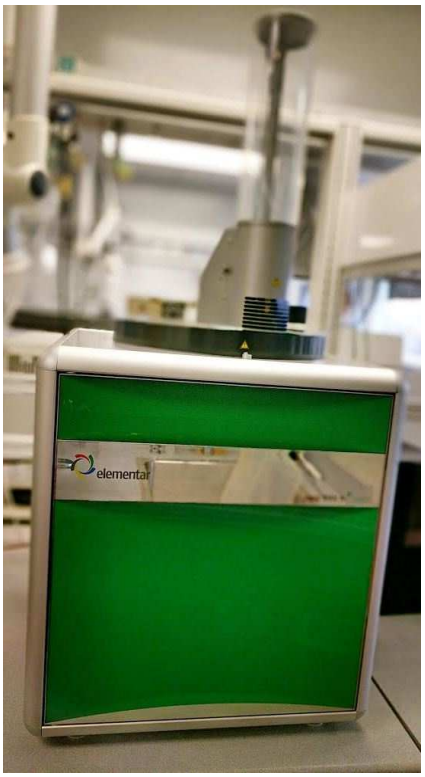
- Increased customer service by decreasing turn around time for samples from 2 months to 10 days. This allows MDARD to evaluate sample compliance potentially before products enter the food chain.
- Developed and Validated metals testing for feed which adds better protection for consumers .

MEASURING SUCCESS:

Metric	FY 2015	FY 2016
Samples Tested	546	811
Number of Tests performed	1303	1368
% of Proficiency Tests completed successfully	95%	99%

PROGRAM GOALS:

- Cross train staff for drug tests and liquor tests
- Obtain 100% on all proficiency tests
- Increase accreditation to all tests
- Increase amount and type of human food testing



KEY STAKEHOLDERS

- Michigan Consumers
- MDARD Food and Dairy Division
- MDARD Pesticide and Plant Pest Management Division

Motor Fuel Quality Testing

PROGRAM MANAGER: Gina DeWitt| 517-337-5082 | dewittg@michigan.gov

The Motor Fuels Quality Testing program tests gasoline to ensure product description accuracy and adherence to quality standards. The laboratory verifies the vapor pressure, distillation properties, ethanol and sulfur content as well as the anti-knock index of gasoline. Along with gasoline testing the lab examines diesel fuel and kerosene for water and flash-point and .

IMPACT FOR MICHIGAN:

The Motor Fuels Quality Testing program monitors and verifies the standards that all gasoline must meet to protect businesses and consumers from economic harm caused by costly engine repairs from substandard gasoline. Testing gasoline reduces health risks caused by the inhalation of gasoline vapors and pollutants. Monitoring vapor pressure levels in high population/automobile use areas helps prevent over 28 tons of pollutants per day fron being released into the atmosphere.

ACCOMPLISHMENTS:

- Increased capacity and efficiency in MDARD's, Motor Fuels testing laboratory allowed Motor Fuel field staff to obtain 3774 motor fuel samples with an overall compliance rate of 97 percent. This is both the most motor fuel samples obtained and the highest compliance rate in the program's 31 year history.

MEASURING SUCCESS:

Metric	FY 2015	FY 2016
Gasoline Samples Tested	3564	3646
Diesel & Kerosene & E-85 Samples Tested	54	58
Proficiency Test	100%	100%
Turn Around Time met or exceeded	93%	100%

PROGRAM GOALS:

- 100% on all proficiency check samples
- 100% of samples completed in the appropriate turn around time
- Increase diesel testing by adding distillation and calculated cetane index
- Cross train new back-up for Octane Engines

KEY STAKEHOLDERS

- Michigan Consumers
- Michigan Fuel Business
- MDARD Consumer Protection Program

LEGAL AUTHORITY:

- Public Act 44 of 1984, as amended, Michigan Motor Fuels Quality Act

PESTICIDE DATA PROGRAM

PROGRAM MANAGER: MICHELLE BOGNER| 517-337-5089 | bognerm@michigan.gov

The Pesticide Data Program (PDP) collects high-quality, statistically based, pesticide residue data is collected from a variety of food products destined for grocery store shelves throughout the United States. The data provides EPA with information to help determine which pesticides are registered for use on food products and to set tolerance levels of registered pesticides. Findings of tolerance violations are reported to FDA to aid them in making programmatic plans for future years of testing imported products. The data produced by PDP are available to the general public in a web-based database and in an annual summary.

IMPACT FOR MICHIGAN:

The PDP provides reliable data that help assure consumers that the food they feed their families is safe. The data published each year provide regulators, scientists, registrants, farmers, processors and consumers with important insights into the actual pesticide residue levels in a variety of widely consumed foods. PDP data have been helpful in identifying crops where alternative pest management practices are needed to increase yield and quality of the produce. PDP data are also useful in promoting export of U.S. commodities in a competitive global market and addressing food safety issues helping Michigan farmers market their products world-wide.

ACCOMPLISHMENTS:

- The Pesticide Section increased their efficiency in monitoring food safety and protecting consumers from pesticide misuse by increasing the pesticide screens by 8%. This increase in productivity provided data for federal agencies to use to ensure minimal dietary exposure to pesticides by consumers, data that supports registration of pest control tools for the agricultural industry to aid in producing high yields and marketable products.

MEASURING SUCCESS:

Metric	2015	2016
Number of samples	1061	1053
Average turnaround	90	96
Satisfactory proficiency testing	100%	100%

PROGRAM GOALS:

- Increase pesticide screens by adding more pesticides during validation
- Validate next assigned commodity
- Improve turnaround by finding efficiencies in data transfer methods
- Add more tests for samples to provide data not collected in the past
- Add more samples to monthly intake

KEY STAKEHOLDERS

- USDA
- US EPA
- US FDA
- Agriculture industry
- Consumers of agricultural products

LEGAL AUTHORITY:

- Agricultural Marketing Act of 1946
- US Food Quality Protection Act of 1996

PESTICIDE & ENVIRONMENT

PROGRAM MANAGER: MICHELLE BOGNER| 517-337-5089 | bognerm@michigan.gov

MDARD has the responsibility of regulating the safe use of pesticides. This responsibility is supported by the Laboratory's Pesticide Section's Pesticide and Environment program through both residue and formulations testing. Formulations testing verifies label claim on commercial pesticide products to prevent consumer fraud and/or misuse of pesticides. Residue testing includes testing of soil, foliage, water and swab wipes for evidence of the misuse of pesticides in samples collected while investigating citizen complaints. This program is also called upon for testing of food products and animal feeds for pesticides and other toxins in conjunction with investigations into human and animal illnesses or deaths.

IMPACT FOR MICHIGAN:

Pesticides are needed by the agricultural industry for higher yield of crops that are desirable to the consumer and control pests in structures that can carry disease or do extensive damage to the structure. Mis-use of pesticides poses a health risk to citizens and animals and can cause environmental damages.

ACCOMPLISHMENTS:

- The Pesticide Section increased their efficiency in monitoring food safety and protecting consumers from pesticide misuse by responding to 20% more misuse complaint samples. This increase in productivity provided residue data that facilitates trade and export of Michigan products and data that helps regulators protect the environment from unnecessary exposure to pesticides. Samples were also reported 20% faster, on average, than the previous year.

MEASURING SUCCESS:

Metric	2015	2016
Number of mis-use samples received	272	222
Average turnaround for mis-use samples	37	29
% Mis-use samples reported on time (60 days)	98%	100%
Number of formulation samples received	18	11
% Satisfactory proficiency testing	100%	100%

PROGRAM GOALS:

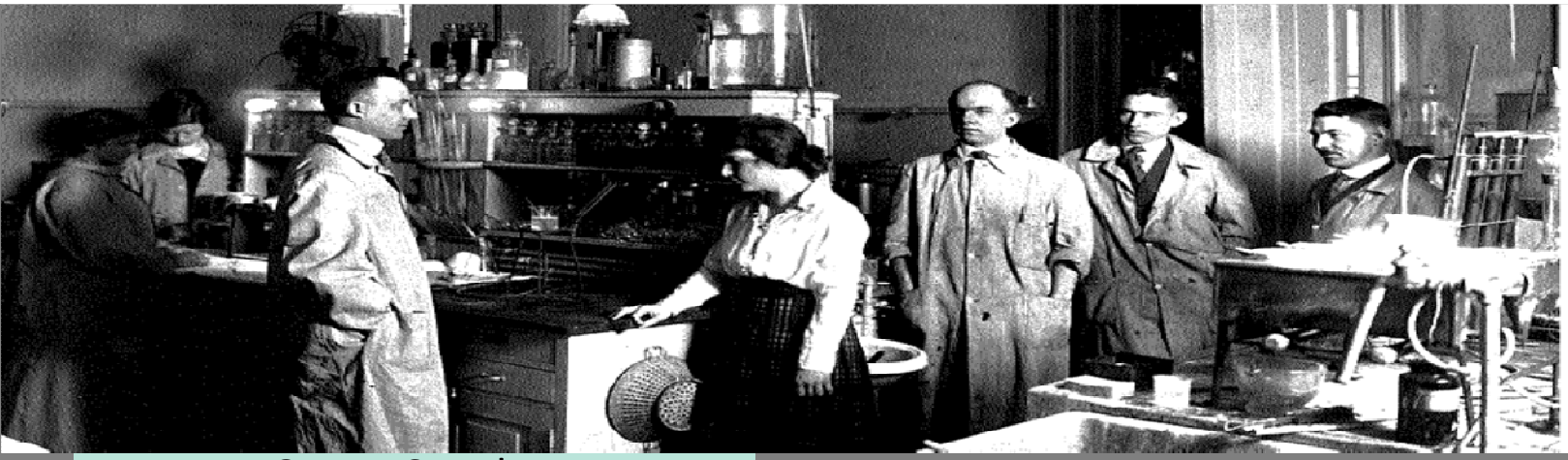
- Improve turnaround times for samples
- Install, transfer analysis methods and write reports for new gas chromatographs with mass spectrum detectors
- Install, transfer analysis methods and write reports for new liquid chromatographs attached to current triple quadrapole mass spectrum detectors
- Validate new method for testing ethylenebisdithiocarbamates and add to accreditation scope
- Validate new method for testing paraquat and diquat and add to accreditation scope

KEY STAKEHOLDERS

- Michigan citizens
- Agriculture industry
- US EPA
- Consumers of agricultural products
- MDNR

LEGAL AUTHORITY:

- Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C s/s 136 et seq (1996)
- Natural Resources and Environmental Protection Act, Public Act 451 of 1994, Part 83



FEDERAL GRANTS and COOPERATIVE AGREEMENTS

PROGRAM MANAGER: **Ted Gatesy| 517-203-1384| gatesyt@michigan.gov**

The FDA and USDA FSIS Food Emergency Response Network (FERN) comprises federal, state and local regulatory laboratories intended to expand and improve the capacity for surveillance and outbreak response of foodborne pathogen and threat agent testing. The MDARD and MDHHS microbiology laboratories have partnered to provide this capability to Michigan. Through a Food and Dairy Division contract with FDA, MDARD's microbiology laboratory provides pathogen testing for environmental samples from food production facilities. Through this same contract, import samples are collected during routine retail inspections and are tested for foodborne pathogens at the MDARD laboratory. The MDARD microbiology laboratory is in its final year of the FDA ISO17025 grant which is intended to maintain accreditation and enhance and expand our scope of accreditation.

IMPACT for MICHIGAN:
Food safety and economic interests of the people of the State of Michigan are two of the top MDARD missions. Detection of pathogens in food is an important step in removal of contaminated products from commerce and consequently eliminates sources of potential illnesses. These programs help to insure production of safe food and dairy products by Michigan manufacturers and will ensure continued sales of Michigan agricultural products within the state, across the nation and through exports. Accreditation of laboratories helps to ensure proper test methods are performed by qualified, trained personnel, producing accurate and timely results.

ACCOMPLISHMENTS:

- Participated with MDHHS in a joint farm raised catfish *Salmonella* surveillance program which identified *Salmonella on raw catfish at retail locations.*
- Received three Leveraging/Collaboration Awards from FDA in 2016.
- Maintained accreditation to ISO/IEC 17025:2005.

MEASURING SUCCESS:

Metric	2015	2016
FERN Proficiency Testing (PT) results	100%	100%
FDA Import and Environmental samples related PT results	100%	100%
Average turnaround time	6 days	6days

PROGRAM GOALS:

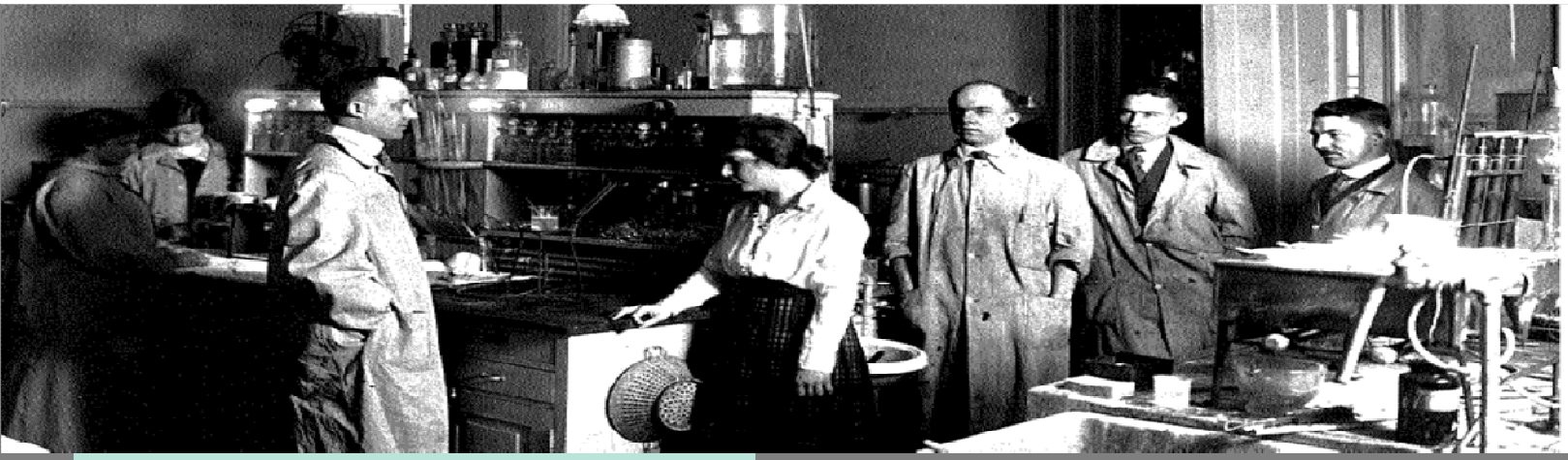
- Maintain ISO/IEC 17025:2005 accreditation through annual assessments.
- Improve the sensitivity and specificity of *Salmonella* testing by developing a method for use on our PCR platform.
- Increase surveillance sample testing through the FERN program.
- Have all food microbiologists on staff attend the FDA Whole Genome Trakr training through the University of Maryland.

KEY STAKEHOLDERS

- Citizens of and visitors to the State of Michigan.
- FDA and USDA FSIS
- MDARD's Food and Dairy Division

LEGAL AUTHORITY:

- PA 92 of 2000, as Amended, Michigan Food Law
- PA 266 of 2000, as Amended, Grade "A" Milk Law



FOOD and DAIRY MICROBIOLOGY

PROGRAM MANAGER: Ted Gatesy| 517-203-1384| gatesyt@michigan.gov

The Microbiology Section tests Grade "A" Dairy Products, Manufactured Dairy Products and Coliforms in Glycol Waters to provide analytical data to the Food and Dairy Division to enforce the Michigan Grade "A" Dairy Law, the Michigan Manufactured Milk Act and the Michigan Dairy Laws of 2007. Recurring testing of these products from Michigan Dairies provides documentation to the dairies as to the safety and cleanliness of their products and processes. The Grade "A" Pasteurized Milk Ordinance, 2009 revision, is designed to protect and improve the nation's milk supply through continued monitoring from production through distribution, including laboratory testing for bacterial counts, somatic cell counts phosphatase enzyme production and inhibitory substances, i.e., antibiotics. Food Pathogen Programs, including testing for pathogens in Ready to Eat foods and fresh produce through Michigan's Food Assurance Program, provide analytical data to the Food and Dairy Division in support of its enforcement of the Michigan Food Law.

IMPACT for MICHIGAN:

Food safety and economic interests of the people of the State of Michigan are two of the top MDARD missions. Detection of pathogens in food is an important step in removal of contaminated products from commerce and consequently eliminates sources of potential illnesses. These programs help to insure production of safe food and dairy products by Michigan manufacturers and will insure continued sales of Michigan agricultural products within the state, across the nation and through exports.

ACCOMPLISHMENTS:

- The Microbiology Section became a member of the FDA Genome Trakr program. This program is designed to provide Whole Genome Sequences (analyzing entire DNA sequences) of all foodborne pathogens recovered in the United States to FDA to better track foodborne outbreak pathogen strains. In addition to adding these organisms to a national database, having a Next Generation Sequence in our department will improve turn-around time of serotyping and bacterial characterization for use by MDARD public health and epidemiology staff during foodborne outbreaks. Eventually, this technology could be used by MDARD in other ways, including food fraud investigations and assisting food processors improve their in-house sampling plans to prevent more outbreaks.

MEASURING SUCCESS:

Metric	2015	2016
Number of food related samples tested for pathogens	3077	2555
Number of dairy tests	12,601	11,921
Average turnaround time	4 days	4 days
Proficiency test results % correct	100%	100%

PROGRAM GOALS:

- Sequence 400 food related pathogen isolates for Genome Trakr.
- Develop food fraud testing methods , possibly using the Whole Genome Sequencer .
- Add cheese moisture test to our ISO/IEC 17025:2005 scope of accreditation.
- Move *Salmonella* screening test to a PCR platform to increase method sensitivity and specificity.
- Harmonize test request forms, reports and reporting methods for all food samples in LabLynx.

KEY STAKEHOLDERS

- Dairy and food farmers and growers, producers, manufacturers, distributors and retail food and dairy establishments.
- Citizens of and visitors to the State of Michigan.
- FDA and USDA FSIS
- MDARD's Food and Dairy Division and Plant and Plant Pest Management Division

LEGAL AUTHORITY:

- PA 92 of 2000, as Amended, Michigan Food Law
- PA 266 of 2000, as Amended, Grade "A" Milk Law