



PESTICIDE AND PLANT PEST MANAGEMENT DIVISION

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Letter from the Director

The Michigan Department of Agriculture and Rural Development's Pesticide and Plant Pest Management Division (PPPMD) is responsible for protecting human health, animal health, and the environment in three primary ways:

- The regulation of pesticides, pesticide applicators, fertilizers, livestock feed, pet food, seeds, and nursery stock
- The certification of plants and plant products to facilitate market access within Michigan, across the country, and around the world
- The prevention, detection, and control of invasive insect pests and plant diseases

These efforts are key to promoting the interests of Michiganders and supporting the state's \$104.7 billion food and agriculture industry.

Among PPPMD's most significant 2022 accomplishments were:

- Aggressively responding to the state's first detection of Spotted Lanternfly, an invasive insect with potentially to significantly impact Michigan's important wine and juice grape industries
- Documenting the information necessary for the Director of MDARD to declare all formulations of the pesticide methomyl (commonly used to kill mammals, including pets) as restricted use, thus making it available only to PPPMD-certified pesticide applicators.
- Acquiring new funding to support programs to reduce pesticide exposure for vulnerable populations in schools, daycares, nursing homes, and hospitals, and for high-risk agricultural workers.
- Completing the initial development of a custom software system for PPPMD's four largest regulatory programs: pesticide, nursery, animal feed, and fertilizer

Continue reading for more information on PPPMD's many programs and accomplishments and the ways they positively impact every Michigander.

Michael Philip, Division Director
Pesticide and Plant Pest Management Division

Plant Health Certification and Export

PROGRAM MANAGERS:

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The Plant Health Certification and Export Program helps prevent the introduction and dissemination of serious insects and diseases injurious to nursery stock and plant products through inspections and outreach. The program also facilitates the trade of nursery stock, plant products, and agricultural commodities to and from other states and countries through inspections and oversight of systems-approach programs that advance detection, eradication, and/or control of plant pests and diseases.

IMPACT FOR MICHIGAN:

Prevent the introduction of plant pests and invasive species protects Michigan's agricultural and natural resources; promotes domestic and international commerce; minimizes pest control costs; and promotes tourism and outdoor recreational industries.

Certification ensures that shipment of plant-based commodities to other states and countries is successful. Nursery stock producers generate over \$290 million in annual sales and distribute over 50 percent of their products to other states. Christmas tree certification allows growers to ship trees to markets outside of Michigan, an industry which has an annual farm gate value of \$27 million. Michigan consumers also benefit by having nursery stock free of pests and diseases.

ACCOMPLISHMENTS:

- Assisted firms in the enrollment of new and existing systems-approach programs that open new markets and reduce costs.
- Quickly prescribed compliance actions in response to introductions of 3 significant invasive pests to Michigan, facilitating the safe movement of plant material out of the area.
- Increased enforcement action on firms shipping material into Michigan in violation of Michigan's exterior plant pest quarantines.
- Fully implemented the use of a new, custom software system that allows for more consistent and higher-quality reports and data tracking as well as streamlines enforcement and licensing.

MEASURING SUCCESS:

Metric	2021	2022
Nursery Stock Growers Inspected	874	552
Nursery Stock Dealers Inspected	285	857
Export Certificates Issued	5,688	5,804
Christmas Tree Fields Inspected	223	162

PROGRAM GOALS:

- Continue to expand the use of a risk-based approach to nursery stock inspections by updating policies and procedures promoting uniform inspections focusing on harmful pests and diseases threatening Michigan nurseries and the environment.
- Increase the efficiency of the export certification program, facilitating savings which can be passed on to industries serviced.
- Strengthen communications to industries and consumers to raise awareness about available programs to increase efficiency, ensure timely service and reach all stakeholders that can potentially benefit.
- Expand certification options for Michigan's green industry to facilitate more consistent and effective plant pest control.



KEY STAKEHOLDERS

- Nursery stock growers and dealers
- Fruit and vegetable producers
- Hay, straw, grain, log, and lumber exporters
- Christmas tree growers
- Greenhouse/floriculture growers
- U.S. Department of Agriculture
- The public

LEGAL AUTHORITY:

- The Insect Pest and Plant Disease Act, PA 189 of 1931, as amended
- Insect Pests and Plant Diseases, PA 72 of 1945

Invasive Pest Detection and Response

PROGRAM MANAGER:

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The Invasive Pest Detection and Response Program focuses on the early detection of invasive species and management of these pests. Early detection, pathway analysis, inspections, and outreach programs are essential to the successful eradication or containment of invasive pest populations. Sustained monitoring programs keep national and international markets open to Michigan-produced agricultural and forest commodities.

IMPACT FOR MICHIGAN

Michigan is home to numerous agricultural industries, producing more than 300 commodities on a commercial basis. The Port of Detroit is one of the busiest commercial border crossing in the world, placing Michigan at exceptional risk for the introduction, establishment and impacts of invasive pests. Left undetected and unmanaged, these pests can reduce agricultural yields, increase input costs, lower the volume and quality of timber, reduce forest biodiversity, imperil threatened and endangered species, and impact property values.

ACCOMPLISHMENTS:

- Successfully used an incident command structure to respond to the detection of spotted lanternfly (SLF), in Oakland County. Response efforts including suppression, outreach, and targeted regulatory measures to slow the spread of SLF are ongoing.
- Prevented the introduction of hemlock woolly adelgid in Berrien County by removing infested hemlock from five properties as a result of hemlock woolly adelgid quarantine violation.
- Monitored for Asian longhorn beetle, Michigan's most significant invasive species threat, through survey at over 120 sites statewide.
- Worked with the U.S. Department of Agriculture and Michigan State University to conduct a statewide survey of 47 pest species threatening our environment and food production.

MEASURING SUCCESS:

Metric	2021	2022
Invasive Species Awareness (audience hours)	1308	665
Asian Longhorn Beetle Survey Sites	102	119
Forest, Fruit, and Field Crop Survey Sites	249	747

PROGRAM GOALS:

- Protect Michigan residents, the environment and agriculture from the impact of exotic invasive species.
- Slow the spread of hemlock woolly adelgid within the state and especially north of the infested counties through continued survey, outreach and treatment.
- Slow the spread of spotted lanternfly within the state through aggressive suppression of the Oakland County infestation and outreach to the nearby community.
- Determine the extent of the recently introduced box tree moth infestation and seek to eradicate or contain the population through survey, outreach and implementation of a quarantine.
- Monitor for the possible introduction of Asian longhorn beetle and maintain response readiness.
- Continue education of industry professionals and public on exotic/invasive forest pest detection and reporting to ensure residents can help discover new pests and have the knowledge to recognize them and report their findings.
- Swiftly respond to new reports of exotic/invasive pests, including hemlock woolly adelgid, Asian longhorn beetle, spotted lanternfly and balsam woolly adelgid.



KEY STAKEHOLDERS:

- Agricultural producers
- Forest products producers
- Property owners, municipalities, and businesses maintaining turf and landscape plants
- Nursery plant, Christmas tree, and floriculture producers
- USDA-APHIS, USDA-Forest Service, MDNR, MSU, Environment Great Lakes & Energy (EGLE).
- The public

LEGAL AUTHORITY:

- The Insect & Plant Disease Act, PA 189 of 1931, as amended
- Insect Pests and Plant Diseases, PA 72 of 1945
- Natural Resources and Environmental Protection Act, PA 452 of 1994, as amended, Part 413

Industrial Hemp

PROGRAM MANAGER: MOLLY MOTT

MOLLY MOTT | 248-521-0501 | mottm@michigan.gov

Industrial hemp is defined at the state and federal level as *Cannabis* containing 0.3% or less tetrahydrocannabinol (THC). The 2018 Farm Bill removed hemp as a Schedule I controlled substance and allowed for commercial hemp cultivation under approved state plans or USDA authority. In response, MDARD gained approval from the USDA for the Michigan's first Hemp Production Plan, with implementation beginning on December 1, 2020. 2022 is the second year MDARD has managed this new program.

IMPACT FOR MICHIGAN

Hemp is an emerging industry in Michigan and is grown for fiber, grain, cannabinoid production, seed, and microgreens. Laws regulating hemp are in their infancy and are constantly being reevaluated at the federal and state levels. Growers are learning best practices as agronomy research continues, and the industry is developing supply chains and watching market stability.

On February 11, 2022, Executive Order 2022-1, signed by Governor Whitmer, moved hemp processing regulatory authority to the Cannabis Regulatory Agency. This move allowed for efficiency in regulating cannabinoid production and products produced from hemp-derived CBD while leaving hemp cultivation aspects of the program with PPM.

ACCOMPLISHMENTS:

- Received USDA approval for performance-based sampling options in the Hemp Production Plan, allowing for less sampling of low-risk crops, reducing costs for both growers and MDARD.
- Established college and university researcher protocol to allow for non-MDARD sampling and testing.
- Completed 100% of industry sampling requests in a timely manner.
- Performed grower inspections with 65% of registered hemp growers.
- Instituted post-harvest inspection process to collect required harvest data and verify harvest was completed within required timeframe.

MEASURING SUCCESS:

Metric	CY2021	CY2022
Collection of official regulatory samples for THC compliance testing	274	110
Percentage of lots disposed of due to THC noncompliance	22 (8.4%)	5 (4.7%)
Registered industrial hemp growers inspected	67 (73%)	59 (64%)
Registered industrial hemp growers	175	92

PROGRAM GOALS:

- Continue to work with legislators to ensure proposed hemp legislation meets the needs of the people of Michigan.
- Maintain partnerships with MDARD divisions and other state agencies to promote hemp as a new agricultural commodity and address crossover issues.
- Collect 100% of requested preharvest and remediation samples in a timely manner.
- Conduct comprehensive inspections with 50% of registered growers.
- Finalize performance-based sampling processes for reduced sampling of low-risk fiber crops, microgreens, clones/transplants, and research crops.
- Move reporting and data-tracking to an electronic system.
- Finalize enforcement processes that meet state and federal requirements.
- Conduct outreach sessions with stakeholders to ensure awareness of Michigan hemp laws and continue to maintain good communication with the industry regarding program activities.



KEY STAKEHOLDERS:

- Hemp growers, propagative material suppliers, manufacturers, retailers, food and feed processors and retailers
- Industry associations
- College and university hemp researchers
- Cannabis Regulatory Agency (CRA), marijuana growers and processors
- U.S. Department of Agriculture (USDA)
- Economic development-related businesses
- The public

LEGAL AUTHORITY:

- Industrial Hemp Growers Act, PA 220 of 2020, as amended
- Michigan Hemp Production Plan

Plant Pathology

PROGRAM MANAGERS:

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The Plant Pathology Laboratory is responsible for plant disease diagnostics and performs phytosanitary testing for export certification. Plant samples with diseases caused by bacteria, fungi, nematodes, and viruses are submitted to the lab by nursery inspectors and field specialists. The lab uses microscopy, culturing, protein analysis, and DNA sequencing to identify and detect plant pathogens. Plant Pathology program work falls into the following three primary categories: diagnostic services, export certification and surveys.

IMPACT FOR MICHIGAN:

Through innovation and collaboration, the MDARD Plant Pathology Laboratory continues to provide cutting edge plant pathogen testing locally to our regulated community in support of phytosanitary certification. Accurate and expedient identification of plant pathogens enhances the marketability of Michigan's agricultural and horticultural products and protects Michigan agricultural industries, the environment and our quality of life from damaging plant pathogens.

ACCOMPLISHMENTS:

- Received approval from the USDA-APHIS to test seed potatoes for the pathogen *Clavibacter michiganensis* subsp. *sepedonicus*, Bacterial Ring Rot (BRR). BRR testing is a requirement for exporting potatoes to Canada
- Collaborated with MSU to develop a reliable and effective dormant potato tuber Potato virus Y diagnostic assay for seed growers.
- Surveyed for *Xylella fastidiosa* in three counties in western Michigan with to establish a Pest Free Area that meets the European Union *X. fastidiosa* conditions for export.

PESTICIDE AND PLANT PEST MANAGEMENT DIVISION

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PROGRAM MANAGERS:

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Fruit and Vegetable Inspection

PROGRAM MANAGER:

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The Fruit and Vegetable (F&V) Inspection Service offers unbiased, third-party grading services and verification of fruit and vegetable quality based on government standards and/or processor specifications. In addition, this program provides Good Agricultural Practices (GAP), Good Handling Practices (GHP), third-party food safety audits, and licensing and inspection of controlled atmosphere storage facilities.

IMPACT FOR MICHIGAN:

The F&V program protects buyers, brokers, and consumers from receiving poor quality produce or produce that does not meet the promised grade or condition from anywhere in the world. In addition, it protects farmers by providing them an unbiased, third-party inspection upon which they are paid fairly for their produce. Processing facilities are also protected from receiving poor-quality produce in processed goods. The F&V inspection staff also perform GAP/GHP food safety audits, opening markets for Michigan producers and handlers.

ACCOMPLISHMENTS:

- Increased the number of restricted license inspectors on a number of commodities.
- Worked to increase the number of licensed auditors
- Updated BIQMS Manual
- All F&V inspectors completed Critical Thinking Training
- Completed all requested audits with limited auditor staff

MEASURING SUCCESS:

Metric	FY 2021	FY 2022
Federal Market Inspections	458	705
Shipping Point Inspections	2,345	1,175
Total Hundredweight of Produce Inspected	822,198	703,113
Audits (GAP/GHP, Harmonized & Harmonized Plus+)	316	226

PROGRAM GOALS:

- Continue process improvement changes to continue our level of customer service.
- Develop electronic forms to provide efficiencies for field and office staff.
- Implement an electronic inspection system for Shipping Point inspections.
- Continue developing relationships with our stakeholders, to understand what their needs are and how we can assist them.
- Increase services provided to auditees through education/outreach
- Increase number of restricted licenses per commodity held by inspectors.



KEY STAKEHOLDERS

- Michigan fruit and vegetable growers and processors
- Michigan shippers
- Buyers, brokers, and consumers
- Food retailers
- U.S. Department of Agriculture - Agriculture Marketing Services
- The public

LEGAL AUTHORITY:

- Market Conditions, PA 91 of 1915
- Cooperative Agreement with the United States Department of Agriculture

Agrichemical Bulk Storage

PROGRAM MANAGER:

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The Agrichemical Bulk Storage Program regulates commercial facilities storing bulk agrichemicals and private facilities storing bulk liquid fertilizers. Inspections help ensure bulk fertilizer and pesticide containments are constructed, installed, and maintained in a safe manner, with the least possible impact on people, property, and the environment. Construction plans are reviewed, and site consultation and inspections are conducted to help facilitate new projects and ensure bulk quantities of agrichemicals are stored properly and securely.

IMPACT FOR MICHIGAN:

The Agrichemical Bulk Storage Program safeguards approximately 76 million gallons of Michigan agrichemicals and ensures fertilizers and pesticides are properly identified, stored, and secured to prevent misuse and environmental discharges. The program promotes economic development by enforcing regulations, providing environmental protections, and maintaining a strong relationship with agribusiness companies expanding their operations. This regulatory oversight benefits industry and producers by preventing environmental contamination and prevents product losses and clean-up costs if a spill or release were to occur. This program initiates proactive efforts to help provide a safer environment through proper storage of agrichemicals.

ACCOMPLISHMENTS:

- Performed commercial consultations with businesses building new containment and renovating existing containment.
- Conducted outreach activities to inform staff, industry, and producers about on-farm fertilizer storage and poly tank integrity.

MEASURING SUCCESS:

Metric	2021	2022
Bulk Storage Facility Registrations Issued	204	204
Facilities Inspected	87	84
State Liquid Agrichemical Storage Capacity (gallons)	76 Million	89.6 Million

PROGRAM GOALS:

- Inspect 50 percent of registered bulk storage facilities on an annual basis.
- Increase construction and site plan reviews and on-site consultations to ensure proper agrichemical containment construction and promote Michigan's economic development.
- Increase outreach efforts to advise agricultural dealers and farmers on ways to deter illicit use of agrichemicals such as anhydrous ammonia, while protecting their safe, intended use.
- Register all bulk storage facilities electronically.
- Respond to a release of fertilizer and/or pesticide product to the environment. Assist with firm and other agencies to remediate the situation and continue to operate.
- Identify aging and/or potentially failing infrastructure and work with firms to implement a plan to update address potential issues.



KEY STAKEHOLDERS

- Fertilizer and pesticide manufacturers and distributors
- Agricultural producers
- Michigan Agri-Business Association
- Michigan Farm Bureau

LEGAL AUTHORITY:

- Natural Resources Environmental Protection Act, PA 451 of 1994, as amended:
 - Part 83, Pesticide Control
 - Part 85, Fertilizers
 - Part 87, Groundwater and Freshwater Protection
- Regulation 640, Commercial Pesticide Bulk Storage
- Regulation 641, Commercial Fertilizer Bulk Storage
- Regulation 642, On Farm Fertilizer Bulk Storage

Fertilizer and Liming Materials

PROGRAM MANAGER:

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The Fertilizer Program regulates manufacturers and distributors of approximately 1.89 million tons of fertilizers and soil conditioner products, as well as 89 licensed liming materials from 44 manufacturers, for both farm and non-farm use. The program helps assure these products are not adulterated, meet label claims and guarantees, and are stored securely in an environmentally protective manner.

IMPACT FOR MICHIGAN:

- Fertilizer is the most widely used agrichemical and is agronomically applied on 10 million acres of Michigan farmland.
- Michigan producers rely on this program to purchase properly labeled fertilizers for maximize yields while maintaining a profitable agricultural operation.
- Restrictions limiting phosphorus applications on turf help maintain and protect Michigan's vast water resources.
- Residents and commercial businesses (i.e. golf courses, nurseries, community gardens, etc..) that purchase fertilizers, soil conditioners and liming products rely on this program to protect them from misbranded and adulterated products.

ACCOMPLISHMENTS:

- Reviewed and analyzed 34 turfgrass fertilizers with “zero phosphorus” claims, 33 of which were found to be accurate.
- Issued stop sale violation notices to three manufacturers selling misbranded products with false claims.
- Sampled and analyzed 203 fertilizer samples for 1704 analytes, the most analytes MDARD has ever analyzed.

MEASURING SUCCESS:

Metric	2021	2022
Fertilizer Licenses Issued	885	856
Specialty Fertilizers Registered	6,750	6,757
Liming Material Licenses Issued	91	89

PROGRAM GOALS:

- Help prevent illegal trade and sale of unapproved and unregistered products to homeowners, professional applicators, and farmers.
- Increase fertilizer sampling and analysis activities to verify label guarantees for industry and consumers.
- Continue to focus on fertilizer and water quality reports and fee payment auditing to ensure manufacturing facilities are complying with fertilizer laws and regulations.
- Work with industry and other agencies on approval of recycled products for use as fertilizer, liming and soil conditioners products as allowed under P.A. 451 of 1994 (Natural Resources and Environmental Protection Act), Part 115.



KEY STAKEHOLDERS

- Fertilizer manufacturers
- Agricultural producers
- Turfgrass application businesses, including golf courses
- Michigan Agri-Business Association

LEGAL AUTHORITY:

- Natural Resources Environmental Protection Act, PA 451 of 1994, as amended:
 - Part 85, Fertilizers
 - Part 87, Groundwater
- Liming Materials, PA 162 of 1956
- Regulation 634, Commercial Fertilizers

Animal Feed Safety Program

PROGRAM MANAGERS:

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Michigan has approximately 1,400 commercial feed licensees distributing over 4 million tons of commercial feed and feed ingredients. The goal of the Animal Feed Safety Program is to protect human and animal health through inspection and sampling, ensuring feeds are produced using approved ingredients and additives, free of contaminants, and labeled properly. Inspectors evaluate feed facilities, ensuring compliance with Current Good Manufacturing practices. Routine review of feed formulations and sampling of feeds confirms compliance with state and federal regulations. Inspectors also investigate complaints involving animal deaths, illnesses, or issues with products impacting public health, including animal feed recalls.

IMPACT FOR MICHIGAN:

Michigan farms are home to an estimated 15 million livestock animals including dairy cows, beef cattle, hogs, turkeys, chickens, goats, and sheep primarily raised for food. Furthermore, it is estimated 55 percent of Michigan households have one or more pets who would be directly impacted by a feed safety incident. Feed safety incidents and recalls demonstrate the need for product surveillance, rapid response capabilities, and strong enforcement for pet food and livestock feed.

ACCOMPLISHMENTS:

- The program responded to animal illness and death investigations, completed Food and Drug Administration (FDA) contract obligations and completed high priority routine work.
- Worked with a custom software developer to replace legacy inspection and enforcement software.
- Worked with Food and Drug Administration and MDARD Animal Industry Division to investigate a feed adulteration event after a feed manufacturer issued a voluntary recall.

MEASURING SUCCESS:

Metric	2021	2022
Current Good Manufacturing Practice Inspections	100	192
Medicated Feed Inspections	64	57
Veterinary Feed Directive Inspections	59	48
FDA Contract Work includes PC and OEI Inspections	133	33
Feed Samples	*716	*428

*21531 total analytes tested (includes new pesticide analytes.)

PROGRAM GOALS:

- Continued focus on feed safety through risk-based inspections and the routine surveillance of feed products through sampling to determine compliance.
- Conduct outreach promoting animal feed safety awareness and compliance activities while implementing and communicating Feed Law changes to stakeholders.
- Assure market access for Michigan food and agricultural products by updating the Feed Law to maintain national and global consistency.
- Continued development and review of internal policies and procedures to ensure the implementation of the Animal Feed Regulatory Program Standards.



KEY STAKEHOLDERS

- Feed manufacturers and distributors
- Michigan Agri-Business Association
- Michigan Farm Bureau
- U.S. Food and Drug Administration
- Livestock producers
- Pet and specialty pet owners

LEGAL AUTHORITY:

- Michigan Feed Law, PA 120 of 1975
- Regulation 635, Commercial Feed

Pesticide Registration

PROGRAM MANAGER:

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Pesticide registration is an important aspect of protecting human health and the environment. The registration of pesticides provides the mechanism to identify and track the use and sale of pesticides in Michigan. Funding from pesticide registration is key in supporting inspection and monitoring programs that promote compliance with state and federal laws and regulations and helps mitigate misuse.

IMPACT FOR MICHIGAN:

Registering pesticides ensures producers, businesses, and residents have access to the pesticides they need to protect themselves, their crops, and their property from damaging pests including insects, vertebrates, fungi, bacteria, and weeds. Registration also provides MDARD with the means to cancel or restrict the use of a pesticide in the event it causes adverse effects on human health or the environment.

ACCOMPLISHMENTS:

- Issued one new, and maintained 44 existing, Special Local Needs registrations, giving growers additional pesticide tools to protect their crops from damaging pests.
- Requested two emergency use exemptions from the Environmental Protection Agency (EPA); ExciteR (pyrethrins and piperonyl butoxide) for the control of Red Swamp Crayfish in select ponds in Southeast Michigan and Ultra Blazer Herbicide (acifluorfen) on glyphosate resistant weeds in sugar beets.
- Conducted 62 state marketplace inspections to ensure pesticides being offered to consumers are properly labeled and registered with MDARD and the EPA.
- Identified seven misbranded pesticide products as part of a state formulation sampling project.
- Conducted five federal producer establishment inspections at facilities that manufacture, reformulate or repackage pesticides.
- Conducted seven federal marketplace inspections at facilities that distribute pesticides.

MEASURING SUCCESS:

Metric	2021	2022
Pesticides Registered for Sale in Michigan	14,537	16,780
State Marketplace Inspections Conducted	99	62
Unregistered Pesticides Found	570	140
Enforcement Actions Taken	108	140
Federal Producer Establishment Inspections Conducted	6	5
Federal Marketplace Inspections Conducted	9	7
Federal Samples Collected	13	10

PROGRAM GOALS:

- Protect human health and the environment by ensuring pesticides sold in Michigan are legally registered, properly labeled, accurately formulated, safely stored, and properly disposed.
- Ensure all people in Michigan have the pesticides they need to protect themselves, their property, and their communities from damaging pests.



KEY STAKEHOLDERS:

- Pesticide manufacturers
- Commodity groups, particularly those that represent specialty crop growers
- Michigan Agri-Business Association
- Michigan State University
- The public

LEGAL AUTHORITY:

- Natural Resources and Environmental Protection Act, PA 451 of 1994, Part 83, as amended, Pesticide Control

Pesticide Enforcement

PROGRAM MANAGER:

CAITLIN BURKMAN | 517-599-5825 | burkmanc@michigan.gov

Pesticide investigations and inspections are conducted in numerous agricultural and non-agricultural settings where pesticides are used, sold, and manufactured in Michigan. The Pesticide Enforcement Program protects human health, animals, and the environment by utilizing a combination of education, monitoring, and enforcement actions to promote compliance with state and federal laws and regulations. Sanctions imposed can include written warnings, administrative fines, and civil or criminal prosecutions.

IMPACT FOR MICHIGAN:

Misuse of pesticides can result in human or animal exposure, illness, or death; property and crop damage, including illegal residues on food crops; and other negative impacts to the environment.

Types of field activities include:

- Investigations of alleged pesticide misuse, including drift.
- Inspections of pesticide application businesses, including landscape companies, pest control operators, and custom agricultural applicators.
- Monitor restricted use pesticide sales.
- Monitor agricultural establishments for compliance with the federal Worker Protection Standard.
- Monitor compliance with integrated pest management requirements at schools, daycares, and medical facilities.

ACCOMPLISHMENTS:

- For cases started within FY2022, issued enforcement in the form of 238 field orders, 58 warning letters, and 45 administrative penalties.
- Assisted Monroe County Sheriff's Office with investigation into intentional pet poisoning leading to all methomyl pesticides being classified as restricted use.
- Nearly doubled the number of school and daycare facilities monitored for compliance with integrated pest management requirements and disinfectant use.

MEASURING SUCCESS:

Metric	FY2021	FY2022
Complaints investigated alleging pesticide exposure, drift, off-target direct discharge, or other misuse*	158	165
Complaints investigated alleging violations of business licensing, applicator certification, or other customer and/or public notification requirements*	61	59
Agricultural establishments monitored for compliance with federal agricultural Worker Protection Standards, including marijuana growers	60	69
School and daycare facilities monitored for pesticide use	50	92

*Allegations could involve both tallied categories. Total complaints received was 210 in FY2021 and 233 in FY2022.

PROGRAM GOALS:

- Strengthen our commitment to regulatory fairness and consistency by establishing an Enforcement and Compliance Assurance Unit and updating related policies and procedures.
- Support high quality field activities by updating staff training materials. Seven out of 18 current inspectors have less than 2 years on the job and at least 3 more hires are expected in 2023.
- Protect vulnerable populations from pesticide exposure by increasing awareness of agricultural worker protection standards and integrated pest management practices at schools, daycares, and certain medical centers. Activities will include increased numbers of monitoring inspections, conducting outreach presentations, and the distribution of compliance assistance materials.
- Increase awareness of pesticide label use restrictions. Activities will include providing compliance assistance materials to applicators during inspections, investigations, and outreach activities.



KEY STAKEHOLDERS:

- Agricultural producers and commodity organizations
- Michigan Agri-Business Association
- Michigan pest management, landscape, and aquatic plant management associations
- U.S. Environmental Protection Agency
- The public

LEGAL AUTHORITY:

- Natural Resources and Environmental Protection Act, PA 451 of 1994, as amended:
 - Part 83 Pesticide Control
 - Part 85 Fertilizers
- Regulation 633, Restricted Use Pesticides
- Regulation 636, Pesticide Applicators
- Regulation 637, Pesticide Use

Pesticide Applicator Certification

PROGRAM MANAGER:

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Pesticide applicator certification is a bedrock of a pesticide regulatory program. The certification of applicators ensures that baseline proficiency standards are maintained for applicators who apply pesticides for both private and commercial purposes. To become certified, applicators must demonstrate an understanding in various categories related to pesticide use, including how to use pesticides safely, environmental protection, and label comprehension.

IMPACT FOR MICHIGAN:

Michigan has approximately 24,000 applicators certified by the Michigan Department of Agriculture & Rural Development (MDARD). Computer and paper-based testing opportunities, as well as approved recertification seminars, provide avenues for applicators to increase their understanding of proper pesticide applications and ensures that MDARD's certification program is of the highest caliber. Ensuring certified applicators have the knowledge and skills required to safely apply pesticides is core to fulfilling MDARD's mission of protecting human health and the environment.

ACCOMPLISHMENTS:

- Hired a new certification program specialist to focus solely on pesticide applicator certification.
- Improved and streamlined exam processes through Metro Institute.
- Proctored over 900 paper-based core exams administered along with an applicator training session at locations across Michigan.
- Oversaw administration of over 13,613 computer-based exams in 2022, of which 1,539 were remotely-proctored.
- Eliminated bubble sheets for recertification seminar training events.
- Created the Applicator Credit Report published on a weekly basis for applicators to verify seminar credits accrued for renewal.
- Approved 1,516 continuing education courses that promote relevant educational opportunities for certified pesticide applicators and allow for renewal of required certification credentials.

MEASURING SUCCESS:

Metric	2021	2022
Total Applicators Certified in Michigan	21,498	23,512
Commercial Applicators	13,870	14,548
Private Applicators	6,006	6,598
Registered Applicators	1,622	2,366
Recertification by Seminar Sessions Approved	1,434	1,516

PROGRAM GOALS:

- Make computer-based and online exams as convenient and reasonably priced as possible while continuing to provide training and paper-based exam opportunities to underserved communities.
- Better exam integrity and content to verify applicator competence and confidence.
- Develop additional compliance assistance materials to improve understanding of certification information and pesticide use.
- Streamline processes for ease of access to information and better the customer experience.
- Increase PSEP influence and program support to improve relevance to applicators.
- Work effectively with stakeholders to implement Certification & Training Program updates to comply with incoming federal pesticide standards.



KEY STAKEHOLDERS:

- Agricultural producers and commodity organizations
- Michigan Agri-Business Association and other Michigan pest management, landscape, and aquatic associations
- Pesticide application businesses, and pesticide applicators
- U.S. Environmental Protection Agency
- The public

LEGAL AUTHORITY:

- Natural Resources and Environmental Protection Act, PA 451 of 1994, Part 83, as amended, Pesticide Control

Pesticide Business Licensing

PROGRAM MANAGER:

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Businesses applying pesticides for hire, dealers of restricted use pesticides, and dealers of agricultural pesticides all play key roles in Michigan business and agriculture. MDARD has the responsibility of supporting these businesses while promoting the safe use of pesticides. MDARD licenses and routinely inspects these businesses to ensure compliance with all applicable pesticide laws and regulations which helps accomplish our goal of protecting human health and the environment.

IMPACT FOR MICHIGAN:

In FY2022, MDARD issued 2,074 pesticide applicator business licenses, 267 restricted use pesticide dealer licenses and 332 agricultural pesticide dealer licenses. Licensing of these businesses enhances compliance with all pesticide laws and regulations and helps ensure the people of Michigan have the pest control resources they need to protect themselves and their property from damaging pests.

ACCOMPLISHMENTS:

- Classified all methomyl pesticides as restricted use.
- Monitored for compliance with pesticide application business license requirements to ensure a fair business environment and protect consumers from illegal operations.
- Monitored sales of restricted use pesticides to ensure they were only sold to certified applicators.

MEASURING SUCCESS:

Metric	2021	2022
Pesticide Applicator Business Licenses Reviewed	331	416
Restricted Use Pesticide Dealers Audited	17	15
Restricted Use Pesticide Enforcement Actions	4	11

PROGRAM GOALS:

- Ensure businesses and individuals can legally operate in Michigan by issuing licenses and certification credentials in a timely matter.
- Facilitate compliance assistance by developing self-assessment guides and how-to-comply manuals for regulated businesses.



KEY STAKEHOLDERS

- Agricultural producers and commodity organizations
- Michigan Agri-Business Association
- Michigan pest management, landscape, and aquatic plant management associations
- U.S. Environmental Protection Agency
- The public

LEGAL AUTHORITY:

- Natural Resources and Environmental Protection Act, PA 451 of 1994 as amended:
 - Part 83 Pesticide Control
 - Part 85 Fertilizers
- Regulation 633, Restricted Use Pesticides
- Regulation 636, Pesticide Applicators
- Regulation 637, Pesticide Use