



Michigan Department of Agriculture

Pesticide & Plant Pest Management Division Annual Report 2010

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Introduction by Gina Alessandri, Acting Director, Pesticide & Plant Pest Management Division

This annual report reflects the dedication and hard work of Pesticide and Plant Pest Management (PPPM) Division staff and the support and collaboration of the Michigan Legislature, commodity groups, industry, and state and federal partners. The accomplishments highlighted are many and were performed in support of our core mission of protecting human health and the environment while fostering a diverse viable agriculture. These accomplishments could not have happened without the partnerships so critical to our success.



As in recent years, significant emphasis was placed in 2010 on detecting and managing invasive species threatening our agriculture and natural resources. Our increasingly globalized economy makes this a critical task. We proactively conducted surveys and implemented response and control measures when necessary for such pests as hemlock woolly adelgid, plum pox virus, emerald ash borer, and blueberry shock and scorch viruses.

Division staff continued to work diligently to facilitate trade - both domestic and international - by assuring grade, condition, and quality of Michigan produce and by insuring that nursery stock and agricultural commodities were inspected to meet phytosanitary standards. Producer assets were safeguarded through inspection, audit, and bonding activities.

Food safety and environmental protection were also priorities in 2010. Division staff worked collaboratively with manufacturers and distributors of animal feeds and ingredients to insure that feed products for food producing animals were safe, free of illegal drug residue, and in compliance with both state and federal laws. Registration, certification, and a significant variety of inspection and investigation activities ensured that pesticides were available, stored safely, and were applied properly by trained applicators.

As we look forward to 2011, the PPPM division will continue to build and foster partnerships and focus our resources on mission critical activities. Though budget and resource challenges remain, division staff stands ready, through collaboration and innovation, to provide the same high quality service performed in 2010 and all years preceding.

***The mission of the Pesticide and Plant Pest Management Division is to:
Protect human health and the environment, while fostering
a diverse, viable Michigan agriculture.***

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Section 1 – Exotic & Invasive Species Pest Management



Emerald Ash Borer

Emerald ash borer (EAB) was first identified in 2002 in six Michigan counties and has since spread to 72 counties, including six in the Upper Peninsula (U.P.) (Eight counties in the U.P. are quarantined). Notable infestations identified in 2010: City of Sault Ste. Marie/Chippewa County, March, 2010 (a previously quarantined county) and Newaygo County (a new county detection, July, 2010). The quarantine was last revised on November 30, 2009.

Approximately 50 million of Michigan's 700 million ash trees have been killed due to EAB. In addition, EAB infestations have been found in Canada, Illinois, Indiana, Iowa, Kentucky, Maryland, Minnesota, Missouri, New York, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin. These infestations are attributed to artificial movement through nursery stock, firewood, and other ash material including logs.

During the past eight years, the Michigan Department of Agriculture (MDA), along with its partners, the Michigan Department of Natural Resources and Environment (DNRE), United States Department of Agriculture - Animal and Plant Health Inspection Service (USDA - APHIS), the USDA - Forest Service (USDA - FS), Michigan State University (MSU), and Michigan Technological University (MTU) have learned a great deal about this pest's lifecycle, its flight patterns, its reproductive habits, and how it spreads. They have focused on utilizing new methods to identify the leading edge of infestations to further suppress the spread of EAB into new areas.

Continued survey of the non-quarantined counties in Michigan continues to be a critical activity. Knowing where EAB exists in the U.P. will allow for regulation of areas once they are found to be infested. Continued survey within the quarantined counties of the U.P. allows for the ongoing adjustment of Quarantine Level boundaries and subsequently a change in how those areas are regulated.

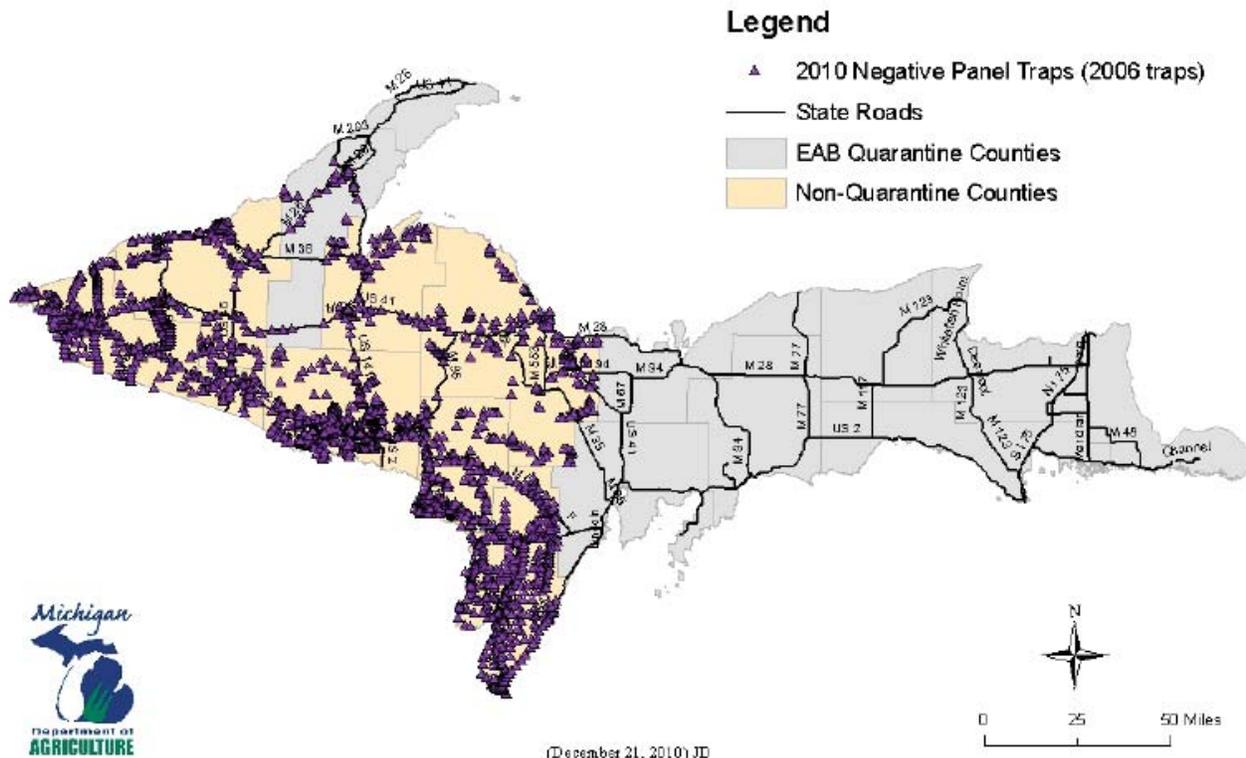
National Emerald Ash Borer Survey

The focus of the MDA's portion of the USDA-APHIS National EAB Survey was to utilize baited panel traps designed to detect EAB. The information MDA collected was combined with information from other participating states to map the location of the beetle. In June, traps were hung in ash trees in all seven of the non-quarantined counties in the U.P. (Baraga, Dickinson, Gogebic, Iron, Marquette, Menominee, and Ontonagon) and in the southern portion of Houghton County (a quarantined county). Whenever possible, traps were hung at high risk sites such as campgrounds, firewood dealers, sawmills, recreational lakes, etc. The highest density trapping occurred in the four counties in the western U.P. bordering Wisconsin and seven townships in the southern most portion of Ontonagon County. Inspections of the panel traps were conducted in late August and early September 2010. Staff from the Houghton/Keweenaw, Dickinson, and Marquette conservation districts accomplished the activities in all eight counties. Trapping activities were conducted with MDA oversight and technical support. There were no EAB detected during the 2010 National EAB Survey.

2010 Emerald Ash Borer High Risk Site Survey

USDA APHIS PPQ 2010 Emerald Ash Borer Survey

Upper Peninsula of Michigan



SLow Ash Mortality (SLAM)



Since 2008, the EAB infestation sites in Mackinac County have been used, and continue to be used, for a pilot mitigation project as part of an integrated multi-year, multi-agency strategy entitled SLow A.sh M.ortality (SLAM) which is cooperatively conducted by MDA, USDA-APHIS, USDA-FS, DNRE, MSU, and MTU. Beginning in 2010, infestation sites in the Garden Corners area of Delta/Schoolcraft counties and in the Calumet/Laurium area in Houghton County were also used as pilot mitigation project sites. The SLAM effort is designed to suppress EAB population growth and delay the onset and progression of widespread ash mortality. The project employs and measures the impact of multiple strategies to slow the rate at which EAB disperses and impacts ash trees. The primary facets of the project include: EAB density and distribution survey, communication and outreach, regulatory compliance, biological control, host reduction, insecticide treated trees, ‘sinks’, forest health survey, ash abundance and distribution survey, data collection and management, and an evaluation of overall project results. These pilot projects will provide a model for future outlier sites in Michigan and around the United States.



**Delta Conservation District
SLAM Staff**



**Panel Trap Inspection
Training**



**Chippewa/East Mackinac
Conservation District SLAM
Staff**

Additional Survey Activities

Delimiting surveys were conducted at three outlier locations in the U.P. (Munising/Alger County, Brimley/Chippewa County, and Sault Ste. Marie/Chippewa County). PPPM field inspectors conducted the field activities at the sites. A destructive sampling survey was accomplished at each site in April. In June, this survey was followed up by a baited panel trap survey at each site. Panel trap inspections later in the summer ended with EAB having been detected at both the Brimley and Sault Ste. Marie sites. There have been no additional detections of EAB in Munising since the original detection there in the latter part of 2009.

MDA staff provided technical assistance to the Alger Conservation District and to Pictured Rocks National Lakeshore for additional panel trap survey activities that they conducted in Alger County. In late summer, when traps were being inspected, no EAB were detected on any of the traps they had established.

Regulatory Activities

Preventing the artificial spread of EAB continues to be a priority for the state. In 2010, MDA continued its focus on enforcing the EAB quarantine and increasing compliance. Regulatory activities included monitoring the movement of ash products, conducting regular inspections, investigating quarantine violations, and issuing compliance agreements to firms that process, or have the potential to process ash wood products.

EAB program staff, in conjunction with MDA's Animal Industry Division, continued to maintain the MDA Inspection Station at the Michigan Department of Transportation's St. Ignace Welcome Center just north of the Mackinac Bridge. Inspection Station staff monitor the movement of hardwood firewood and ash wood products leaving Michigan's Lower Peninsula. Staff inspected private and commercial vehicles entering the U.P. and either seized all wood in violation or ordered the load in violation to return to its place of origin. Travelers and commercial firms found to be moving regulated ash were issued a "Report of Violation" on site, after which the facts of the case were reviewed for prosecution, civil penalties, or warning letters.

Bridge Inspections:

Commercial Trucks.....	7,737
Pulpwood (Cords).....	80,061
Chips & Sawdust (Tons).....	44,830
Sawn Lumber (Board Feet).....	30,941,798
Firewood Inspected (Cubic Yards).....	122
Firewood Inspected (Pieces).....	11,729
Firewood Contacts.....	2,093
Reports of Violation.....	42

Pesticide & Plant Pest Management Division

PPPM staff also continues to identify firms and persons that may artificially spread EAB such as nurseries, landscapers, firewood dealers, logging and milling companies, utility companies, tree removal and trimming firms, excavation and land clearing firms, municipalities and/or other government agencies, composting yards, and ash disposal facilities.

MDA and USDA-APHIS continued to issue compliance agreements to firms allowing the movement of regulated products from quarantined areas. On a regular basis, MDA staff inspects firms or persons with compliance agreements to verify appropriate treatment and disposal methods are met, shipments have the appropriate certification, and records are accurate. Should any portion of the compliance agreement not be met, the compliance agreement may be revoked, and firms and/or persons may be subject to regulatory action, including prosecution.

In 2010, 239 compliance agreements were issued.

Biological Control

In 2010, USDA scientists continued to evaluate parasitic wasps as biological control agents against EAB. MDA approved the general release of these organisms in 2007 after a national review and comment period conducted by USDA-APHIS and a finding of no significant environmental impact. The results will be studied to decide whether the wasps can become established in Michigan and provide effective control against EAB. In 2010, the rearing facility established in Brighton, Michigan by USDA-APHIS produced 5,452 *Oobius agrili* females, 105,946 *Tetrastichus planipennisi* females and 55,279 *Spathius agrili* females. Releases of these parasitic wasps have occurred in 12 counties in Michigan. A parasitic wasp native to Michigan in the genus *Atanycolus* is also being evaluated as a possible biological control against EAB. USDA researchers are continuing in their efforts to identify other possible biological control agents. In addition, USDA continues to explore both the biology of EAB and its host material (ash) to develop a more effective and efficient lure and trap.

Outreach Activities

Outreach and education efforts are essential in every aspect of the EAB program. Public awareness and understanding enhances compliance with the quarantine and supports the state's overall efforts to prevent the artificial spread of EAB.

PPPM produced and distributed numerous pieces of educational materials to stakeholders as well as the general public. Additionally, staff hosted public meetings and several informational booths, educational seminars, workshops, and group discussions at both the state and national level.

PPPM continued to maintain the EAB Hotline. The top three areas of inquiry/concern were:

1. Clarification on firewood movement.
2. Inquiries about funding assistance for tree removal.
3. Inquiries from individuals who believe they have EAB and who are looking for guidance on what to do.



Tetrastichus planipennisi
(Hymenoptera: Eulophidae)



Oobius agrili
(Hymenoptera: Encyrtidae)



Spathius agrili
(Hymenoptera: Braconidae)

Pesticide & Plant Pest Management Division

Highway signs continued to be positioned at key locations as northbound travelers approached the Mackinac Bridge informing them not to bring firewood into the U.P.

In November, in the days leading up to the firearm deer hunting season, a firewood 'blitz' was conducted at the MDA Inspection Station north of the Mackinac Bridge. 275 travelers were contacted and no firewood was found moving in violation of the quarantine. The general knowledge regarding the quarantine restrictions on moving firewood was rated as 'very good'.

There were several press releases in 2010 including one in which Governor Jennifer M. Granholm declared the week of May 23, 2010 as "Emerald Ash Borer Awareness Week." This effort was coordinated with several other states to enhance public awareness and understanding of EAB.

Exotic Pest Detection

MDA is responsible for the detection, regulation, and when applicable, control or eradication of exotic insects, plant pathogens, and terrestrial plants. These exotic pests can significantly impact agricultural production, ecological sustainability, and human health.

Exotic pests gain entry into new areas as contaminants in agricultural and related commodities, as hitchhikers in cargo and baggage, or through natural spread already established populations. MDA utilizes a variety of trapping, sampling, and inspection techniques in an effort to locate these pests while there is still time to implement successful management strategies.

Michigan is home to eight ports-of-entry, including the busiest commercial border crossing in the world. It's agricultural, horticultural, and industrial sectors receive plants and plant products from around the world. And with more than 200 commodities, Michigan has the nation's second most diverse agricultural economy. Taken together, these factors place Michigan at exceptional risk for the introduction and impact of exotic pests.

Surveys for exotic insects, plant pathogens, and noxious weeds are facilitated through PPPM's participation in the Cooperative Agricultural Pest Survey (CAPS) and Farm Bill Section 10201 pest detection programs. Administered by USDA-APHIS-PPQ, these programs provide federal funding to conduct surveys for early detection of exotic plant pests, to facilitate export of U.S.-grown commodities, and to support regulatory and management initiatives. Thirteen major surveys were conducted in 2010.

Barberry and Black Stem Rust

Certain cultivars of ornamental barberry serve as alternative hosts for black stem rust, a serious disease to which current wheat varieties are resistant. It is feared that black stem rust could mutate into a virulent form on these barberry cultivars, and then move into production wheat fields, causing major losses. In 2010, MDA collected 316 barberry plants representing over 30 cultivars from propagating and retail nurseries statewide. These plants are being analyzed for trueness-to-cultivar using molecular techniques to ensure that the plants are being sold under the correct cultivar names, and that those cultivars are resistant to black stem rust per federal statute. In addition, surveys for black stem rust were performed in wheat fields in 25 counties statewide, and surveys for common barberry, a naturalized host of black stem rust that occurs throughout the state, is being implemented.

Blueberry Scorch and Shock Viruses

In 2010, PPPM conducted surveys for Blueberry Scorch Virus (BIScV) and Blueberry Shock Virus (BIShV), two serious virus diseases affecting blueberries. The scorch virus was first detected in 2008 in one commercial nursery in the southwestern part of the state, while shock was detected in 2009 at an MSU research farm. A trace-forward survey for BIScV in 2009 detected the virus at four other locations. In the 2010 survey, a total of 28,650 samples representing 643 fields and 99 growers were collected and processed for BIScV and BIShV. Forty four samples from six grower locations tested positive for BIScV, while all samples tested negative for



BIShV. To prevent further spread, impacted growers were instructed to remove all positive plants and all plants within 25 feet of positive plants, treat positive fields for aphids, and not to move plants from infected fields.

Exotic Oak and Pine Pests

Oak and pine are major components of over 5.1 million of Michigan's 19 million forested acres. These forests support 200,000 jobs, contribute \$12 billion to the state's economy annually, and provide immeasurable ecological and environmental benefit. As highlighted by emerald ash borer, hemlock woolly adelgid, and gypsy moth, exotic insects pose one of the most serious threats to Michigan's and the nation's forests. In 2010, MDA conducted a large-scale survey for more than 30 of the most significant exotic oak and pine pests at 110 sites in more than 50 counties statewide. The goal of this survey is early detection to facilitate effective mitigation. Samples are being analyzed and results are pending.



Blueberry Shock Virus

Giant Hogweed

Giant hogweed is an invasive and potentially dangerous exotic weed that crowds out native vegetation and produces severe blistering when its sap contacts human skin. MDA continues to respond to public reports of new infestations of this plant and provides property owners options for control. Additionally, MDA also conducts treatments of infestations that would otherwise go uncontrolled. Hogweed is currently known from 61 sites in Michigan. Because of control efforts by homeowners, MDA, and USDA, nearly all of these infestations are in decline.



Giant Hogweed

Hemlock Woolly Adelgid

Aggressive measures have been taken to eradicate hemlock woolly adelgid (HWA) from four areas of Michigan since its first discovery in Harbor Springs in 2006. Hemlock is an ecological keystone, and this pest is among the most significant threats to the health of Michigan's northern forest ecosystems. Tree removals, pesticide treatments, and massive survey efforts have taken place in Emmet, Macomb, and Ottawa counties over the past five years and will continue in 2011 and beyond. Sustained diligence will be necessary to ensure Michigan remains free of this highly destructive insect.



Hemlock Wolly Adelgid

Exotic Grape Pests

Michigan is one of the nation's largest wine and juice grape producers. Several species of exotic insects are poised to invade Michigan's vineyards, increasing costs and reducing yields. MDA participated in a national exotic grape pest survey by conducting trapping and inspections for 10 exotic pests of grapes at 49 juice and wine vineyards in southwestern and northwestern Lower Peninsula in 2010. Diagnostics should be complete by September 30, 2011.

Honeybee Pests

Honeybees in Michigan, and across the nation, are under enormous stress from a host of known and unknown pests and other agents. In 2010, MDA participated in a national honeybee survey with the goals of establishing baseline pest information, detecting previously unknown exotic pests, and demonstrating pest freedom for federal regulatory purposes. This work is important to protect the state's honey production and pollination industries and the fruit and vegetable industries that depend on them. Twenty-five apiaries statewide were inspected and samples forwarded to USDA for analysis. Michigan was one of seven states that had completed all of their assigned survey samples prior to winter. USDA was able to use our reports to demonstrate that Slow Paralysis Virus does not occur in the United States, and that allowed the USDA to close the border to Australian live honey bee imports.



Karnal Bunt

Karnal bunt is a serious disease of wheat and rye detected in the southwestern United States in 1996. To ensure foreign markets remain open to U.S. and Michigan-grown wheat and rye, MDA participates in an annual national survey to demonstrate the vast majority of the country is free of this disease. Each year, composite grain samples are collected at grain elevators in Michigan's major wheat growing counties and tested at a USDA laboratory in Texas. In 2010, 12 samples were collected from grain elevators in Michigan's leading wheat-producing counties; all were negative for Karnal bunt. Karnal bunt has never been found in the state.

Plum Pox Virus

Plum pox virus (PPV), an extremely serious exotic disease affecting peaches, plums, apricots, and nectarines, was detected in a single tree in the southwestern Lower Peninsula during a 2006 Cooperative Agricultural Pest Survey (CAPS). All potentially infected trees were removed and a quarantine placed around the impacted area. A three-year survey to sample the majority of stone fruit orchards in the largest producing regions of the state began in 2007 and concluded in 2009. In 2010, a total of 13,395 samples representing 48,432 trees were collected and processed. For the fourth year in a row, no new infections were detected. MDA cancelled its PPV quarantine in 2009; and will continue to monitor the state for additional PPV infections in 2011 and beyond.

Potato Cyst Nematodes

Two exotic species of potato cyst nematodes – pale cyst nematode and golden nematode – are known to occur in the United States and Canada. To ensure foreign markets remain open to Michigan-grown potatoes, MDA participates in a national program designed to detect populations of the nematodes, or conversely demonstrate their absence, in seed potato fields statewide. MDA has completed the third of nine projected years of sampling. In 2010, 1,129 soil samples were collected from seed potato fields in the Upper Peninsula and northern Lower Peninsula. To date, no potato cyst nematodes have been detected, but full results from 2010 are pending.

Sudden Oak Death

Sudden oak death, caused by the pathogen *Phytophthora ramorum*, is decimating native oak stands in the far western U.S. Because *P. ramorum* utilizes a variety of important ornamental plants as alternate hosts, the nursery trade has been the primary means of spread of this pest to new areas. In 2010, MDA participated in a national *P. ramorum* survey to allow for early detection of new infections and to assess the current status of its movement in the nursery industry. Thirty high-risk nurseries were sampled and all samples were negative. Sudden oak death has never been recorded in Michigan.

Sirex Woodwasp

Since its discovery in New York in 2004, MDA, in cooperation with USDA-APHIS-PPQ, the U.S. Forest Service, MDNR, and MTU, has conducted an annual trapping survey for sirex woodwasp statewide. Native to Europe, western Asia, and northern Africa, this insect has spread to all inhabited continents, and is now the world's most significant pest of commercially produced pines. To date, sirex woodwasp has been found at seven sites in Huron, Macomb, Saginaw, Sanilac, and St. Clair counties in the southeastern Lower Peninsula. In 2010, 131 sites were trapped in the southeastern Lower Peninsula and eastern Upper Peninsula; no sirex woodwasp was detected. USDA detected one sirex woodwasp in its traps in Saginaw County, which was a new county record.



Sirex Woodwasp

Warehouse Survey

Solid-wood packing materials like crates and pallets are the most significant means by which exotic woodboring insects like emerald ash borer gain entry into the U.S. To get to the root of the problem, MDA conducted a trapping, inspection, and outreach program at high-risk warehouses and commercial and industrial firms. In 2010, 75 warehouses and other commercial and industrial facilities were trapped and inspected for exotic woodboring insects. The survey is ongoing and results are pending. This year's survey is an expansion of last year's, in which 50 facilities were trapped and no significant pests detected.

Section 2 – Plant Pest & Commodity Certification

PPPM's Plant Pest and Commodity Certification programs facilitate interstate, intrastate, and foreign trade through inspection and certification of nurseries and plant material and provide an unbiased, third-party inspection service for the produce industry through the fruit and vegetable inspection program. The goals of these programs are to:

- ❑ Prevent the spread of harmful pests and diseases which could lead to serious ecological and economic losses.
- ❑ Facilitate the export of plant-based commodities (dry beans, grain, hay, nursery stock, logs, and lumber) to markets in more than 60 countries.
- ❑ Ensure plants purchased by consumers meet requirements for viability, trueness to varietal name, and quality standards.
- ❑ Assure Michigan fruit and vegetable producers meet the requirements necessary to access local and international markets.

Nursery Program

Nursery inspections facilitate the sale of plant materials, such as hardy perennials, trees, shrubs, herbaceous perennials, small fruit plants, and hardy bulbs. Nursery and perennial plant producers generate about \$291 million in annual sales. Sales of Christmas trees by Michigan producers generate another \$41.5 million, representing 2.87 million trees; while, sales of wreaths and boughs account for an additional \$1.3 million (*source: 2004 Rotational Survey Values*). Michigan nursery growers produce stock for sale within the state and ship to 35 states and foreign markets. Through the inspection process, PPPM ensures plant materials entering market channels are free of pests and diseases. In addition to inspecting for pests and diseases, PPPM field staff also makes sure that production areas are free from weeds. For those plants destined for out of state markets, the commodity must meet the phytosanitary requirements of the receiving state.

Inspectors visit nursery stock dealers who receive stock from high-risk states to review shipping documents and confirm the stock is free of pests and diseases. Import inspections are also performed at both the grower and dealer level when nursery stock arrives from foreign sources.

Export – Interstate Certification

PPPM certifies nursery stock, Christmas trees, logs, hay, and bedding plants for interstate shipment. PPPM field staff ensures plant materials meet the quarantine requirements of the receiving states. Of primary importance are five major quarantine-significant pests: gypsy moth, pine shoot beetle, emerald ash borer, Japanese beetle, *Phytophthora ramorum* blight, and black stem rust. Japanese beetle is the focus of several external state quarantines as well as the National Japanese Beetle Harmonization Plan. To certify plant materials for shipment outside gypsy moth regulated areas, PPPM inspectors assure freedom from this pest through an egg mass survey plus the required annual inspection. In areas of high gypsy moth populations, PPPM also conducts additional checks in the spring for the presence of larvae that may be blown in from surrounding areas. The black stem rust quarantine applies to barberry and related species and only approved resistant varieties may be sold.



Foreign Export

Under a cooperative agreement with USDA, commissioned PPPM staff members receive training and authorization to issue federal phytosanitary certificates, facilitate trade in foreign markets, and export of Michigan commodities to nearly 60 countries worldwide. The vast majority of exports went to Canada and Mexico, as well as to Europe and South America. The largest export categories by volume are propagative items (nursery stock and agricultural seed), grain for consumption, straw, logs, and lumber.



PPPM also monitors compliance with special export programs to assure producers meet the requirements of these new initiatives. The “Apples to Mexico” program is the most recent initiative facilitated by a partnership between MDA-PPPM, USDA, Michigan Apple Committee, MSU, and Mexican officials. The US/Canada Greenhouse Certification Program is another successful export program facilitated in Michigan by PPPM staff.

Plant Pathology Laboratory Activities in Support of Export and Plant Disease Prevention

PPPM Plant Pathology Laboratory, located within MDA’s Geagley Laboratory, performs many activities in support of certification and export. Plant Pathology is actively involved in improving the quality of pome and stone fruit trees in Michigan. This virus-free indexing program is established at a large commercial fruit tree firm in southwest Michigan. PPPM-Plant Pathology also conducts virus-free certification of blueberry plants to help growers obtain disease-free vigorous plants for export and domestic markets. Other activities include dry bean testing, seed corn certification, and support of CAPS surveys such as PPV, SOD, and viruses of imported perennial ornamentals such as hosta.



Biotechnology and Plant Post-Entry Quarantine Import Permits

To facilitate safe introduction of foreign genetic material to improve the quality of fruit trees and other crops in Michigan, PPPM reviews applications and issues import permits in cooperation with USDA-APHIS-PPQ. In 2010, PPPM, in agreement with USDA, approved a total of 66 permits for commercial companies and research and teaching institutions in Michigan. Forty six permits were issued for interstate movement and field trials of genetically modified organisms (GMO), 12 for the importation and movement of plant pathogenic organisms, four for movement of federal noxious weed plants, and three for the importation of soil samples for laboratory research and analysis.

Fruit and Vegetable Inspection Program

The F&V inspection program offers an unbiased, third-party inspection service for the produce industry in Michigan and throughout the United States. Inspections are based on USDA and Michigan standards, processor specifications, and/or industry requests. USDA standards are used nationwide as a basis for purchase and to resolve disputes. All F&V staff must be licensed by USDA on each commodity they inspect.

Shipping Point Inspections

Shipping point inspections are used to assure the quality and condition of Michigan produce prior to shipment. This type of inspection verifies Michigan produce meets the grade marked on the containers and bags. Some shipping point inspections are mandatory such as exports, the school lunch program, and government purchases. USDA grades are recognized throughout the world and are used as a basis to market produce.

Process Inspections

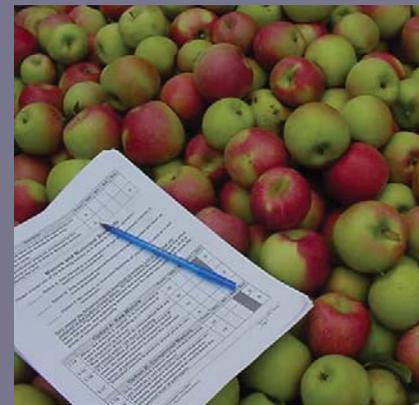
Seasonal F&V inspectors perform inspections on raw produce received from farmers at process plants and receiving points. The inspections are based upon USDA standards and/or processor specification. Process inspections protect Michigan farmers by providing them with an unbiased, third-party inspection upon which they are paid for their produce. In addition, inspections protect processing plants from receiving poor quality produce from Michigan farmers. They also protect Michigan consumers from receiving poor quality produce in processed goods.

Market Inspections

F&V inspection staff are licensed by USDA to conduct market inspections on produce entering the channels of trade from anywhere in the world. Market inspections protect the buyer, broker, and consumer from receiving poor quality produce or produce which does not meet the promised grade or condition. Market inspections are used to resolve disputes which end up in court and are vital to the survival of the state's buyers/broker/receivers of Michigan produce worldwide. PPPM has three F&V staff licensed to inspect incoming market loads of produce.

Good Agricultural Practices, Good Handling Practices

Good Agricultural Practices and Good Handling Practices (GAP/GHP) were developed by USDA as a result of requests from states, shippers, and growers. This program provides set guidelines for the fresh produce industry verifying good agricultural and handling practices. This is an independent, third-party, audit-based service provided by trained and licensed fruit and vegetable inspectors and plant industry staff. These staff have successfully completed the GAP/GHP training class and have participated in a minimum of three audits, including two as the lead auditor.



Pesticide & Plant Pest Management Division

Currently, there are 12 MDA staff members fully trained and licensed to perform audits for USDA GAP/GHP in Michigan. This program is currently being used by Michigan's apple, potato, peach, carrot, cherry, onion, blueberry, radish, green onion, beet, raspberry, apricot, pear, strawberry, watermelon, winter squash, summer squash, and cantaloupe industries. This type of audit is required by some purchasers of produce and is mandatory to participate in the school lunch program.

Controlled Atmosphere Storage Licensing Program

Enjoying crisp, juicy, flavorful Michigan apples year-round is possible due to controlled atmosphere (CA) storage. CA involves careful monitoring and control of temperature, oxygen, carbon dioxide, and humidity. All CA rooms are inspected and sealed by F&V inspection staff annually. Controlled atmosphere is required by some foreign countries as a condition of sale or phytosanitary requirements.

Seed Potato Inspection

F&V inspectors conduct mandatory inspections on all Michigan certified seed potatoes prior to shipment to various farms throughout the U.S. Michigan continues to be a national leader in production of potato seed, with the largest market here in Michigan. In the fall, F&V inspection staff conduct quality control inspections during harvest of Michigan certified seed potatoes prior to placement in storage bins for shipment in the spring. The final certification inspection occurs while seed potatoes are being loaded into trucks. During 2010, F&V inspectors conducted 144 shipping point inspections on approximately 3.2 million pounds of seed potatoes.

Fruit & Vegetable Certificates Issued

Shipping Point Inspections.....	6,783
Process Inspections.....	5,403
Market Inspections.....	636
GHP/GAP Audit Inspections.....	300

Licenses Issued

Controlled Atmosphere Licenses.....	40
Wholesale Potato Dealer Licenses.....	16

Plant Pest & Commodity Certification Statistics

Nursery Licensing

Total Licenses.....	5,608
Total Growers Licensed.....	1,444
General Nursery Licenses.....	998
Plant Grower Licenses.....	106
Small Scale Grower Licenses.....	340
Total Dealers Licensed.....	4,164
Dealer in Nursery Stock Licenses.....	3,609
Plant Dealer Licenses.....	408
Small Scale Dealer Market License.....	147

Nursery Inspections

Growers: Total Acres Inspected.....	7,554
Dealers: Dealers Inspected.....	128

Christmas Tree Inspection – Federal Gypsy

Moth & Pine Shoot Beetle Quarantines

Fields Inspected.....	386
Percent of Fields in Compliance.....	96.9
Acres Inspected.....	8,021



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Pine Shoot Beetle Compliance Management Program

Firms Enrolled.....	8
Fields Enrolled.....	23
Acres Enrolled.....	342

Export Certification

Federal Phytosanitary Certificates Issued

All Commodities – Phytosanitary Certificates Issued.....	4,180
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US/Canada Greenhouse Certification Program

Firms Enrolled.....	4
Shipments Certified.....	658

Nursery Firms Issued Compliance Agreements for Federal/State Quarantines

Black Stem Rust.....	19
Gypsy Moth.....	100
Japanese Beetle.....	80
Pine Shoot Beetle.....	40
Total Compliance Agreements Issued.....	239

Plant Pathology Laboratory

Virus-Free Indexing of Pome & Stone Fruit Trees

6,898 stone and pome fruit trees were maintained for certification of budwood for virus-free status.

Blueberry Virus-Free Certification

335 samples representing 134 cultivars from five Commercial growers were tested

Dry Bean Seed Testing

128 samples were tested for seed borne diseases.

Seed Corn Certification

490 seed corn samples were tested for seed.

Plum Pox Virus

13,395 samples collected. All negative.

Section 3 - Food Safety & Consumer Protection

Commercial Feed Program

The commercial feed program helps to assure the safety and wholesomeness of feed and food products in Michigan through its inspection and sampling program. Approximately 1,200 feed manufacturers and distributors of more than 2.5 million tons of commercial feed and feed ingredients are regulated under the program. Safe and nutritious feed, free of contaminants and harmful residues, is the over-arching goal of the program.

PPPM regularly inspects, samples, and analyzes commercial feed to ensure that feeds are in compliance with the Michigan Commercial Feed Law and the rules promulgated under the



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act. Inspections and sampling help to assure that feed products offered for sale are safe and that they provide the promised nutrition. Inspections involve not only feed products, but also make sure the processes used to create them are in compliance with current good manufacturing practices.

To ensure companies comply with Michigan's licensing and labeling requirements, PPPM inspectors inspect any facility in which feeds are manufactured or distributed including feed mills, farm suppliers, grocery stores, pharmacies, gas stations, and wholesale distributors. In addition, PPPM staff review feed labels to prevent deceptive labeling and investigate reports of animal deaths or illnesses where feed may be implicated.



Medicated Feed

Therapeutic and production drugs are commonly administered to livestock and poultry through their feeds. For this reason, PPPM monitors the manufacturers of medicated feeds and takes samples to ensure compliance with federal regulations. These regulations cover good manufacturing practices designed to prevent unsafe drug residues in human food.

Bovine Spongiform Encephalopathy (BSE or “Mad Cow Disease”)

PPPM is an active participant in a national effort led by the US Food and Drug Administration (FDA) to prevent the introduction and establishment of BSE in the United States. This is done by closely monitoring the use of certain animal-derived proteins in animal feed. PPPM inspectors have been inspecting feed manufacturing facilities throughout the state under this program since 1998. All firms handling restricted protein materials are inspected at least yearly to assure continued compliance. In 2010, 84 inspections helped to assure Michigan livestock and consumers were protected from BSE.

In addition, PPPM was one of eight states awarded BSE Cooperative Agreement funds from FDA. BSE inspections were expanded beyond feed mills to include livestock producers (farms) and firms that transport and haul animal feed. In 2009, PPPM staff conducted 91 on-farm transporter/hauler inspections. Staff also collected 338 BSE feed samples that were analyzed and found to be negative for restricted protein prohibited under the federal BSE rule.



FDA Feed Safety Cooperative Grant

In September 2010, Michigan was one of 12 states to be awarded with a FDA Feed Safety Cooperative Grant. The five year, \$1.25 million grant from FDA will allow MDA to enhance its feed surveillance capabilities in the areas of: early detection, rapid response, and effective recovery. The initiative would focus specifically on improving the control of and response to BSE and feed safety risks associated with imports, manufacturing, transportation, and distribution of feed products.

Rapid Response Team Activities

MDA's Rapid Response Team (RRT) had an integrated role with the Michigan feed program. Throughout 2010, the RRT and PPPM worked with FDA on pet food and livestock feed recalls by conducting follow-up inspections and traceforward/trackback inspections to ensure the effectiveness of the recalls.

One major accomplishment was identifying a Vitamin D toxic reaction of dogs in Michigan and other states caused by a specific brand of dog food. RRT members worked with the dog owners, veterinarians, PPPM inspectors, Michigan State University, Kansas Department of Agriculture, MDA's Animal Industry Division, the Food and Drug Administration (FDA), and the manufacturer of the dog food to determine the cause of the illness. The result was high Vitamin D levels in the feed causing hypertoxicosis. As a result, the feed manufacturer issued a feed recall and FDA has recommended lowering the maximum allowable levels of Vitamin D in dog food.

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RRT members reacted to poor corn quality found in the corn harvest of 2009-10. The quality of corn from this harvest affected the protein levels in the corn as well as produced high levels of Vomitoxin, also known as deoxynivalenol (DON). When fed, this mycotoxin can have harmful effects in livestock, mainly swine. MDA's RRT helped to develop a sampling plan while including sampling at ethanol plants where the DON can become concentrated in distillers grain used for feed. Over 200



mycotoxin samples were collected by PPPM. The RRT also shared information with FDA, on the use of feed additives for “binders” which later developed into new FDA advisory levels for DON in grain used for food and feed.



Annual Feed Contaminant Survey and Poultry Feed Sampling Effort

Working in partnership with FDA, PPPM collected 19 livestock feed samples as part of an annual animal feed contaminant survey which monitors feed for pesticide residues and mycotoxins. The results are used to determine if additional measures are needed to prevent harmful residues in human food. Results of the 2010 survey indicated there were no actionable levels in any of the feeds.

To ensure the safety of the poultry feed supply, PPPM collected poultry feed samples in response to reports that a nationwide salmonella-infected egg recall was possibly linked to feed. All 29 collected samples were found to be negative for salmonella.

Animal Remedies Program

Modern animal husbandry practices often demand the use of drugs and vaccines to prevent or treat diseases which can harm herd health and cause decreases in production. Many drugs and vaccines are also used extensively by homeowners in the care of their pets. The PPPM animal remedy program helps assure drugs and vaccines are registered, safe, properly labeled, and effective for their intended uses.

Elevator and Feed Mill Sanitation Program

Through this program, PPPM inspectors work to address and prevent insanitary grain storage conditions which could negatively impact the safety of Michigan's feed and food supply. The inspection program also helps prevent costly economic losses due to pests and other forms of environmental or chemical contamination. Through these inspections, PPPM helped to safeguard nearly 165 million bushels of grain and 361 million pounds of dry edible beans, processed and stored in Michigan's grain elevator system valued at nearly \$2.8 billion.



Seed Program

There are approximately 450 seed labelers and 140 dealers who process and distribute agricultural and non-agricultural seed in Michigan. Michigan farmers spend more than \$315 million annually on agricultural seed. The goal of the seed program is to ensure the seed purchased by Michigan growers and homeowners for planting purposes is of good quality and meets standards for germination, purity, and freedom from noxious weeds established in the Michigan Seed Law. Through its seed program, PPPM also provides oversight of seed certification activities ensuring the genetic purity of plant varieties and potato seed and other quality standards for crops.

Additionally, PPPM assists USDA in making sure seed companies comply with federal seed requirements and assist in the enforcement of the Federal Seed Act by providing samples and documentation for seed shipped in interstate commerce.

Fertilizer and Liming Program

The fertilizer and liming program regulates approximately 600 manufacturers and distributors of more than 1.4 million tons of fertilizers, soil conditioners, and liming materials for both farm and non-farm use. Fertilizer is the most widely used agrichemical and is agronomically applied on about 5.5 million acres of Michigan farmland.

Michigan producers and industry rely on this program to maximize yields and maintain a profitable agricultural operation. In addition, millions of state residents depend on this program to protect them from fraud when purchasing fertilizer for home and garden use.

PPPM collected 93 agricultural and specialty use fertilizer samples in 2010. Analysis results are compared to the plant nutrient claims on the product label to verify label guarantees. As part of activities to improve compliance, PPPM sent stop-sale notices, issued warning letters and worked with firms with violative sample results to review their blending and manufacturing procedures.

In December, statewide phosphorus application restrictions were added to the Michigan Fertilizer Law (1994 PA 451, Part 85, Fertilizers). The new legislation prohibits the use of fertilizer containing available phosphate to residential or commercial lawns, beginning January 1, 2012. Phosphorus applications for agriculture, for new turf establishments, based on soil test results, for certain types of manure and by golf courses that complete an approved training course, are not included.



Section 4 – Pesticides & Agrichemicals

Inspections/Investigations

PPPM conducts a variety of inspections and investigations to assure pesticides are used in compliance with state laws and regulations and in a manner minimizing adverse effects on human health and the environment. Pesticide inspections monitor the compliance of an individual or firm through routine contacts either in the field or at business locations. Pesticide investigations are based on an alleged violation and are conducted to determine if the allegation is true as well as monitor compliance with all pesticide regulatory requirements. In either case, detection of violations results in appropriate enforcement action and compliance assurance.

Common pesticide inspection activities include a variety of compliance monitoring efforts such as federal and state marketplace inspections at locations where pesticides are sold, federal inspections at pesticide manufacturing facilities, and bulk pesticide storage inspections. Planned use inspections are a comprehensive inspection which may occur at a variety of operations, such as commercial businesses, schools, private farm operations, and other locations where pesticides are used and pesticide regulatory requirements apply. Pesticide investigations usually start with the receipt of a complaint alleging one or more potential violations of Michigan pesticide laws or regulations. Within 24 hours, PPPM field staff first contact the complainant and then the applicator, investigate allegations, and determine compliance with all regulatory requirements.

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Inspectors also collect physical, photographic, and documentary evidence to determine if violations occurred. Like an inspection, investigations also use an objective approach to determine compliance with all applicable regulatory requirements. PPPM conducted 152 investigations in 2010.



Certification

In Michigan, applicators who apply restricted use pesticides (RUPs) must become certified to use or supervise the use of RUPs. This requirement applies to private applicators producing agricultural commodities or commercial applicators (applicators that are not private). In addition, any person applying a pesticide, other than a general use, ready-to-use pesticide (as defined), as part of their job duties must be a certified or registered applicator. Registration and certification of applicators ensures that persons applying pesticides achieve a level of comprehension appropriate to apply pesticides. There are 21,799 applicators “certified” and 382 applicators “registered” to apply pesticides in Michigan.

Agricultural Pesticide Dealer Licensing

In February 2008, legislation was passed creating a new Agricultural Pesticide Dealer (APD) License Program. The new license program regulates the sale of agricultural pesticides into Michigan, regardless of the point of origin. Any APD that is not licensed as a RUP dealer must obtain the new APD license. If the APD business is located outside Michigan, they must also retain a resident agent in the state. Out-of-state RUP or APD locations must now report the sale of all agricultural pesticides to the registrant/producer so that all applicable groundwater sales-based fees are paid. In 2010, PPPM issued 201 APD licenses.

Registration

Pesticides sold, offered for sale, or used in Michigan must be registered with PPPM. This program gives PPPM the ability to regulate which products are permitted for use in Michigan and allows the division to place additional use restrictions on pesticides, when warranted, to protect human health or the environment. Generally speaking, pesticides registered in Michigan are first registered by the Environmental Protection Agency (EPA) where they undergo a number of environmental and toxicological assessments. Pesticides are registered for sale annually. In addition to registration fees, registrants also pay an annual groundwater fee supporting environmental stewardship projects. PPPM registered 15,471 pesticide products in 2010.

In 2010, PPPM again received funding from EPA to conduct internet marketplace inspections. These inspections focus on four factors associated with both federal and state priorities, including detection of unregistered/canceled pesticide products, illegal restricted use pesticide sales, improper health and safety claims, and detecting pesticides not registered by PPPM. In 2010, MDA conducted 30 internet inspections, looking at over 955 pesticide products. As a result of the inspections, 11 referral letters were sent to EPA Region 5 (several of the referrals contained multiple violations). A large number of referrals were related to violations of FIFRA section 25(b) and labeling which contains false or misleading safety claims. The Internet inspections also identified 95 pesticides not registered for sale in Michigan.

Pesticide Enforcement Activities

When violations of Public Act 451, Part 83, Pesticide Control, or regulations thereunder, are detected, PPPM has a variety of enforcement activities that can be used to gain compliance and issue penalties. Options include: warning letters requiring a written response as to how an individual or firm will comply with requirements, or hearings where PPPM and the defendant review findings and develop a compliance agreement. PPPM can issue administrative penalties (fines) or work within the judicial system to seek warrants and prosecute violators as well as conduct formal hearings to revoke business licenses or certification/registration credentials.



High Profile Investigations

In 2010, several investigations dealt with significant food safety or human health issues. The following are examples of those investigations:

Bean Sprouts

MDA's Food and Dairy Division (FDD) staff conducted a routine inspection of a grower and processor of bean sprouts located in Detroit, which grew bean sprouts in a controlled warehouse environment. MDA FDD staff found the grower had been using a Sulfur Fungicide/Acaracide for the control of fungus and mites. The grower was applying the pesticide by placing the product in an aluminum pan and lighting the pesticide on fire. The grower informed MDA he had learned the method from a farmer. MDA FDD referred the issue to Pesticide and Plant Pest Management staff who found the grower had misapplied the pesticide as it was only labeled for outdoor use and lighting the product on fire was not a labeled application method.

Migrant Worker Exposure

MDA received a complaint from migrant workers who did not speak fluent English and used a translator to submit their complaint. The complainants were a male and female who had children; and the female was pregnant at the time of the incident. The complainants alleged that they had been employed by a farm that produced cucumbers. They alleged the producer hired an aerial applicator to apply a fungicide and farm workers were instructed by the farm operator to re-enter the field just five hours after treatment. The pregnant female complainant had a miscarriage soon after this incident and she claimed the miscarriage was the result of pesticide exposure from this early-entry exposure.

MDA's investigation verified that workers were instructed to enter the field before the restricted entry interval had expired. MDA also found the farm producer failed to provide appropriate training and personal protective equipment (PPE) to the workers. The farm producer also failed to provide the required safety poster or timely information pertaining to pesticide applications to the workers. The investigation was unable to verify or to refute the allegation that the complainant's miscarriage was caused by pesticide exposure related to this incident.

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Methomyl Misuse

Over a two-week period in May of 2010 MDA pesticide inspectors conducted undercover marketplace inspections at retail establishments throughout the state selling methomyl-based fly bait (commonly sold under the trade name Golden Malrin). The goal of the project was to collect evidence related to the alleged widespread misuse of Golden Malrin to control vertebrate pests such as raccoons, skunks, and opossums, and the alleged promotion of such uses by retailers.

Posing as homeowners, inspectors entered 43 different retail establishments such as hardware and farm supply stores and began browsing the pesticide aisle of the establishment until an employee offered assistance. Once approached, the inspector would explain they had a skunk living under their porch/barn, and they were looking for ways to get rid of it - being careful not to entrap the firm by mentioning Golden Malrin or any other fly bait.

Of the 43 establishments inspected, 11 advised an MDA inspector that Golden Malrin could be used to control vertebrate pests such as skunks, and provided detailed instructions on how to mix/apply the pesticide so that it would be attractive to the animal (i.e. mix it with cola, wet cat food, or tuna fish). In addition, two of the establishments advised inspectors they could use a rodenticide to poison their unwanted skunk, and eight retailers suggested mothballs could be used to repel skunks. In total, 20 of the 43 (47 percent) establishments inspected advised the off-label use of a pesticide.

In most cases, it appeared employees knew they shouldn't be recommending the use of Golden Malrin to control skunks or other vertebrate pests, but it wasn't always clear whether or not they knew it was actually illegal to use the product in such a manner. What does seem to be clear, however, is that there is widespread knowledge that Golden Malrin is a very effective means of eliminating unwanted vertebrate pests. This knowledge appears to be particularly common among the agricultural community. In fact, an employee of one establishment even stated that "...farmers in the area have been using Golden Malrin for 40 years."

In response to our findings, MDA has issued Stop Prohibited Conduct Orders and warning letters to firms that advised the off-label use of a pesticide. Included in the warning letters was a requirement that the firms submit to MDA a written description of how the firm will ensure such off-label recommendations do not occur in the future.

Based on the finding of this project, as well as historical instances of misuse, MDA is recommending EPA designate as restricted use (available to only certified applicators) all methomyl-based fly baits.

Agrichemical Safety and Security

In response to recent world events, PPPM strives to ensure fertilizers and pesticides are stored properly and securely to prevent bioterrorism and other misuse. Each year, PPPM staff inspects agrichemical containers to ensure they were properly identified, locked, and secure. PPPM also continued its outreach efforts to advise agricultural dealers and farmers on how they can help deter illicit use of agrichemicals while protecting their safe, intended use.

Bulk Storage Program

More than 45 million gallons of Michigan agrichemicals are safeguarded through the bulk storage program. During 2010, PPPM staff registered 218 fertilizer and pesticide bulk storage facilities, conducted routine inspections, and provided assistance with containment construction, site plans, emergency response plans, and recordkeeping. The bulk storage program ensures commercial bulk storage facilities are constructed installed, and maintained in a safe manner with the least possible impact on people, property, and the environment.

The phase in period for the new federal pesticide containment regulations ended in 2010. Michigan storage facilities were not affected because in 2009, EPA approved MDA's request to continue implementing Michigan's regulations in lieu of the federal containment regulations. EPA found Michigan's pesticide bulk storage regulations to be equal and some areas, even more protective than the federal regulations.

In August 2008, the five-year phase in period ended for Regulation 642, On Farm Fertilizer Bulk Storage. All Michigan farms with bulk liquid fertilizer storage must now have secondary containment, a mixing/loading pad and

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an emergency response plan in place. PPPM continues to conduct consultations and outreach activities to inform staff, industry, and producers about Regulation 642 and poly tank integrity.



Section 5 – Food Safety, Consumer Protection & Environmental Protection Statistics

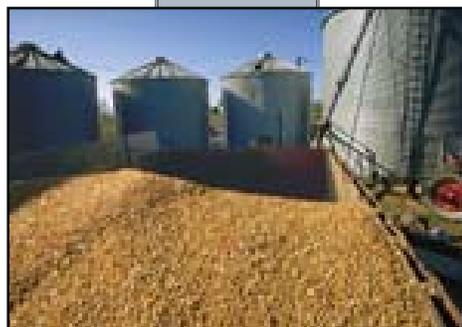
Food Safety & Consumer Protection

Inspections

Total No. of Inspections.....	1,996
Agricultural Products.....	1,372
BSE Rule Compliance.....	171
Bulk Storage.....	14
Grain Elevator Sanitation.....	335
Federal Contract Medicated Feed.....	4
State Medicated Feed.....	99
Complaint Investigations.....	8
Products Sampled.....	1,741
Feed – Nutrient & Medicated.....	1,058
Feed – BSE.....	338
Feed – Pesticide Residue.....	10
Feed – Mycotoxins.....	213
Feed – Salmonella.....	29
Fertilizers.....	93

Licenses/Registrations

Animal Remedies	
Product Registrations.....	1,610
No. of Registrants.....	151
Commercial Feed Manufacturer/Distributor.....	1,198
Michigan Firms.....	320
Out-of-State Firms.....	878
Fertilizer Manufacturer/Distributor.....	580
Michigan Firms.....	212
Out-of-State Firms.....	338
Specialty Fertilizer & Soil Conditioner	
Product Registrations.....	4,495
Liming Materials	
Product Registrations.....	82
Agrichemical Bulk Storage Facilities.....	218
Fertilizer Product Distribution.....	1.4
(July 08-June 09) Tonnage	million tons
Commercial Feed Product Distribution.....	2.8
(July 08-June 09) Tonnage	million tons





Agricultural Products Enforcement

(Feed, Seed, Fertilizer, Remedies, Lime, Bulk Storage, Elevator Sanitation)

Violation Notices.....	553
Failure to License/Register.....	139
Stop Sale.....	414
Value of Violative Products Seized.....	\$507,217
Warning Letters.....	71
Compliance Conferences.....	4

ENVIRONMENTAL PROTECTION STATISTICS

Licenses/Certifications/Registrations

Commercial Pesticide Applicator	
Business Licenses.....	2,095
Restricted Use Pesticide Dealer Licenses.....	272
Agricultural Pesticide Dealer Licenses.....	201

Total Certified/Registered Applicators.....	22,161
Commercial Pesticide Applicator	
Certifications.....	14,199

Private Pesticide Applicator	
Certifications.....	7,580
Commercial Registered Applicators.....	382

Total Certification/Registration Exams	
Administered.....	14,289
Pesticides Registered in Michigan.....	15,471

Pesticide Inspections/Investigations

Pesticide Misuse Investigations	
(agriculture).....	45
Pesticide Misuse Investigations	
(non-agriculture).....	107
Planned Use Investigations	
(agriculture).....	14
Planned Use Investigations	
(non-agriculture).....	31
Other Inspections.....	613
Restricted Use Pesticide Sales Audits.....	31
Federal Marketplace Inspections.....	15
Federal Pesticide Producer Inspections.....	26

Pesticide Enforcement

Advisory Letters.....	5
Warning Letters.....	116
Hearings.....	1
Administrative Penalties.....	48
Prosecutions.....	1

Freedom of Information Act Requests

Pesticide Program Requests.....	79
Plant Industry Program Requests.....	7

