



Michigan Department of Agriculture

Pesticide & Plant Pest Management Division Annual Report 2006

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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.

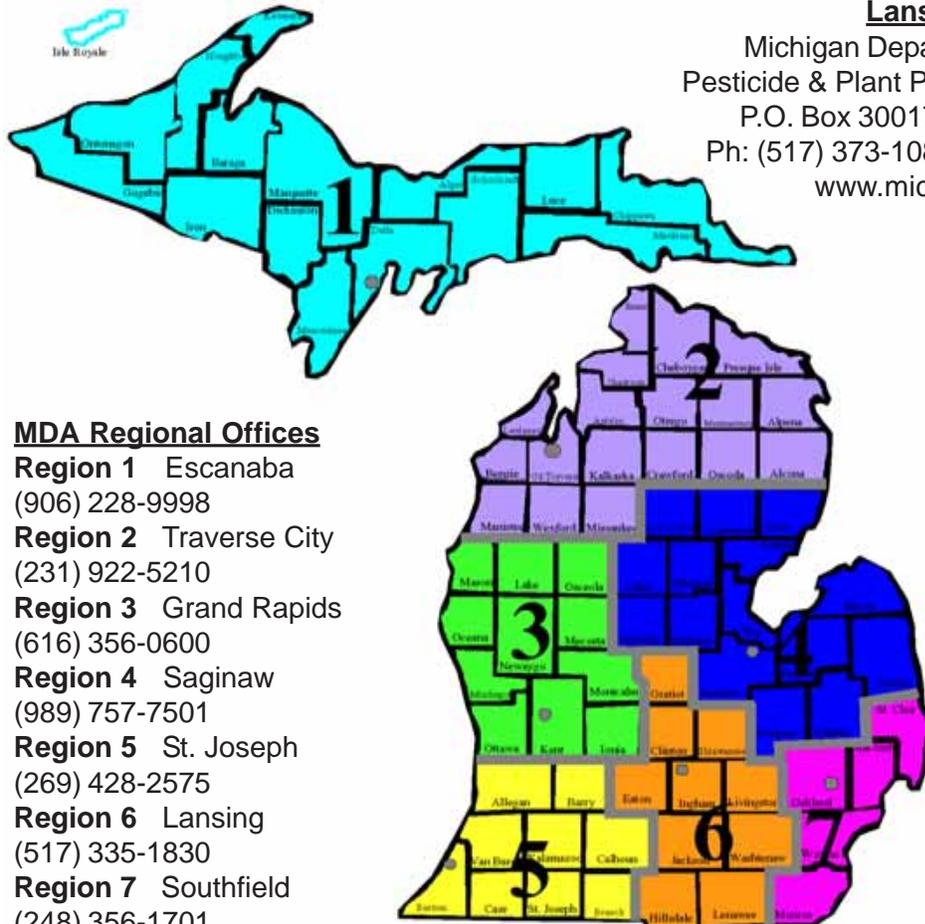


Kenneth Rauscher
Director

Introduction

This 2006 annual report reflects the hard work of the Pesticide and Plant Pest Management Division (PPPM) staff and the cooperative support of other Michigan Department of Agriculture (MDA) divisions, the state legislature, industry, commodity groups, and other partners. We continued to focus our resources on early detection and rapid response to manage invasive species such as emerald ash borer, plum pox virus, and hemlock woolly adelgid to safeguard our critical, but fragile, agricultural production systems. Our well-trained staff worked closely with consumer groups and industry to insure that pesticide products were safely stored, appropriately used, and adequately available. They provided critical grading services for Michigan's fruits and vegetables and assured strict consumer protection standards were met for agricultural products such as feed, seed, and fertilizer to support the department focus on food safety and economic development. Additionally, PPPM continued its long tradition of facilitating domestic and international trade by insuring that nursery stock and other agricultural commodities met rigorous phytosanitary standards.

We are proud to have served the citizens of Michigan in these diverse regulatory and management responsibilities.



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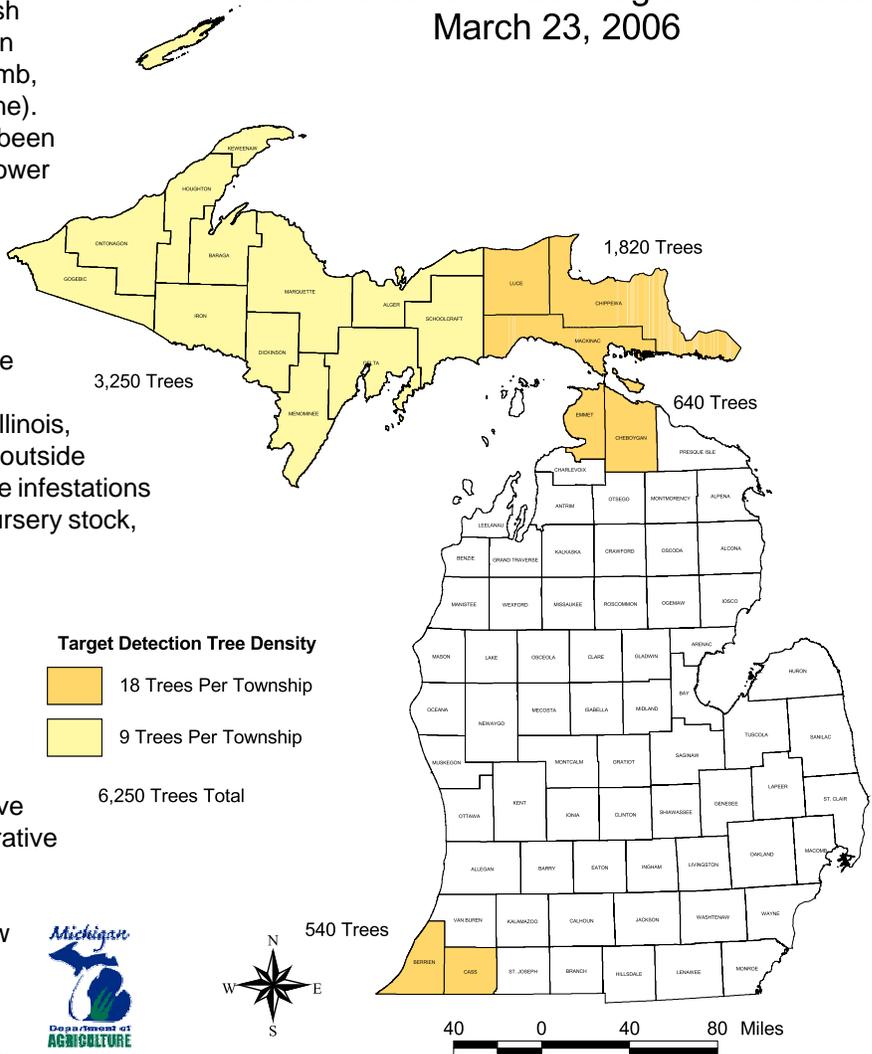
Section 1 - Exotic & Invasive Species Pest Management

Emerald Ash Borer

The destructive Asian beetle, Emerald Ash Borer (EAB), was first identified in 2002 in six Michigan counties (Livingston, Macomb, Monroe, Oakland, Washtenaw and Wayne). Since its discovery, this exotic pest has been quarantined in two levels of Michigan's Lower Peninsula; 21 counties of southeast Michigan known as Level I and the remaining 47 counties of the Lower Peninsula known as Level II. Approximately 20 million of Michigan's 700 million ash trees have been killed due to EAB. In addition, several smaller infestations have been found in Indiana, Illinois, Maryland, Ohio, and Virginia, all located outside the known generally infested area. These infestations are attributed to artificial movement of nursery stock, firewood, and ash logs.

During the past four years, PPPM, along with the Michigan Department of Natural Resources (MDNR), United States Department of Agriculture (USDA), and Michigan State University (MSU), have learned a great deal about this pest's lifecycle; its flight patterns; its reproductive habits; and how it spreads. This collaborative team has come to understand the many challenges of eradicating and controlling EAB. They have focused on utilizing new methods to identify the leading edge of infestations to further suppress the spread of EAB into new areas with the ultimate goal of eradication of any outliers found in the Upper Peninsula.

2006 Detection Tree Program Densities March 23, 2006



Detection/Survey Activities

In 2006, PPPM focused its EAB activities on a detection tree program in the northern and southern Lower Peninsula and throughout the Upper Peninsula. Target densities ranged from nine trees per geographic township in the western Upper Peninsula to 18 trees per township in the Lower Peninsula and eastern Upper Peninsula. Detection tree operations were conducted by both PPPM survey staff and through contracts with local conservation districts.



EAB surveyors peeling limbs.

Removal and peeling of detection trees began in September. At the end of the year, more than 75 percent of the detection trees have been felled, peeled, and properly disposed. To date, six new infestations outside the 21-county EAB quarantine were identified during the 2006 detection tree process.

Survey activities outside of the detection tree program were aimed at high-risk sites such as campgrounds, sawmills, and recreational lakes, yielding new finds in Arenac, Gladwin, Kalamazoo, Leelanau, Mecosta, Ogemaw, and Otsego counties.

Regulatory/Enforcement Activities

Preventing the artificial spread of EAB continues to be a priority for the state. In 2006, PPPM focused on enforcing the quarantine and increasing compliance. Regulatory activities included monitoring the movement of ash products, conducting regular inspections, investigating quarantine violations for prosecutions and fines, and issuing compliance agreements to firms that process or have the potential to process ash wood products.

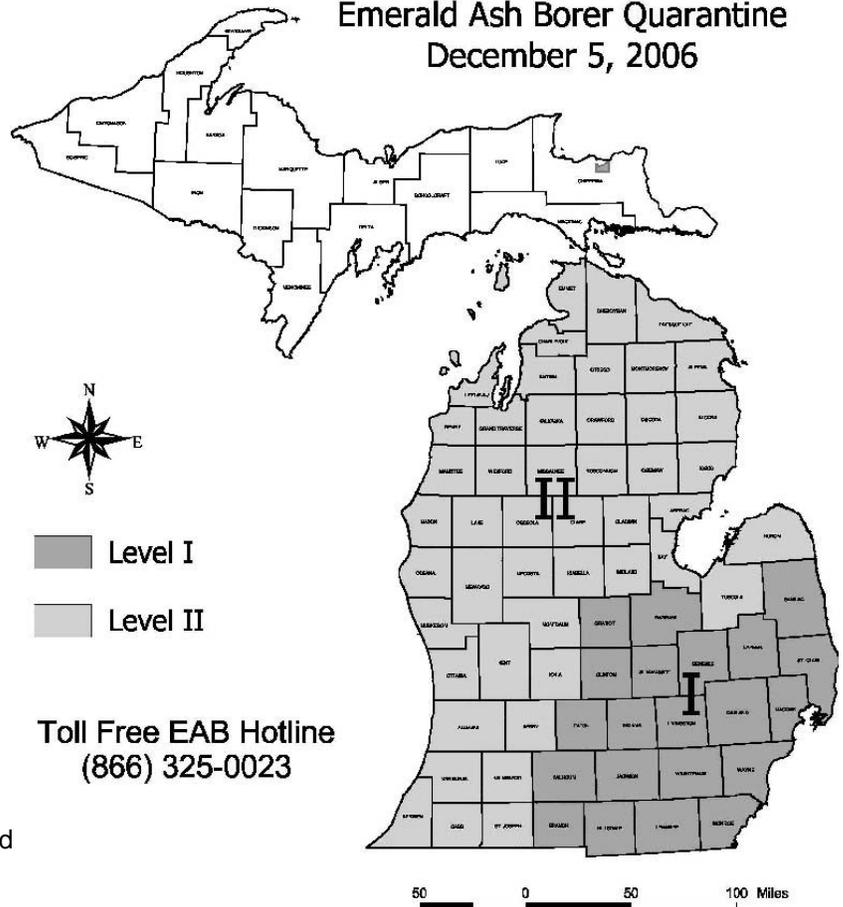
In December 2006, PPPM revised its EAB quarantine to define Michigan's Lower Peninsula as quarantined by two levels. In addition, a small outlier remains quarantined in Brimley, Michigan in the Upper Peninsula where a small outbreak was successfully eradicated in 2005. This area will continue to be closely monitored until 2008.

PPPM staff identified firms and persons that may artificially spread EAB and included firms 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 any ash marshaling facilities.

Firewood checkpoints were established along major interstates leading out of regulated areas during key travel weekends in 2006. The timing of the events were selected to coincide with high travel weekends: Memorial Day, Independence Day, Labor Day, and the weekend prior to the opening of the firearm deer hunting season. Travelers found to be moving regulated ash were immediately issued a "Report of Violation." The facts of the case were later reviewed for prosecution, civil penalties, or warning letters.



**Emerald Ash Borer Quarantine
December 5, 2006**



The emerald ash borer inspection office in St. Ignace at the Mackinac Bridge.

PPPM, along with the Animal Industry Division, continued to staff the MDA Inspection Station at the St. Ignace Welcome Center at the Mackinac Bridge to regulate the movement of ash wood products leaving Michigan's Lower Peninsula. The regulatory staff inspected private and commercial vehicles entering the Upper Peninsula and seized all wood in violation of the EAB quarantine.



Emerald ash borer inspection sign approaching Mackinac Bridge.

PPPM and USDA-APHIS-PPQ staff issued compliance agreements to firms allowing the movement of regulated products from quarantined areas. On a regular basis, PPPM staff inspect firms or persons with compliance agreements to verify that 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 are subject to regulatory action, including prosecution.

Control/Eradication Activities

In 2006, PPPM initiated a containment strategy in two key areas of the state - Berrien and Cheboygan counties - to help slow the spread of EAB out of the Lower Peninsula. These containment efforts will continue in 2007 and the results of its effectiveness will be evaluated.



EAB outreach materials displayed at trade show.

Outreach Activities

In 2006, communication staff developed a detailed statewide communications plan. The two key messages for the EAB project are: 1) this is a team effort between project partners, industry, and the general public to contain the spread of EAB in Michigan and the rest of the nation, and 2) Don't move firewood. It is the key element in containing the pest in the state. These messages and other program information have been shared through media updates, outreach materials, and meetings with the general public and industry.

PPPM continues to sponsor the EAB Communications Committee whose membership includes communication specialists from the Michigan's EAB Response Project partners. This group meets regularly to ensure a coordinated communication effort and consistent deliverable public message.

PPPM produced and disseminated outreach and educational materials to stakeholders and the general public; hosted numerous informational booths, educational seminars, workshops, and group discussions at both the state and national level, and distributed an outreach message with MDNR fishing licenses.

An advertising campaign was initiated utilizing billboards along major northbound interstates, radio public service announcements, and other publications highlighting the "Don't Move Firewood" message.

A major communications effort occurred when Governor Jennifer M. Granholm declared May 22-27, 2006 as "Emerald Ash Borer Awareness Week." A kick-off press conference was held at the Mackinac Bridge.



PPPM staff is shown distributing emerald ash borer outreach information.

Cooperative Agricultural Pest Survey

Surveys for the detection of exotic terrestrial plants and plant pests are facilitated through the PPPM's participation in the Cooperative Agricultural Pest Survey (CAPS) program. Administered by USDA-APHIS-PPQ, this program provides federal funding to conduct early detection activities for the most critical invasive pests impacting agriculture, horticulture, forestry, the environment, and human health. Early detection of foreign pests that have eluded first line inspections at ports-of-entry is crucial to the successful implementation of control measures.

Target pests for 2006 CAPS surveys included exotic woodboring insects, Sirex woodwasp, giant hogweed, sudden oak death, and others. Plum pox virus (PPV), an extremely serious disease of peaches, plums, apricots, and nectarines, was detected in a single tree in southwest Michigan in a CAPS survey. PPPM and USDA subsequently collected 50,000 samples in a seven-mile radius around the positive tree with all additional samples testing negative. This is the first detection of PPV in Michigan.



Hemlock woolly adelgid sample collection



Giant hogweed plant



Contracted aerial application of the biological insecticide *Bacillus thuringiensis* in Gladwin County as part of the MDA's Cooperative Gypsy Moth Suppression program.



Plum pox virus damage

Gypsy Moth

PPPM's Cooperative Gypsy Moth Suppression program provides county governments cost-share funding to manage gypsy moth populations on public and private property. In 2006, PPPM contracted for the treatment of 15,981 acres in six counties using the biological insecticides Foray 48B and Gypcek to suppress developing gypsy moth populations. Nearly 100 percent of treatment areas were protected from defoliation due to this program.

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 55 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.



Greenhouse grown perennial plants

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 \$220 million in annual sales. Sales of Christmas trees by Michigan producers generates another \$41.5 million, representing 2.87 million trees (2004 values); while, sales of wreaths and boughs account for an additional \$1.3 million. Michigan nursery growers produce stock for sale within the state and also ship to 35 states and many foreign markets. Through the inspection process, PPPM ensures plant materials entering market channels are free of pests and diseases. The primary reasons for inspection are two-fold:



Taxus inspection

- Preventing the spread of harmful pests and diseases which could lead to serious ecological and economic losses; and,
- To assure plants purchased by consumers meet requirements for viability, trueness to varietal name, and quality standards, such as those prescribed by the American Nursery and Landscape Association.

Besides 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 that the stock is free of pests and diseases. Over a dozen pests are

the main focus of these inspections. Import inspections are also performed at the grower and dealer level when nursery stock arrives from foreign sources. This past year staff detected and restricted a large amount of diseased plants and bulbs originating from the European Union, especially *Hosta* infected with virus.

Export – Interstate Certification

PPPM certifies nursery stock, Christmas trees, logs, hay, and bedding plants for interstate shipment. PPPM field staff ensures that plant materials meet the quarantine requirements of the receiving states. Of primary importance are six major quarantine-significant pests: gypsy moth, pine shoot beetle, emerald ash borer, Japanese beetle,

sudden oak death, and black stem rust. The 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 the gypsy moth regulated counties, 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 have blown in from surrounding areas. The Black Stem Rust quarantine applies to barberry and related species. Only approved resistant varieties may be sold.

Foreign Export

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

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 Commission, MSU, and Mexican officials. The US/Canada Greenhouse Certification Program is another successful export program facilitated in Michigan by PPPM staff.



PPPM staff inspecting Christmas trees.

Plant Pathology Laboratory Activities in Support of Export



Virus indexing of fruit and pome fruit trees.

The 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 nursery 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, potato PVYn testing, asparagus testing, and support of CAPS surveys such as soybean cyst nematode, PPV, sudden oak death, and imported hosta.

Biotechnology and Plant Post-entry Quarantine (PPQ) 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 2006, PPPM, in agreement with USDA, approved a total of 27 biotechnology permits for four companies and four research institutions in Michigan. Four permits were issued for field trial studies, seven for interstate movement, and 16 for both field trial and interstate movement. Eight different crops were permitted.

Fruit and Vegetable Inspection Program

The Fruit and Vegetable (F&V) Inspection program offers an unbiased, third-party inspection service for the produce industry in Michigan and throughout the United States. F&V inspections are based on both USDA and Michigan standards, processor specifications, and/or industry requests. USDA standards are used nationwide as a basis for purchase and resolving disputes. With the exception of federal programs and exports, the program is voluntary. All F&V staff are required to be licensed by USDA on each commodity they inspect.

Shipping Point Inspections

Shipping point inspections assure the quality and condition of Michigan produce prior to shipment. This type of inspection verifies the 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 to market produce.

Process Inspections

Approximately 24 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 on their incoming 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.



Staff conducting an apple inspection.



Staff conducting a market inspection.

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 may end up in court and are vital to the survival of Michigan's buyers/brokers/receivers of produce worldwide. PPPM has four F&V inspectors and supervisors licensed to inspect incoming market loads of produce.

Good Agricultural Practices, Good Handling Practices

Good Agricultural Practices, Good Handling Practices (GAP/GHP) were developed by USDA as a result of requests from states, shippers, and growers. This program provides uniformity of a national auditing program for the fresh produce industry verifying good agricultural and handling practices. This is an independent, third-party, audit-based service provided by licensed fresh fruit and vegetable inspectors who have successfully completed the GAP/GHP training class and have participated in a minimum of five audits, including one as the lead auditor. There are currently two federal/state F&V supervisors licensed to perform audits for GAP/GHP in Michigan. This program is currently being used by Michigan's apple, peach, and plum industries. This type of audit is required by some purchasers of produce and is mandatory to participate in the school lunch program.



F&V staff conducting an apple inspection.

Controlled Atmosphere Storage Licensing Program

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



Controlled atmosphere storage apples

Wholesale Potato Dealer Licensing Program

This program protects Michigan potato growers in case a licensed wholesale potato dealer fails to pay for potatoes purchased. The Wholesale Potato Dealers Act requires dealers to post a bond or letter of credit as a condition of licensing annually. During Fiscal Year (FY) 06, 19 licenses were issued to wholesale potato dealers and no complaints were received.



Staff conducting a potato inspection.

Seed Potato Inspection

Michigan certified seed potatoes require mandatory inspection prior to shipment to various farms throughout the United States. Michigan is a leading national producer of potato seed, with the largest market for its production here in Michigan. In the fall, F&V inspection staff conducts 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 FY06, F&V inspectors conducted 291 shipping point inspections on approximately 13,261,500 pounds of seed potatoes.

Dry Edible Bean Inspection

The dry bean inspection program is voluntary. The total number of inspections increased in 2006. There were approximately 29 million pounds of black beans inspected, which is over one-half of the total inspections this fiscal year. The increase was primarily due to additional inspections of black beans exported to Mexico. The F&V dry bean inspector issued 548 certificates on 43,491,210 pounds of dry edible beans during FY06.

Michigan Organic Registration Program

Public Act 316, Michigan Organic Products Act, requires registration of all organic certifying agents, handlers, and producers. During FY06, PPPM registered ten certifying agents and 126 handlers and producers. PPPM received \$14,091.11 from USDA for federal organic cost-share reimbursement during FY05-FY08. The funds were distributed to 37 Michigan organic producers/handlers during FY06. This program reimbursed organic handlers/producers for a portion of their certification costs. During FY06, PPPM responded to 39 requests from new producers and handlers seeking information on transitioning into organics.



Section 3 - Emerald Ash Borer, Plant Pest & Commodity Certification Statistics

Emerald Ash Borer Statistics

Detection/Survey

Statewide Detections Trees Established	10,700
Statewide Detections Trees Peeled	9,000
Counties with Detection Trees	19
New Infestations from Detection Program	41
High Risk Surveys	5,113



Regulatory

Quarantined Counties	68
Regulatory Inspections	2,687
Compliance Agreements Issued	74
Firewood Confiscated at Checkpoints	3,985
Notices of Violations Issued at Checkpoints	76
Notice of Violations Issued at Checkpoints	74
Bridge Inspections	
Commercial Trucks	8,094
Cords of Pulpwood	73,351
Chips & Sawdust Tonnage	26,425
Sawn Lumber Board Feet	39,887,281
Firewood Inspected Cubic Yards	340
Reports of Violation	90



Control/Eradication

Ash Tree Removal Program Communities Participating	12
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Outreach

Distributed Outreach Materials	285,040
Firewood Facts Sheets	38,000
EAB Hitchhiker Brochures	37,500
Alert Emerald Ash Borer Billfold	154,000
Temporary Tattoos	55,000
Educational Packets	540



Plant Pest & Commodity Certification Statistics



NURSERY Licensing

Total Licenses	7,636
General Nursery Licenses	1,337
Plant Grower Licenses	160
Dealer in Nursery Stock Licenses	4,981
Plant Dealer Licenses	577
Small Scale Grower Licenses	391
Small Scale Dealer Licenses	117
Total Growers Licensed	1,888
Total Dealers Licensed	5,748

Nursery Inspections

Growers: Total Acres Inspected	10,994
Dealers: Dealers Inspected	350

Christmas Tree Inspection – Federal Gypsy Moth & Pine Shoot Beetle Quarantines

Fields Inspected	559
Percent of Fields in Compliance	98%
Acres Inspected	10,544

Pine Shoot Beetle Compliance Management Program

Firms Enrolled	15
Fields Enrolled	40

Export Certification

Federal Phytosanitary Certificates Issued

Commodity Type & Phytos Issued

Propagative Commodities (plants, cuttings, seeds, and bulbs)	931
Beans & Grains	1,211
Logs & Lumber	327
Fruits & Vegetables	70
Hay & Straw	2
Miscellaneous	17
Total Phytos Issued	2,558

Nursery Firms Issued Compliance Agreements for Federal/State Quarantines

Black Stem Rust	20
Gypsy Moth	65
Japanese Beetle	88
Pine Shoot Beetle	30
Total Compliance Agreements Issued	203

FRUIT & VEGETABLE INSPECTION

Fruit & Vegetable Certificates Issued

Shipping Point Inspections	1,938
Process Inspections	13,637
Market Inspections	1,005
GHP/GAP Audit Inspections	7

Dry Bean Certificates Issued

Dry Bean Inspections	548
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Licenses Issued

Controlled Atmosphere Licenses	175
Wholesale Potato Dealer Licenses	19

Federal Phytosanitary Certificates Issues

Apple Shipments Inspected	34
Blueberry Shipments Inspected	6
Pear Shipments Inspected	1

State Phytosanitary Certificates Issued

Apple Shipments Inspected (California)	8
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Organic Registration

Handlers/Producers Registered	126
Certifying Agents Registered	10

Organic Cost/Share Reimbursement

Handlers/Producers Reimbursed	37
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Plant Pathology Laboratory Statistics

Virus-Free Indexing of Pome & Stone Fruit Trees

13,358 stone and pome fruit trees in 4 scionwood orchards were maintained for certification of budwood for virus-free status. 4,870 trees were tested for quarantine viruses.

Blueberry Certification

794 samples representing 64 varieties from 2 commercial growers were tested for TRSV and ToRSV using ELISA. 27 samples tested negative for Blueberry Scorch and Shock viruses with neither virus reported in Michigan.

Dry Bean Testing

168 dry bean samples were tested for seed borne diseases.

Seed Corn Testing

556 seed corn samples representing 23,978 acres from 8 growers were tested.

Soybean Cyst Nematode

164 nematode samples were collected from 25 nurseries in 13 counties. 32 samples were collected from seed potato fields (15 growers in 8 counties, 1,050 acres).

Potato PVYn

1,390 potato samples, comprising 1,146 tubers and 244 leaves were tested for PVY.

Asparagus Testing

127 samples of asparagus crowns from 2 growers were tested for *Phytophthora* and *Fusarium*.

Cooperative Agricultural Pest Survey (CAPS)

Plum Pox Virus (PPV) - 2,516 Prunus trees from four growers were tested for PPV. One sample from a research station tested positive. First detection of PPV in Michigan.

Sudden Oak Death (SOD) - 758 plant samples were collected at 33 production nurseries statewide as part of the National *Phytophthora ramorum* (SOD) survey.

Exotic Woodboring Insects – 21 high-risk sites were trapped for European spruce bark beetle and sirex wood wasp.

Karnal Bunt – 12 samples were collected from grain elevators in Michigan's leading wheat-producing counties to facilitate overseas export of US wheat.

Viruses on Imported Hosta – 665 hosta plants from the Netherlands were grown-out in the greenhouse and tested for *Hosta Virus X* (HVX) and *Arabidopsis Mosaic Virus* (ArMV).



Section 4 - Food Safety & Consumer Protection

PPPM's Agricultural Products program is responsible for regulating commercial animal feeds and remedies, grain elevator sanitation practices, seed, lime, and fertilizers. The goal of this program is to:

- Prevent adulterated grain, animal feeds, and fertilizers from entering commerce.
- Prevent livestock illness and death due to adulterated or misbranded feed or remedies.
- Prevent animal feed establishments and grain storage facilities from operating under insanitary conditions that could endanger the health of animals and the public.
- Prevent deceptive labeling practices involving the sale of feeds, remedies, seeds, and fertilizers.
- Investigate reports of animal deaths or illnesses where feed has been implicated or may be involved.
- Assure that feeds, remedies, seeds, and fertilizers are properly labeled.
- Guide industry concerning practices that assure food safety and protect consumers.

Through its inspections of feed, seed, fertilizer, liming materials, and animal remedy products, PPPM ensures agricultural products and commodities are marketed fairly and are safe for their intended uses. Michigan producers and industry rely on the fertilizer and seed quality assurance and consumer protection programs to produce high yields of crops valued at \$2.4 billion. Inspections of feed manufacturing practices, the products, and their labels also help assure that the \$1.7 billion worth of meat, eggs, and dairy products obtained from production livestock are safe and wholesome.



Bovine Spongiform Encephalopathy (BSE or "Mad Cow Disease")

PPPM is an active participant in a national effort led by the U.S. Food and Drug Administration (FDA) to prevent the establishment and amplification of BSE in the United States by controlling the use of certain animal-derived proteins in animal feed, and in so doing, minimize any potential risk to animals and humans. Under this program, PPPM inspectors have been inspecting feed manufacturing facilities throughout the state since 1998. All

firms handling restricted protein materials are being inspected at least yearly to assure continued compliance. In 2006, 85 routine inspections ensured Michigan livestock and consumers were protected. In September, PPPM received a continuation of a grant that is being used to enhance the scope and effectiveness of the state's BSE compliance assurance program.

Medicated Feed

Therapeutic and production drugs are commonly administered to livestock through their feeds. For this reason, PPPM monitors the manufacturers of these feeds closely for compliance with federal regulations covering manufacturing practices that are designed to prevent unsafe drug residues in human food.



Annual Feed Contaminant Survey



Working in partnership with FDA, PPPM conducts an annual survey of animal feeds looking for pesticide residues and mycotoxins. This survey is now in its tenth consecutive year. The information obtained is useful in determining if additional measures are needed to prevent harmful residues in human food. In FY06, PPPM inspectors collected 16 livestock feed samples. Two FDA laboratories tested seven of the samples for pesticide residues and nine for mycotoxin contamination. The results once again indicated that there were no actionable levels of mycotoxins and no illegal pesticide residues in any of these feeds.

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. Unhealthy animals can also increase the risk of foodborne disease in humans. Many drugs and vaccines are also used extensively by homeowners in the care of their pets. The objective of the PPPM Animal Remedy Program is to provide assurance that these drugs and vaccines are safe, properly labeled, and effective for their intended uses.



Elevator and Feed Mill Sanitation Program

Through this program, PPPM inspectors help to assure insanitary grain storage conditions that can negatively impact the safety of Michigan's food supply are eliminated. This also helps prevent costly economic losses due to pests and other forms of environmental or chemical contamination. Through these inspections, PPPM helped protect the wholesomeness of nearly 148 million bushels of grain and 391 million pounds of dry edible beans valued at nearly \$1.7 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 approximately \$315.2 million annually on agricultural seed in producing more than \$1.5 billion worth of field crops and vegetables. The objective of the seed program is to ensure 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 the seed program, PPPM also provides oversight of seed certification activities that ensure the genetic purity of plant varieties and other standards of quality.

PPPM assists USDA in assuring that seed companies comply with various federal seed requirements. The division plays a role in the enforcement of the Federal Seed Act by providing samples and documentation for seed shipped in interstate commerce. Additionally, PPPM provides samples of selected seed kinds to the USDA, which verifies varietal claims.

Fertilizer and Liming Program

The fertilizer and liming program regulates 600 manufacturers and distributors of more than 1.46 million tons of fertilizers, soil conditioners, and liming materials for both farm and non-farm use. Fertilizer is the most widely used agrichemical with approximately 5.5 million acres of state farmland being treated with fertilizers, lime, and soil conditioners. 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.



Fertilizer sampling

PPPM collected 537 agricultural and specialty use fertilizers in 2006. 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 to firms with violative sample results and worked with these firms to review their blending and manufacturing procedures.

The Michigan Fertilizer Law (Act 451, Part 85, Fertilizers) was amended in 2006 and becomes effective March 30, 2007. The amendments update various definitions, labeling requirements, tonnage reporting, and analytical methods to bring it more in line with the national model fertilizer law. Administrative penalties to strengthen MDA's enforcement response and custom blend specialty fertilizer and soil conditioner licensing were also included. The Michigan Fertilizer Law changes will help facilitate the program's primary objectives: consumer and environmental protection, quality assurance, and product security.

Section 5 - Pesticides & Agrichemicals

Inspections/Investigations

PPPM conducts a variety of inspections and investigations to assure that pesticides are used in compliance with state laws and regulations and in a manner that minimizes adverse effects on human health or the environment. Pesticide inspections monitor the compliance of an individual or firm through routine contacts either in the field or at business locations. These inspections are briefly described in program statistics listed on page 20. 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 will result in appropriate enforcement action and compliance assurance.

Common pesticide inspection activities include a variety of compliance monitoring inspections such as firms treating trees for Emerald Ash Borer infestations, integrated pest management programs in schools and licensed daycare facilities, federal and state marketplace inspections at locations where pesticides are sold, federal inspections at pesticide manufacturing facilities, and bulk storage inspections.



Mothballs were found displayed with candy during a federal marketplace inspection.



Staff conducting an inspection

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 investigate allegations. 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 231 investigations in FY06.

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 that produce agricultural commodities or commercial applicators (applicators that are not private). In addition, any person that applies 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 that apply pesticides achieve a regulatory level of comprehension appropriate to apply pesticides. There are 22,095 applicators certified to apply pesticides in Michigan and 1,033 applicators registered to apply pesticides in Michigan.

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 allowed 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 that are 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 and in addition to registration fees, registrants also pay an annual groundwater fee that supports environmental stewardship projects. PPPM registered 13,000 pesticide products in 2006.

Worker Protection Standards

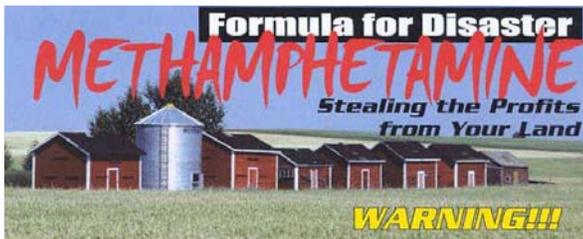
PPPM cooperates with EPA in the implementation of the Federal Worker Protection Standards (WPS). The WPS were designed with the intent to reduce, prevent, and/or minimize agricultural worker's exposure to pesticide residues. The WPS requires agricultural employers to provide basic pesticide safety training to their agricultural employees. In addition, the WPS establishes restrictions on worker entry into treated areas, provides a communication system so workers know when and where pesticides have been applied, and requires employers to provide decontamination facilities (water, soap, and towels). PPPM conducts inspections at agricultural facilities that employ workers to ensure compliance with WPS.

Pesticide Enforcement Activities

When PPPM detects violations of Public Act 451, Part 83, Pesticide Control, or regulations thereunder, 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. PPPM may also conduct formal hearings to revoke business licenses or certification/registration credentials. FY06 enforcement activities are itemized in detail on page 20.



Staff conducting a bulk storage inspection.



Agrichemical Safety and Security

In response to recent world events, PPPM strives to ensure that fertilizers and pesticides are stored properly and securely to prevent bioterrorism and other misuse. In 2006, PPPM continued its outreach efforts and partnerships with state agencies and stakeholders to advise agricultural dealers and farmers on how they can help deter illicit use of agrichemicals while protecting their safe, intended use.

Activities included: assisting the Bureau of Alcohol, Tobacco, Firearms, and Explosives with security preparations for Super Bowl XL in Detroit; partnering with the Michigan State Police on ammonium nitrate security inspections; inspecting more than 1,000 bulk storage containers to ensure they were locked and secure; and Michigan signed anhydrous ammonia security legislation (Public Acts 426 & 417) in September 2006. Agricultural businesses and producers that follow an established set of safety and security practices will be granted immunity from personal injury and property damage claims caused by anhydrous ammonia theft or unlawful use.

Bulk Storage Program

More than 62 million gallons of Michigan agrichemicals are safeguarded through the bulk storage program. During 2006, PPPM staff registered 225 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 that commercial bulk storage facilities are constructed, installed, and maintained in a safe manner with the least possible impact on people, property, and the environment.



Fertilizer bulk storage containment

PPPM helped address current containment technology needs by amending Regulation 641, Commercial Fertilizer Bulk Storage, in 2006. These amendments allow the use of an internal tank liner (bladder) system as an alternative design to the existing fertilizer containment requirements.

Section 6 - Food Safety, Consumer Protection & Environmental Protection Statistics



FOOD SAFETY & CONSUMER PROTECTION

Inspections

Total No. of Inspections	1,777
Agricultural Products	1,313
BSE Rule Compliance	85
Bulk Storage	135
Grain Elevator Sanitation	135
Federal Contract Medicated Feed	5
State Medicated Feed	104
Complaint Investigations	14
Products Sampled	1,707
Feed	754
Pesticide Residue	7
Mycotoxins	9
Fertilizers	537
Groundwater Samples	
Bulk Storage	33
Seed	383

Licenses/Registrations

Animal Remedies	
Product Registrations	1,668
No. of Registrants	118
Commercial Feed Manufacturer/Distributor	1,185
Michigan Firms	311
Out-of-State Firms	874
Fertilizer Manufacturer/Distributor	515
Michigan Firms	209
Out-of-State Firms	306
Specialty Fertilizer & Soil Conditioner	
Products Registrations	3,767
Liming Materials	
Product Registrations	80
Agrichemical Bulk Storage Facilities	225
Fertilizer Product Distribution (July 05-June 06) Tonnage	1.46 million tons
Commercial Feed Product Distribution (Jan 05-Dec 05) Tonnage	2.22 million tons

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

Violation Notices	431
Failure to License/Register	179
Stop Sale	252
Violative Products Seized	\$810,000 value
Warning Letters	28
Informal Hearings	1
Compliance Agreements	4
Feed Recalls	2

ENVIRONMENTAL PROTECTION STATISTICS

No. of Licenses/Certifications/Registrations

Commercial Pesticide Applicator Business Licenses	1,962
Restricted Use Pesticide Dealer Licenses	266
Commercial Pesticide Applicator Certifications	13,743
Private Pesticide Applicator Certifications	8,352
Commercial Registered Applicators	1,033
Total Certification/Registration Exams Administered	14,539
Pesticides Registered in Michigan	13,000

Pesticide Inspections/Investigations

Pesticide Misuse Investigations (agriculture)	45
Pesticide Misuse Investigations (non-agriculture)	186
Planned Use Investigations (agriculture)	22
Planned Use Investigations (non-agriculture)	59
Other Inspections	797
Restricted Use Pesticide Sales Audits	35
Restricted Use Pesticide Unauthorized Sales Inspections	47
Federal Marketplace Inspections	28
Federal Pesticide Producer Inspections	36

Pesticide Enforcement

Advisory Letters	1
Warning Letters	183
Stop Prohibited Conduct Orders	46
Hearings	2
Administrative Penalties	72
Prosecutions	2

Freedom of Information Act (FOIA) Requests

Pesticide Program Requests	93
Plant Industry Program Requests	8
Emerald Ash Borer Program Requests	5
Administrative	4



