



Michigan Department of Agriculture

Pesticide & Plant Pest Management Division

Annual Report
2004

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Kenneth Rauscher,
Director

***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.**

INTRODUCTION

This annual report reflects the hard work of the Pesticide and Plant Pest Management Division staff. Their accomplishments in every county of the state signify the depth and breadth of the regulatory and management programs of this division. Our attention to agricultural products quality assurance provides for a safe food and feed supply, groundwater protection and consumer protection while maintaining a level playing field for manufacturers and retailers. Our management of plant pests facilitates interstate and international trade and protects the viability of our agricultural and natural resources. With particular attention to exotic invasive pests such as Emerald Ash Borer, PPPM has forged partnerships with federal, state, and local agencies to ensure the citizens of Michigan that their food supply and environment are protected from these horrific invaders. The pesticide enforcement component of the division assures the availability of pest management tools while protecting human health and our precious environment. Additionally, our fruit and vegetable inspection service assures proper produce grading, facilitates trade, and works with the organic industry to insure fairness.

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



To better serve our constituents, industry, and the general public, Pesticide and Plant Pest Management Division staff can be found in seven regional office locations throughout the state.

Region 1	Escanaba	(906) 228-9998
Region 2	Traverse City	(231) 922-5210
Region 3	Grand Rapids	(616) 356-0600
Region 4	Saginaw	(989) 758-1778
Region 5	St. Joseph	(269) 428-2575
Region 6	Lansing	(517) 335-1830
Region 7	Southfield	(248) 356-1701

Dan Wyant, MDA Director
Keith Creagh, MDA Deputy Director

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PESTICIDE SECTION

The Pesticide Section of the Pesticide and Plant Pest Management Division (PPPM) is responsible for certification and registration of pesticide applicators, pesticide enforcement, commercial applicator licensing, worker protection, endangered species, pesticide registration, food safety, bulk agricultural storage, restricted use pesticide (RUP) dealer licensing, integrated pest management programs, and urban pesticide outreach activities.

Inspection activities include use/misuse investigations, inspection of pesticide producer establishments and marketplaces, restricted use pesticide dealer audits, commercial applicator record audits, food safety sampling, planned use inspections, and targeted WPS and urban initiative inspections.

Other activities include marketplace surveillance and contacts with applicators and dealers to ensure compliance with registration and licensing requirements. During FY04, PPPM continued to place a high priority on use/misuse investigations. Staff responded to the majority of pesticide misuse complaints with an initial contact within 24 hours of receipt of the complaint. Outputs and enforcement actions are reported quarterly to the Environmental Protection Agency (EPA) Region 5, pesticide specialists, and regional supervisors. This quarterly report provides a summary of outputs for the month and year-to-date, as well as measures commitments under the annual EPA grant.

Legislative Activity

Act 451, Part 83, Pesticide Control, Amended by Act 24

On March 10, 2004, the Governor signed Act 24, which amends Act 451, Part 83, Pesticide Control. This act amends the existing notification system for parents or guardians of children that attend schools or day care centers where pesticide applications occur. Specific options and timelines to provide notification and the information contained in the notification are defined. The act will require licensed

day care facilities to have an integrated pest management (IPM) program in place for each building where indoor pesticide applications occur. The law maintains regulatory controls on pesticide applications in and around schools. The act defines "day care center" and modifies the definition of school to exclude home schools.

Regulation 637, Pesticide Use

The Pesticide Section requested and received approval of the Agriculture Commission to begin the rulemaking process to amend certain sections of Regulation 637. PPPM will address issues such as confusing verbiage, regulatory requirement details, and sections that are difficult to enforce. Issues will be addressed within definitions, notification registry requirements, mixing/loading pad requirements, posting requirements, IPM in schools, misrepresentation of pesticide safety, and the organic farm registry. Amendments to Regulation 637 are necessary due to recent passage of recent amendments to Act 451, Part 83. In 2005, PPPM convened a rulemaking workgroup that includes representatives from all affected parties.

Ginseng Pest Management Strategic Plan

In April of 2004, PPPM officials participated in the development of a pest management strategic plan (PMSP) for the Michigan and Wisconsin ginseng industry. The event was coordinated by staff at MSU and attended by growers and ginseng industry representatives from both states as well as by the US Department of Agriculture (USDA) and EPA-Region 5 staff. Participants agreed that it was a successful day and it demonstrated the industry's commitment to developing the most effective and environmentally sound pest management strategy for today and the future. Michigan and Wisconsin combined produce over 90 percent of the ginseng grown in the United States.

Tick Borne Disease Positive Ticks Found

In Michigan, tick borne diseases are rare, but they do occur and can be serious if not properly diagnosed and treated. The most common ticks in

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Michigan are the American Dog Tick, *Dermacentor variabilis* and the Black Legged Tick, *Ixodes scapularis*.

In the summer of 2004, three ticks removed from Michigan residents and submitted to the MDA Geagley Laboratory tested positive for two different tick-borne diseases: Rocky Mountain Spotted Fever Group (RMSF) and Lyme disease, *Borrelia burgdorferi*, (spirochete bacterium causes Lyme disease). The RMSF positive American Dog Tick was removed from a Kalamazoo County resident. The two positive Lyme disease ticks were taken from residents living in Mason and Ottawa Counties.

In response to the RMSF detection, PPPM cooperated with the local health department to conduct tick-dragging activities to collect additional ticks for analysis. This was repeated several times during summer tick season, but no additional positives were located. Outreach materials were provided to local residents in an effort to raise their awareness of the insect and its potential to transmit disease.

EPA's Preliminary Risk Assessment for 2,4-D

In July 2004, EPA met with representatives from MSU (research and extension), agrichemical dealers and commercial applicators, the Michigan Grape Council, aquatic applicators, and PPPM to discuss their preliminary risk assessment for the herbicide 2,4-D. EPA's assessment precedes the reregistration of this versatile pesticide. EPA listened to issues surrounding the sensitivities of grape plants and Michigan's unique use restrictions to protect the wine and grape industry. A critical issue under review is the potential risk associated with aquatic uses of 2,4-D and EPA's desire to incorporate additional protective measures for potable water intakes and swimmers. One important fact shared with EPA is that 2,4-D applications allow for "spot" treatments in lakes, reducing the dependency on whole lake treatments or the need to use higher volumes of other aquatic herbicides.

Lindane Use in Michigan

In May 2004, the Michigan Environmental Action Council (MEAC) requested MDA-PPPM and the

Michigan Department of Community Health (MDCH) to ban the use of the insecticide Lindane in Michigan. The request covered both the agricultural use of Lindane and the human health use for controlling body lice. On July 16, 2004, the MDA Pesticide Advisory Committee (PAC) reviewed the request and discussed the agricultural use of the product. Agricultural uses of Lindane are limited to treatment of agricultural seed, posing few risks. The PAC recommended to the Director that MDA should not ban agricultural use and that no further action is necessary by the department. The Director accepted this recommendation and a response was provided to MEAC.

The remaining uses for human health were to be reviewed by MDCH and constitute the primary focus of the request from MEAC. The pediculacide use of Lindane is regulated by the Federal Food and Drug Administration and is prescribed by physicians and distributed by pharmacies, which are regulated by MDCH.

ENFORCEMENT ACTIVITIES

The enforcement program oversees inspection and investigation activities for the Pesticide Section. Activities include conducting pesticide use/misuse investigations; inspecting pesticide-producing establishments and places where pesticides are sold; auditing of restricted use pesticide (RUP) dealer sales and commercial applicator records; addressing pesticide use violations related to food safety and farm worker protection; and implementing federal and state targeted compliance monitoring initiatives.

Other enforcement activities include marketplace surveillance for unregistered pesticides and proper pesticide labeling; contacts with applicators and RUP dealers to assure compliance with certification and licensing requirements; and special projects, like integrated pest management (IPM) requirements in schools and the federal urban initiative.

Use Investigations

PPPM conducted 153 pesticide use investigations (UIs) with 35 occurring in agricultural situations and 118 occurring in non-agricultural situations.

Agricultural use investigations involved 18 commercial applicator firms and 6 aerial application firms.

Of the 118 non-agricultural UIs, one involved a homeowner; one was unclassified and 116 involved commercial applicators in various categories.

A total of 153 complaints were filed with PPPM in FY04, an increase of approximately 16 percent from the 132 filed in FY03. There was a decrease of 20 percent from 2002 to 2003.

Supplemental Environmental Projects

Occasionally firms found to be in violation of state pesticide use regulations voluntarily choose to sponsor supplemental environmental projects as part of their civil penalty. The following projects were sponsored as a result of penalties assessed in FY04:

- \$1,500 was directed to MSU where it was used to fund training specifically targeted toward Spanish-speaking blueberry growers.
- \$1,000 was directed to the Kalamazoo County Nature Center to assist its volunteers with the collection of wild migratory bird blood samples to detect St. Louis Encephalitis, Eastern Equine Encephalitis, and West Nile Virus.
- \$1,000 was directed to the Sparta Fire Department to assist with clean up from an accident involving an aerial applicator.

- \$1,375 was directed to MSU for purchase of reagents for testing mosquitoes as part of the state's response plan for West Nile Virus.
- \$750 was directed to MSU-Pesticide Education Program to purchase 50 Spanish applicator certification manuals for distribution to minority farmers who participate in PPPM training programs and to print a color document used to inform RUP dealers of the new certification credentials.

Planned Use Inspections

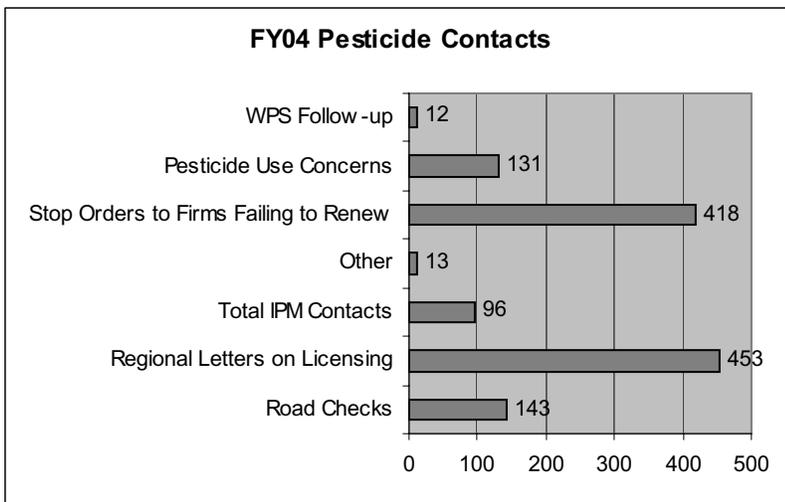
PPPM conducted 85 Planned Use Inspections (PUIs) in FY04. Twenty-nine were agricultural PUIs; 25 involved private applicators and 4 involved commercial firms. Fifty-six PUIs were at non-agricultural sites with 50 conducted at commercial pesticide application firms.

Pesticide Contacts

A total of 1,266 inspections/contacts were recorded in FY04. These include targeted inspections of specific pesticide use activities, road check inspections, informational contacts, compliance assistance and outreach, and monitoring for compliance with state regulatory requirements. Some contacts contain specific orders to stop prohibited conduct such as failure to renew the firm's commercial pesticide applicator license.

During the outdoor application season, PPPM conducted 143 road check inspections. Most of these inspections involved the observation of a pesticide application. At a minimum, PPPM inspects the application equipment and applicator records along with conducting a comprehensive interview with the applicator. The focus of the inspection is to confirm that the firm is in compliance with Act 451, Part 83 and Regulations 636 and 637.

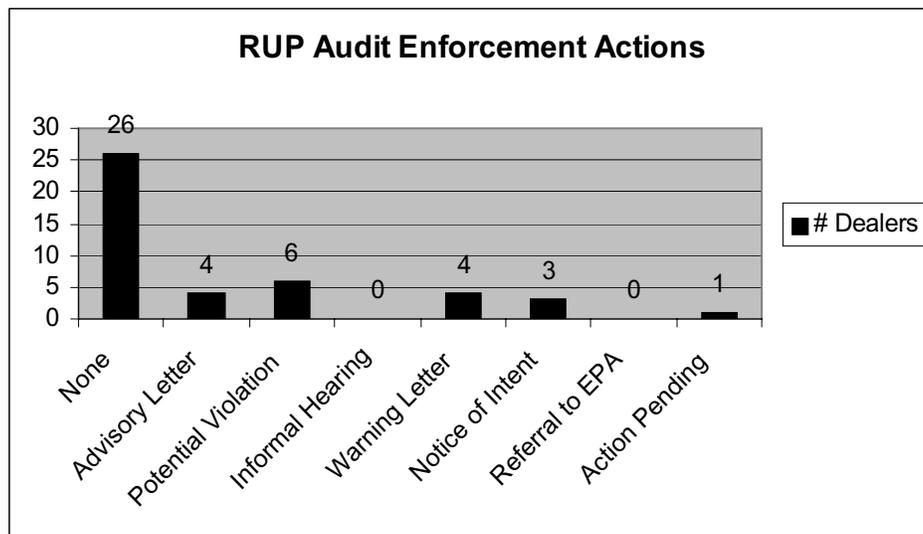
As a result of contact made in FY04, PPPM issued 642 Stop Prohibited Conduct Orders, 57 warning letters, 16 advisory letters, and 10 Notices of Intent.



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RESTRICTED USE PESTICIDES (RUP)

PPPM conducted 43 RUP dealer audits in FY04. Thirteen enforcement actions were issued or recommended. PPPM also conducted 60 initial inventories of restricted use pesticides at dealer sites to facilitate audits in FY 2005. The total number of dealers licensed decreased from 274 in FY03 to 263 in FY04.



Producer Establishment Inspections

PPPM conducted 31 pesticide producer establishment inspections in FY04. Twenty-one inspections were conducted at bulk repackagers. Sixteen inspections specifically included WPS product label reviews for a total of 70 pesticide product label reviews. Eighteen inspections specifically targeted antimicrobial pesticides with a total of 38 different documentary samples collected for label reviews. One formulation sample was collected for analysis as part of the national EPA antimicrobial initiative.

Federal Marketplace Inspections

During FY04, PPPM conducted 29 federal marketplace inspections. Ten inspections resulted in physical samples being collected. A comprehensive inspection was done at nine different branch locations of a pet supply company found to be distributing counterfeit Frontline and Advantage (flea control) products. PPPM also assisted EPA by conducting six import inspections at both Port Huron and Detroit.

WORKER PROTECTION STANDARD ACTIVITIES

PPPM continues to work within the framework of the State Implementation Plan for the Worker Protection Standard (WPS). The plan contains Michigan's strategy for development of cooperative relationships, compliance monitoring, and enforcement. PPPM staff

continues to provide WPS compliance assistance during inspection activities, but has conducted enforcement actions in response to detecting WPS violations.

In FY04, PPPM conducted 26 WPS planned use inspections at farms, greenhouses, nurseries, and commercial farm operations. In addition, PPPM conducted 12 WPS pesticide contact inspections as follow up and closure to previous WPS PUIs.

PPPM also participated in or conducted 10 WPS activities including WPS presentations and approved trainer programs. Outreach activities are essential to reach the diverse groups impacted by the WPS or who are interested in learning about the WPS. These activities were sponsored or coordinated by MDA, MSU Extension, farm organizations, and commodity groups. PPPM reached about 150 individuals through these activities.

In FY04 PPPM again participated with local farm worker organizations to promote and implement the first of its kind in the nation, "Michigan Farm Worker Appreciation Month". The goal was to formally thank and recognize the sacrifices that thousands of migrant farm worker families make in order to ensure that Michigan families have a bountiful supply of fruits and vegetables, and to highlight the benefits these populations bring to Michigan.

INTEGRATED PEST MANAGEMENT

The Natural Resources and Environmental Protection Act, Act 451, Part 83, as amended, and Regulation 637 set forth requirements for use of Integrated Pest Management (IPM) practices in schools, health care facilities, and public buildings. These requirements include provisions for pesticide applicator attendance at an approved IPM training program and verifiable IPM programs for buildings.

To assist pesticide applicators with compliance, the Michigan Pest Control Association (MPCA) and PPPM developed a joint IPM training program. In FY04 this training program was offered twice in Detroit and once in Traverse City with a total of 75 people in attendance. Participants attending the training programs included representatives from health care facilities, schools, public buildings, and the pest control industry.

In FY04 PPPM conducted 96 IPM inspections to determine compliance with Regulation 637. Of these inspections, 10 warning letters, 5 advisory letters, 5 stop prohibited conduct orders, and 1 administrative fine were issued.

URBAN PESTICIDE EDUCATION PROGRAM

PPPM conducted 183 contacts in urban areas in FY04; 48 were failure to renew commercial pesticide applicator’s license and 11 were stop prohibited conduct orders.

PPPM also conducted 5 market place inspections (MPI), 4 producer establishment inspections (PEI), 22 planned use inspections (PUI), and 22 use inspections (UI) in urban areas.

PPPM issued 184 pesticide applicator business licenses in economically depressed areas.

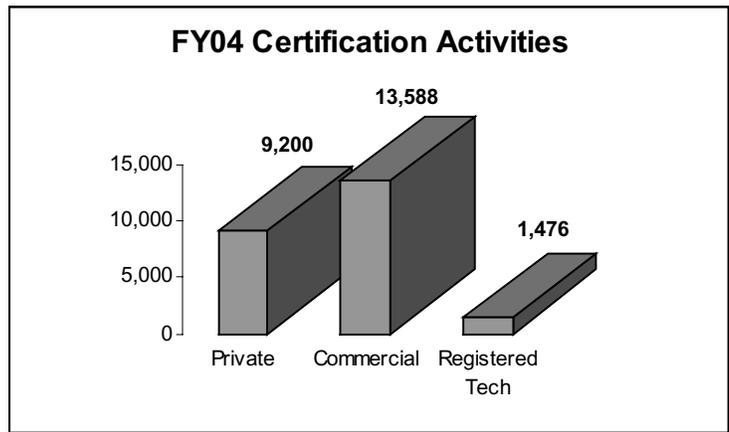
PPPM also completed implementation of the Benton Harbor School district Integrated Pest Management program to enhance the educational environment and learning experience through the elimination of

major pests and health problems within the Benton Harbor schools.

CERTIFICATION ACTIVITIES

PPPM is responsible for primacy enforcement and implementation of pesticide applicator certification required by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). FIFRA requires that applicators using or supervising the use of restricted use pesticides (RUPs) must be certified.

Currently there are over 24,000 pesticide applicators that are either certified or registered in Michigan. The chart illustrates the number of pesticide applicators by type.



Exam Activity

PPPM administers pesticide applicator exams to commercial, private, and registered applicators. The following summarizes PPPM’s exam activity for FY04:

PPPM administered a total of 13,674 pesticide applicator exams, including repeat exam attempts, to private, commercial, and registered applicators throughout the state. This figure represents both initial exams administered to applicants becoming certified/registered for the first time and renewal exams administered to applicants renewing their credentials.

Pesticide applicator exams are administered by PPPM at various locations including PPPM regional offices, county extension offices, and other specially

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coordinated exam locations. During FY04, exams were given during 275 regional office exam sessions and 120 non-regional office exam sessions, ie extension offices, private firms, etc.

Recertification

PPPM reviews seminars offered nationally and within the state for approval under the recertification by seminar attendance program. The number of seminars approved for credits (continuing education) continues to increase each year demonstrating the growing popularity of this option for certification and registration renewal. In FY04, PPPM approved 855 seminars for recertification credits.

The popularity of the recertification by seminar attendance program has increased considerably since its implementation in 1989. In FY04, 1,489 applicators renewed their credentials in this manner.

Section 24(c) of FIFRA allows states to issue registrations for additional sites or changes in use patterns for federally registered pesticides as long as a special local need (SLN) exists. An SLN means a pest problem within the state that PPPM has determined that an appropriate federally registered pesticide product is not sufficiently available. PPPM does not approve these registrations when registered alternatives exist or the residue data do not support the registration. PPPM issued seven 24(c) registrations in FY04.

Section 5 of FIFRA allows pesticide registrants to obtain a permit from EPA to do experimental trials in the states that they would like to seek registration. PPPM requires registrants to submit a summary of the experimental program as well as the names and locations of the cooperators within the state. PPPM collected information on four experimental use permits (EUPs) for use during FY04.

PESTICIDE REGISTRATION

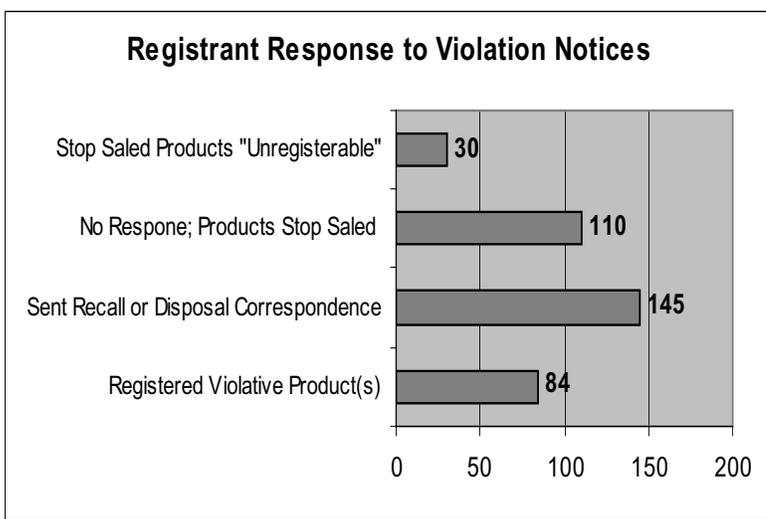
FIFRA Section 18 Exemptions, 24(c) Registrations and EUPs

Section 18 of FIFRA allows states to request from EPA, the use of an unregistered pesticide to control an emergency pest problem within the state. When an emergency situation develops, an MSUE specialist petitions PPPM for a Section 18 emergency exemption. PPPM evaluates the situation to see if it meets Section 18 criteria and, if so, works with the MSU extension specialist to develop the Section 18 exemption request. In FY04, PPPM reviewed and prepared 17 Section 18 specific exemption requests for submission to EPA. Included in the 17 requests were three requests for use on ginseng that PPPM prepared and shepherded through the process, on behalf of both the states of Michigan and Wisconsin. Fourteen of the Section 18 exemption requests were granted, two were not submitted due to impending Section 3 registration, and one is still pending with EPA. PPPM issued one Section 18 crisis exemption.

State Marketplace Inspections

PPPM inspectors conducted 109 state market place inspections in FY04 resulting in violation notices being issued to 145 registrants for 387 products. PPPM registered 84 products as a result of violation notices. Based upon the results of the inspections in FY04, 77 out of 109, 70 percent of all inspection locations, had one or more products offered for sale that were not currently registered with the State of Michigan.

Registrant Response to Violation Notices



ENDANGERED SPECIES

In FY04, PPPM continued to address concerns about endangered species through identification of sensitive habitats during special pesticide registration review. PPPM also continues to consult with the US Fisheries and Wildlife Service (FWS) on registrations of concern to ensure that application of pesticides will not impact known sensitive habitats.

In FY04, PPPM, in cooperation with MSU, developed information to be posted on the MDA website in anticipation of EPA endangered species regulatory activities. The main interest is to establish a central location where an applicator can locate basic information on endangered species (through web links) and easily locate EPA county restrictions through county bulletin information. The information has been compiled and MDA is in the process of formatting the information for the state website.

2004. MSU analyzed the samples for arbovirus (St. Louis Encephalitis and Eastern Equine Encephalitis) diseases.

PPPM also participated in the State of Michigan West Nile Virus (WNV) Working Group, a collection of state agencies, MSU, and local health departments. This group annually plans and supports WNV surveillance activities, such as web-based dead bird reporting, dead bird testing for presence of WNV, mosquito surveillance and testing efforts, etc. Additionally, PPPM supported two separate training efforts for local health departments on how to collect samples from dead birds using the new VecTec swabbing procedures.

INSECT AND RODENT PROGRAM

Pesticide Notification Registry

PPPM completed and published the FY04 Pesticide Notification Registry. A total of 85 contact persons appear on this registry, which identifies 3,010 properties statewide that are either adjacent or additional properties requiring applicators to notify a contact person on the registry.

Certified Organic Farm Registry Update

PPPM completed and published the FY04 Certified Organic Farms Registry. The registry is in effect for one year (March 15, 2004 to March 15, 2005). A total of 268 organic farm parcels (17,589 acres) are found in this registry. The 2004 registry identifies 27 Michigan counties.

West Nile Virus Activities

PPPM coordinated bird sera collection and testing efforts with the Kalamazoo Nature Center to submit wild bird blood samples from captured birds in Bay and Kalamazoo Counties during the summer of

PLANT INDUSTRY SECTION

FRUIT AND VEGETABLE INSPECTION PROGRAMS

The Fruit and Vegetable (F&V) Inspection program offers an unbiased, third party inspection service for the produce industry. Fruit and vegetable inspections are based on US Department of Agriculture (USDA) standards, Michigan standards, processor specification, and/or industry needs. This program is voluntary with the exception of required inspections for exports, school lunch programs, and government purchases. 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 produce prior to shipment. Inspections performed for the industry are as a condition of sale or marketing tool. This type of inspection verifies that the produce meets the grade marked on the containers and bags. Some shipping point inspections are mandatory such as exports, school lunch program, and government purchases. Michigan shippers would not be able to participate in these programs without shipping point inspections. USDA grades are recognized throughout the world and are used to determine the value of produce.

Michigan has nine USDA licensed inspectors who performed 2,942 shipping point inspections on 4,606,014 pounds of produce prior to shipment, including the summer potato harvest in the Munger area, generating 364 inspections for 15,358,700 pounds of potatoes.

Market Inspections

Michigan has six F&V inspectors and supervisors licensed to inspect incoming market loads of produce. This produce enters Michigan from anywhere in the world. During FY04 PPPM conducted 1,294 market inspections for 18,498,400 pounds of produce.

Process Inspections

During FY04, 17,113 process inspections were conducted on 442,961,253 pounds of apples, blueberries, red tart cherries, grapes, and peppers destined for processing in Michigan, Canada, Pennsylvania, and New York. Unfortunately, the weather dealt Michigan tart cherry farmers another devastating blow this year with 50% loss of their crop.

For the second year in a row, processed grape growers experienced a major crop failure with production down considerably due to adverse weather conditions. During FY04, temporary F&V staff performed 4,946 inspections involving 209,811,926 pounds of processed grapes.

Controlled Atmosphere Storage Licensing Program

During calendar year 2004, controlled atmosphere storage operators requested inspections on 144 rooms containing 90,358,640 pounds of apples. PPPM staff conducted inspections and issued licenses for 138 rooms that met the requirement of Act 228, as amended, for 26 different firms who have controlled atmosphere storage rooms. During the inspection process, two controlled atmosphere storage rooms failed to meet requirements of the act and four rooms were opened early.

Phytosanitary Inspections

Phytosanitary inspections were conducted on 210 exports this year consisting of 6,388,226 pounds of apples, seed potatoes, and blueberries. Most importing countries limit the amount of insects and diseases allowed on incoming produce. Certificates were issued for the following countries: Canada, Columbia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Taiwan, Italy, Spain, Jamaica, and the United Kingdom.

Wholesale Potato Dealer Licensing Program

PPPM issued 17 licenses through the wholesale potato dealer-licensing program in FY04. This

program protects Michigan potato growers in case a wholesale potato dealer fails to pay for potatoes purchased. PPPM requires wholesale potato dealers to post a bond or letter of credit as a condition of licensing. No complaints were received during FY04.

Seed Potato Inspection

Seventeen Michigan farmers produced 2,221 acres of seed potatoes. During FY04, F&V inspectors conducted 606 inspections on approximately 23,436,815 pounds of seed potatoes. Quality seed is one of the most important ingredients to total potato production. Michigan seed farmers continue to shift to raising mainly “chip” type varieties.

Dry Bean Inspection Program

The dry edible bean inspection program had a decrease in the number of inspections performed this fiscal year. The dry bean inspector issued 353 certificates during FY04, compared to 863 certificates issued during FY03.

In addition to the above members, there are several ex-officio members from MSU, USDA, an environmental constituent, and MDA staff who attend the meetings. The MOAC is responsible for advising the MDA director on issues that may impact the organic industry.

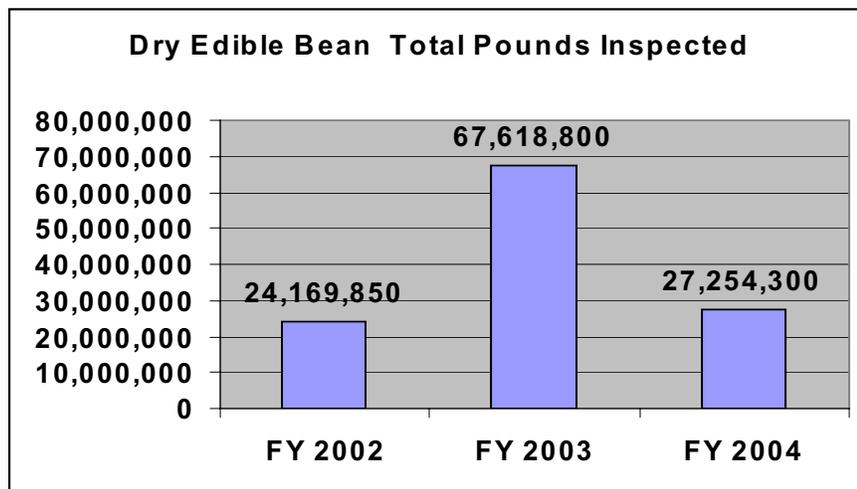
PPPM updated the organic portion of the MDA website throughout the year by posting MOAC meeting dates; minutes; member list; and certifying agents, handler/producer registration information, and cost-share information.

PPPM continues to work toward having the National Organic Programs (NOP/USDA) approval of the state organic program. Once Michigan’s state organic program is approved, PPPM will become responsible for the enforcement of the state and federal laws. NOP/USDA has approved state organic programs in California and Utah. Michigan requires registration of certifying agents, handlers, and producers, which is a more restrictive requirement than the federal law. The federal law exempts producers and handlers with retail sales

between \$0-5,000 from certification, while Michigan’s law does not. MDA, the Michigan organic industry, and the MOAC support the more stringent state requirements. However, MDA will need to seek approval from NOP/USDA for the more restrictive state requirements or amend Act 316 to bring it into compliance with the federal law.

Michigan law requires registration of organic certifying agents, handlers, and producers. During FY04, PPPM registered 8 certifying agents and 84 handlers and

producers. The MDA website is updated annually with a list of registered organic handlers/producers and the products they produce or grow.



Michigan Organic Registration Program

PPPM staff met with the Michigan Organic Advisory Committee (MOAC) several times during this year. The MOAC consists of 11 members representing organic producers, retail food establishments, processors, input suppliers, and consumers. In

PPPM received \$63,922.80 from USDA for federal organic cost-share reimbursement during FY03/ FY04. The funds were distributed to 157 Michigan organic producers/handlers during the last two fiscal years. This program reimbursed organic handlers/

producers for up to 75% of the cost of certification not to exceed \$500. Organic handlers/producers were required to submit an application along with the required support documentation to receive reimbursement.

The state organic program has no dedicated funds, however, PPPM continues to be supportive of Michigan's organic industry and program development. Michigan's law is important to the organic industry and will provide consumer confidence in organic products and production standards in Michigan.

AGRICULTURAL PRODUCTS/ QUALITY ASSURANCE

Commercial Feed Program

PPPM regulates the manufacture and distribution of commercial animal feeds. The division also investigates reports of animal deaths or illnesses where feed may be implicated. This insures that appropriate actions to protect the food supply are taken. PPPM made 358 inspections of commercial feeds and the processes involved in their production, distribution, and storage. Inspectors contacted feed manufacturers, distributors, and others an additional 422 times to follow up on previous inspections and assist companies with compliance or to investigate complaints related to feeds. Inspections of feed manufacturing practices, the products, and their labels help to assure that animal feeds are marketed fairly and are safe for their intended uses. These inspections also help assure that the meat, eggs, and dairy products obtained from production livestock are safe and wholesome.

Through its routine surveillance activities, PPPM identified 146 feed law violations, which resulted in the removal of \$84,655 worth of feed from distribution. Forty-nine of the violations were identified through sampling. In FY04, PPPM investigated five complaints alleging feed-related animal deaths or illnesses, problems with feed quality, or adulteration. PPPM issued six regulatory or warning letters for non-medicated feed violations.

Bovine Spongiform Encephalopathy (BSE)

The Food and Drug Administration (FDA) issued a regulation in 1997 prohibiting most mammalian protein products from being used as or in the feed of ruminant animals (e.g. cattle, sheep, goats, deer, elk, bison, and buffalo). The purpose of this regulation is to prevent the establishment and amplification of BSE, commonly referred to as Mad Cow Disease, in the United States through feed and in so doing minimize any risk to animals and humans. The regulation addresses the handling and use of any feed ingredient that meets the definition of "prohibited materials" so that contamination of feeds intended for ruminant animals can be avoided. Since the discovery of BSE in the US, the FDA is considering amendments to the ban.

PPPM inspectors have been inspecting feed manufacturing facilities throughout the state since 1998. Thus far all of the state's renderers and livestock feed manufacturing facilities have been inspected at least once with 100% of those firms that currently handle restricted protein materials being in compliance with the regulation. PPPM conducted 99 BSE inspections in FY04. All firms handling restricted protein materials are being inspected at least yearly. PPPM continues to inspect all of the firms it regulates on a regular basis to assure continued compliance.

In FY04, PPPM began testing commercial animal feeds and meat and bone meal (MBM) used in animal feeds for the presence of ruminant protein. By federal regulation, protein of ruminant origin is prohibited from use in feeds for other ruminants. Feeds that contain ruminant MBM but are intended for non-ruminant animals must be labeled with the statement, "Caution: Do not feed to cattle or other ruminants (except pet food sold at retail)." The testing is used as a preliminary screening method to determine if a possible violation may have occurred. If a suspect positive is detected in a ruminant feed, or in a non-ruminant feed (except pet food) that lacks the caution statement, confirmatory testing was done.

The MDA Laboratory tested 168 samples from 151 finished feeds and 17 MBM products. No ruminant protein was detected in 148 of the finished feed samples or any of the 12 MBM samples.

Of the three finished feed samples with ruminant protein detected, two were formulated for fish and one for pigs. The labels of both fish feeds contained the required statement, "Caution: Do not feed to cattle or other ruminants." The swine feed, manufactured by an Ohio firm, apparently did not have the required caution statement. Sample information was shared with both the Ohio Department of Agriculture and the FDA for follow-up. The caution statement was present on all five of the MBM samples in which ruminant protein was detected.

Feed Sampling and Analysis

The MDA Laboratory analyzed 663 samples of commercial feed collected by PPPM inspectors, with 85.67% of the samples in compliance. Samples consisted of livestock feeds and wild bird feed.

Livestock Feed Samples

In FY04, PPPM inspectors collected 594 samples of livestock feed to determine the accuracy of their labeled guarantees for crude protein, crude fat, crude fiber, minerals, and drugs. Of those samples, 76 (12.79%) were found to be in violation for failing to meet guarantees. Tests to detect ruminant protein were also done on 168 of the livestock feed samples collected (see BSE above).

Wild Bird Feed Samples

The MDA Laboratory Seed Section again analyzed wild bird feed samples for the presence of noxious weed seed. MDA tested 69 samples in FY04, with 19 (27.53%) out of compliance due to the presence

of viable prohibited noxious weed seeds. There were no samples that contained excessive viable restricted weed seed.

The following table provides a summary of the feed samples collected during FY04:

Medicated Feed

Therapeutic and production drugs are commonly administered to livestock through their feeds. For this reason, PPPM monitors the manufacturers of these products closely for compliance with regulations designed to prevent unsafe drug residues in human food. PPPM conducted 94 inspections at 75 of the 103 feed mills in the state that manufacture medicated feeds, including six FDA-licensed establishments. At the time of the inspections, no drugs were being added to feeds at 17 of these feed mills. The purpose of the inspections is to determine a firm's level of compliance with federal medicated feed good manufacturing practices regulations. Of the active firms inspected, approximately 75% were found to have minor deficiencies in meeting their requirements. Voluntary corrections of these deficiencies are being monitored during subsequent inspections.

Vomitoxin Testing Initiative

With the widespread occurrence of Fusarium head blight (FHB) in wheat throughout much of the state during FY04, PPPM formulated a plan to sample and test wheat by-products and feeds for vomitoxin during the FY05 sampling season. Vomitoxin occurs naturally and develops on grain in the presence of mold caused by FHB. In heavily contaminated wheat kernels, vomitoxin concentrations can be highest in the bran and other fractions. These fractions are usually milled off and sold as feed ingredients. PPPM's plan includes the sampling and testing of

Type of Sample	No. Samples Tested	No. Samples in Compliance	Violation Rate
Livestock Feed	594	518	12.79%
Wild Bird Feed	69	50	27.53%
TOTAL	663	568	14.32%

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wheat by-products used in animal feeds as well as mixed feeds in which those ingredients are being used. This should enable us to determine if ingredients with vomitoxin in excess of federal guidance levels for various species of livestock are being distributed.

Annual Feed Contaminant Survey

A partnership with FDA that enables PPPM to survey animal feeds for pesticide residues was expanded in 2000 to include testing for mycotoxins. This partnership is now in its eighth consecutive year. The information obtained is useful in determining if additional measures are needed to prevent harmful residues in human food. In FY04, PPPM inspectors collected 20 livestock feed samples. Two FDA laboratories tested 13 of the samples for pesticide residues and seven for mycotoxin contamination. The results once again indicated that there were no mycotoxins in any of these feeds and no detectable pesticide residues in 85% of these feeds. Pesticide residues in the 2 positive samples were well below FDA guidance levels.

Feed Manufacturing and Distribution Statistics

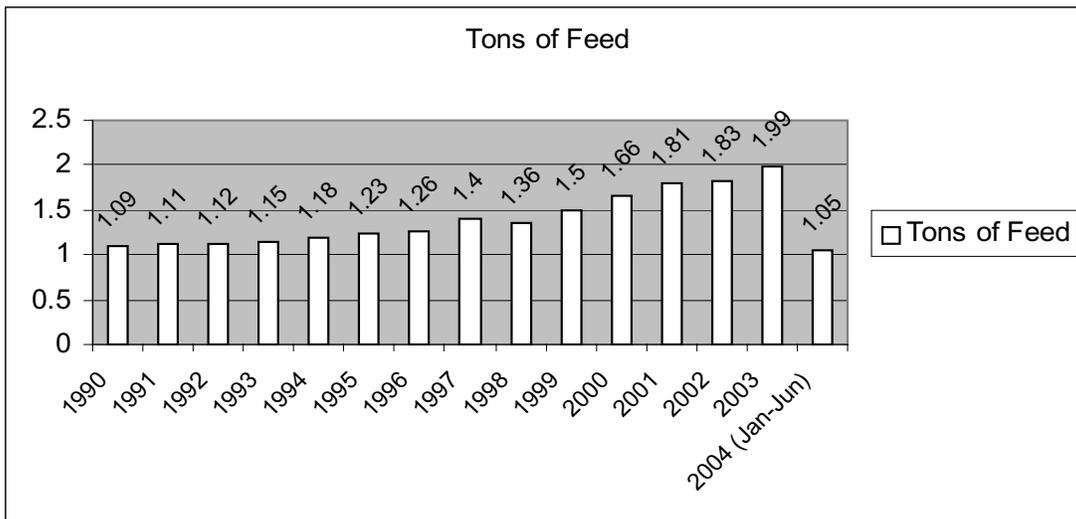
The total volume of feed manufactured and distributed in Michigan continued its upward growth

in 2004. In fact, this measure has nearly doubled from 1.09 million tons in 1990 to 1.99 million tons in 2004. This also represents a 9.15% increase over 2002 (1.83 million tons). The following graph demonstrates the general expansion in commercial feeds and feed ingredients manufactured or distributed in Michigan over the past 13 years. Licensees reported 1,051,067 tons of feed through the first half of 2004 compared to 950,474 tons over the same period in 2003. This represents a 10.6% increase in manufacturing and distribution.

In 2004, PPPM licensed 1,092 feed manufacturers and distributors, a decrease of 23 from the previous year.

Animal Remedies Program

Modern animal husbandry practices often demand the use of drugs and vaccines to prevent or treat diseases. These diseases can harm herd health and cause decreases in production. Unhealthy animals can also increase the risk of food-borne disease in humans. Likewise, a multiplicity of drugs and vaccines are used extensively by homeowners in the care of their pets. The objective of the PPPM Animal Remedies program is to provide assurance that these drugs and vaccines are safe, properly labeled, and effective for their intended uses.



PPPM issued 1,709 animal remedy product licenses to 136 companies in the license year that ended June 30, 2004. As of November 2004, 1,454 product licenses were issued to 113 companies approximately five months through the license year that began in July 2004.

Plant Industry inspectors conducted 50 inspections checking for unlicensed or misbranded remedies, issuing 56 violation notices, one warning letter, and removing \$17,067 worth of violative products from sale. One anonymous complaint was investigated resulting in an order to stop the manufacture and distribution of an unapproved equine drug.

Elevator and Feed Mill Sanitation Program

Under the Grain Elevator Sanitation program, PPPM inspectors' help to assure that the conditions that can have a detrimental impact on the safety of Michigan's food supply are eliminated. In doing so, they help to prevent costly economic losses of grain and animal feeds to pests and other forms of environmental or chemical contamination.

During 2004, PPPM made 428 inspections to verify compliance with sanitation requirements in 282 of the 200 grain elevators and 250 feed mills that PPPM regulates. Through these inspections, PPPM helped to protect the wholesomeness of nearly 145 million bushels of grain and 250 million pounds of dry edible beans valued at \$1.8 billion.

Seed Program

The objective of the seed program is to ensure that the seed purchased by Michigan growers and homeowners for planting purposes is of good quality and meets standards established in the Michigan Seed Law. The law includes minimum requirements for label information and standards for germination, purity, and freedom from noxious weeds. 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 also assists USDA in assuring that seed companies comply with various federal seed

requirements. The division participates in the enforcement of the Federal Seed Act by providing samples and documentation for seed shipped in interstate commerce. PPPM also provides samples of selected seed kinds to the USDA, which verifies varietal claims.

The seed program helps to establish fair competition for approximately 450 seed labelers and 140 dealers who process and distribute agricultural and non-agricultural seed in Michigan. Recent statistics show that Michigan farmers spend nearly \$316.9 million annually on agricultural seed in producing more than \$2.7 billion worth of grain and hay. Furthermore, landscapers, sod growers, public works agencies, and private citizens in Michigan also depend on this program to insure the highest level of quality in the seed they purchase for lawns and gardens, rights of way, and parks.

Regulatory Activities

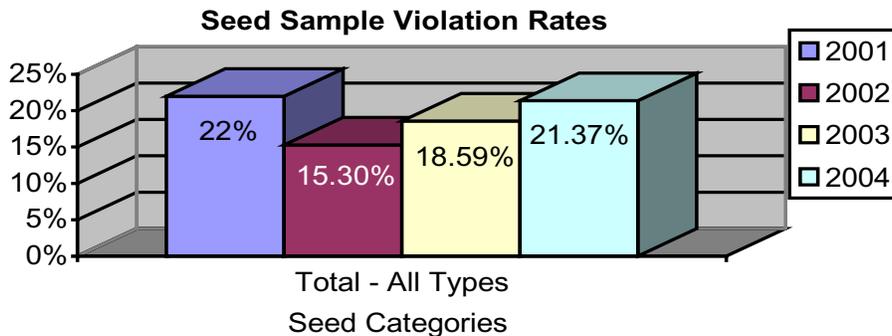
Due in part to Michigan's late planting season, enforcement activities in this program play a critical role in protecting Michigan from becoming a dumping ground for poor quality seed that has been rejected in other states. As a result, thousands of cash crop and animal production farmers are protected from possible crop failure and economic disaster.

PPPM conducts routine inspections that often include the sampling of seed products to determine whether or not they meet required standards and are labeled truthfully. These inspections allow for the interception and removal of violative seed products from the channels of trade before they reach Michigan farmers and homeowners. Inspectors issued 74 violation notices and removed \$632,476 worth of violative seed products from the channels of trade during FY04. An informal hearing was held with one seed dealer for violating a stop sale order on outdated seed. PPPM investigated two complaints in FY04. The first alleged that misbranded seed was responsible for causing the wrong crop to be planted. The second involved the illegal distribution of a prohibited noxious weed (yellow nutsedge) to sportsmen. When planted, the weed, which was being sold by the name chufa, was promoted to be a wildlife attractant.

PPPM collected 424 seed samples in FY04. Final test results have been reported on 379 of those samples, including 313 agricultural seed lots, 64 turf seed lots, and 2 lots of vegetable seed. Violations were reported in 81 of those, including 52 agricultural lots and 29 turf lots. Purity testing is incomplete on 25 additional samples of agricultural seed and 20 samples of turf seed, although germination testing on these 45 samples is complete, with all in compliance for that test. The overall violation rate for the completed FY04 samples stands at 21.37%, compared to 18.59% in FY03 and 15.30% in FY02.

Seed Certification

Another function of the seed program is to provide oversight for seed certification activities. The Michigan Crop Improvement Association (MCIA), which is designated as the state's official seed certifying agency, provides a system for bringing high quality seed from outstanding field crop varieties to farmers and seedsmen. The certification concept is based on varietal purity, which is comparable to pedigrees in animals. It represents seed with the genetic potential to produce high crop yields and other desirable characteristics.



The seed program also oversees the certification of seed potatoes. This activity is conducted by the Michigan Seed Potato Association (MSPA) and is aimed at maintaining adherence to genetic purity and mechanical standards in seed stocks for both domestic and international use.

This rate is likely to change when the remaining sample results are reported.

Seed Count

Many seed companies place information on their product labels that is not required by the Michigan Seed Law or regulations. Additional information that appears on agricultural seed labels, such as the number of seeds per pound of product or per bag, is intended to assist farmers in determining the correct amount of seed needed to achieve desired planting densities. In FY04, the MDA Seed Laboratory tested 235 of the agricultural crop seed samples collected by PPPM to determine the accuracy of these seed count claims. Seed count claims that are sufficiently inaccurate may cause the seed to be misbranded under Michigan's Seed Law. Through this testing effort, 21 products (8.9%) failed, within the tolerances applied, to meet labeled seed count claims.

Fertilizer and Liming Program

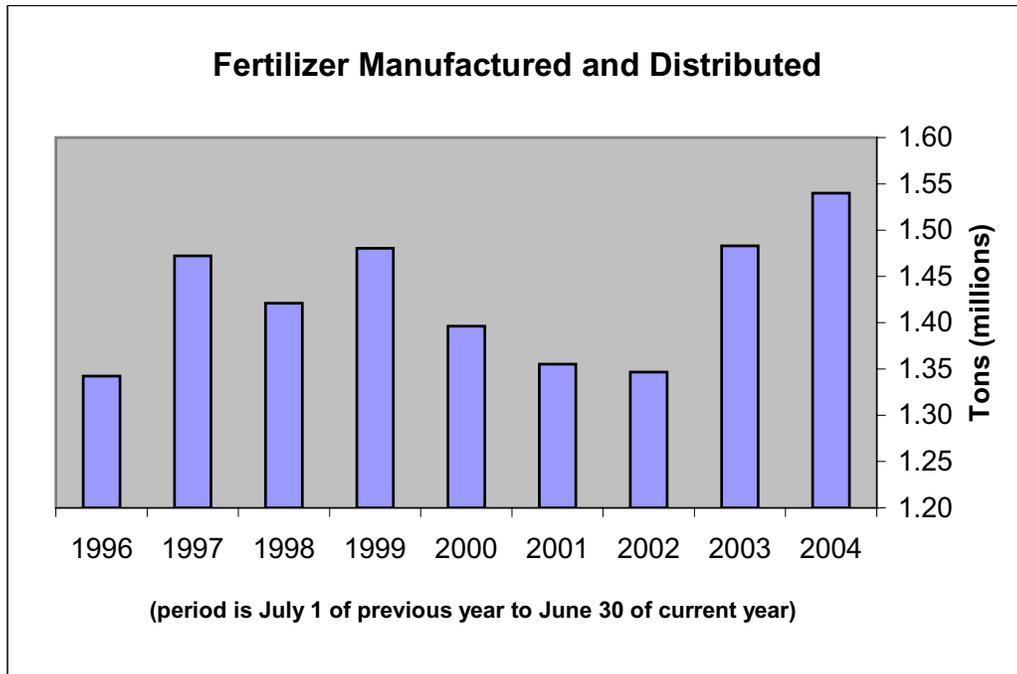
The fertilizer and liming program regulates over 600 manufacturers and distributors of over 1.5 million tons of fertilizers, soil conditioners, and liming materials for both farm and non-farm use. Michigan producers and industry rely on this quality assurance and consumer protection program to maximize 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. Because fertilizer is the most widely used agrichemical, it is important to provide a level playing field for individuals and businesses purchasing and manufacturing fertilizers.

Registration/Licensing and State Marketplace Inspections

PPPM issues licenses and registrations for fertilizers, soil conditioners, and liming materials manufactured and distributed as part of a statewide fertilizer regulatory program. Inspection activities include: conducting manufacturing and marketplace inspections, reviewing labels, sampling, and complaint investigations. The electronic reporting system used by staff aids this process by providing easy access to current registration data, uniform reports, and tracking capabilities for unregistered and misbranded fertilizer products sold in Michigan. During 2004, 305 contacts and over 255 inspections conducted by field staff resulted in 121 notices for fertilizer and liming materials found to be in violation of the Fertilizer and Liming laws. This resulted in the interception and removal of over \$71,000 worth of violative fertilizer and liming products from distribution.

Fertilizer Product Information					
	2000	2001	2002	2003	2004
Fertilizer Facility Licenses	391	454	475	503	520
Specialty Product Registrations	2,900	3,153	3,346	3,680	3,795
Liming Material Licenses	75	88	84	98	83

In 2004, the total amount of agricultural and specialty fertilizers manufactured and distributed in Michigan increased to 1.54 million tons, up 3.8% from 1.48 million tons the previous year. The following graph represents the quantities of fertilizer and fertilizer ingredients manufactured and distributed in Michigan over the past nine years. Michigan producers depend on the efficient distribution of quality fertilizer to produce high yields of crops valued at over \$2.1 billion.



Sampling

Each year, PPPM routinely samples a wide variety of agricultural and specialty fertilizers including dry and liquid manufactured products, dry and liquid custom blends, and compost. Samples are analyzed for total nitrogen, available phosphate, and soluble potash (N-P-K). Analysis results are compared to the guaranteed analysis on the product label to verify label guarantees. Statewide PPPM staff collected 448 fertilizer samples in 2004, 70 of which were violative. This represents a violation rate of 15.6%, which is slightly less than last year's violation rate of 15.9% and a significant decrease from the 20.5% violation rate in 2002. As part of activities to improve compliance, PPPM sent notices to firms with violative sample results and worked with these firms to review their blending and manufacturing procedures.

Prior to the spring blending season, PPPM sent 20 warning letters and two informal hearing notices to manufacturers with significant fertilizer sample violation rates from the previous year. The letters required fertilizer manufacturers to review their blending/manufacturing procedures and to respond to PPPM as to why the violations occurred and the changes the firm took to prevent its reoccurrence. At the informal hearing, the firm enters into a compliance agreement which addresses PPPM's findings and the corrective actions the manufacturer adopted or will adopt to avoid future violations of the Fertilizer Law. Fertilizer samples provide relevant information about industry operations and help in making sound enforcement decisions that will ensure a wholesome food supply.

Anhydrous Ammonia and Ammonium Nitrate Security

Anhydrous ammonia is one of the key ingredients in the illegal production of methamphetamine. The wrongful use of anhydrous ammonia is of great concern to agriculture since it is widely used as a low-cost form of agricultural fertilizer. In 2004, MDA continued outreach efforts and its partnerships with state agencies and stakeholders to advise agricultural dealers and farmers on how they can help deter illicit use of anhydrous ammonia while

protecting its safe, intended use. A toll-free tip line for reporting the manufacturing, sale, and use of methamphetamine is available. Individuals can call 1-866-METH-TIP to report suspected manufacturing activities of this illegal drug.

The criminal misuse of ammonium nitrate fertilizer is also a high concern to the agribusiness industry, government, and law enforcement alike. PPPM sent security reminders to all Michigan facilities that store bulk fertilizer and pesticide products. The mailing is part of the ammonium nitrate security outreach campaign, "America's Security Begins With You." The campaign, jointly sponsored by The Fertilizer Institute and the Bureau of Alcohol, Tobacco, Firearms, and Explosives, is targeted to assist the agribusiness industry to increase their vigilance to help ensure ammonium nitrate cannot be obtained for criminal misuse.

Bulk Storage Program

By inspecting and registering businesses storing large quantities of agricultural chemicals, the bulk storage program helps prevent the likelihood of agrichemical contamination of Michigan's natural resources. 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.

Inspections and Enforcement

PPPM inspected 235 registered fertilizer and pesticide bulk storage facilities during 2004. Each commercial facility is inspected annually and required to register the site and update information on an annual basis with PPPM. Firms with major violations or numerous minor violations are re-inspected during the calendar year to ensure compliance. Accurate and complete bulk storage application information is essential for emergency and discharge response activities, product and site identification, and groundwater monitoring. PPPM staff also performs consultations with firms in the initial stages of bulk storage construction. Site visits are arranged with firms to discuss and provide assistance with site planning, containment, and recordkeeping.

PPPM continued efforts in 2004 to ensure that all commercial bulk storage facilities in Michigan have containment. During 2002, the deadline passed for bulk storage facilities to be in compliance with all parts of Regulations 640 and 641. The results of inspections from 2000 to 2002 revealed that approximately 40% of the active commercial bulk storage facilities in Michigan did not have the proper structural containment. Following this deadline, PPPM sent warning letters to 93 firms with structural deficiencies. As a result, a majority of those firms took immediate corrective action. Additional enforcement actions continued in 2004 to bring the remaining violative facilities into structural compliance.

PPPM coordinated an advisory workgroup to develop and review proposed fertilizer bulk storage regulation amendments that focus on current containment technology and regulatory needs. A Request for Rulemaking was filed to amend Regulation 641, Commercial Fertilizer Bulk Storage. PPPM entered into three compliance agreements for the implementation of a bladder system as an alternative design stipulating the firms to follow the technical specifications and standards in the proposed amendments.

Security, Spill Recovery and Water Monitoring

Continued emphasis was placed on the safety and identification of bulk pesticide and fertilizer products in 2004, with the intent to ensure agrichemicals are secure and used for their intended beneficial purpose. Activities included: marketplace inspections, investigations, presentations, and inquiries to verify types of storage at distribution centers. Last year, the efforts to improve product safety and storage by PPPM staff resulted in the annual violation rate in this area being reduced by half.

Tank failures occurred at three different Michigan facilities during the 2003-2004 winter season. Fortunately, the fertilizer spills stayed entirely within the secondary containment and no releases to the environment occurred. All three firms were in

compliance with bulk storage regulations and had the required secondary containment in place. The containment prevented over 500,000 gallons of liquid fertilizer from being released into the environment, and a potential product loss worth approximately \$315,000.

During 2004, PPPM partnered with the Groundwater Monitoring Program to monitor water quality at bulk storage facilities by collecting 50 well samples. This project will better determine the nature and extent of pesticide and fertilizer contamination in groundwater, if any, at bulk agrichemical facilities.

On Farm Fertilizer Bulk Storage

PPPM conducted numerous outreach activities in 2004 to inform staff, industry, and producers about the newly implemented Regulation 642, On Farm Fertilizer Bulk Storage. This regulation became effective in August 2003, and establishes a statewide standard for the storage and handling of bulk liquid fertilizer on the farm. Farms with bulk fertilizer storage will be phased in over a five-year period and can use farm-specific designs that will meet requirements in a cost-effective manner. In Michigan, similar rules have been in place since October 1999 for commercial fertilizer bulk storage facilities. Uniform standards for both the commercial and private sectors of Michigan agriculture will help ensure safe product storage and the protection of surface and groundwater.

In 2001, PPPM provided cost-share and technical support to assist 21 farms throughout the state construct secondary containment facilities around already existing on-farm bulk liquid fertilizer tanks. These demonstration sites follow the containment specifications in Regulation 642. During 2004, the demonstration sites continued to be used for educational purposes to illustrate a variety of containment operations for sound on-farm fertilizer storage.

NURSERY PROGRAM

In the 2004 field season, PPPM staff inspected 11,183 acres of nursery stock and perennials in support of an industry with estimated annual sales exceeding \$710 million. Nursery inspections facilitate the sale of plant materials, such as hardy perennials, trees, shrubs, herbaceous perennials, small fruit plants, and hardy bulbs. Michigan nursery growers produce stock for sale within the state and also ship to over 30 states and many foreign markets. Through the inspection process, PPPM ensures that plant materials entering market channels are free of pests and diseases, as well as meeting 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.

Through the nursery program, PPPM conducted annual field inspections at the state’s 2,087 licensed growers of nursery stock and perennial plants. In addition to the annual inspection, other specialized inspections may be required to facilitate movement of plants into the market stream, especially where quarantine pests may be present. Of primary importance are five major quarantine-significant pests: gypsy moth, pine shoot beetle, emerald ash borer, Japanese beetle, Sudden Oak Death, and black stem rust. All counties in Michigan are included in the federal Gypsy Moth Quarantine. All of the Lower Peninsula and seven out of 15 counties in the Upper Peninsula are now regulated under the federal Pine Shoot Beetle Quarantine. In southeast Michigan, 20 counties are now regulated for emerald ash borer under both federal and State of Michigan quarantines. 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 be blown in from surrounding areas. The Black Stem Rust Quarantine applies to barberry and related species. Only approved resistant varieties may be sold.

No regulatory incident occurred in 2004 involving gypsy moth egg masses on Michigan-grown nursery stock and Christmas trees. This past year PPPM placed increased emphasis on educational efforts regarding the issue of gypsy moth egg masses, especially for the Christmas tree industry. PPPM continued to emphasize loading yard inspections during the Christmas tree shipping season to prevent interstate shipment of this regulated pest, and thus facilitate interstate trade. The certification of nursery stock and Christmas trees complying with the federal Gypsy Moth Quarantine continues to be a major challenge for PPPM and the nursery and Christmas tree industries in Michigan.

Nursery Inspection and Licensing Facts	
General Nursery Grower Licenses	1,487
Plant Grower Licenses	284
Small-scale Grower Licenses	316
Total # of Growers Licensed	2,087
Nursery Stock Dealer Licenses	4,476
Nursery Stock Dealer Market Licenses	318
Plant Dealer Licenses	480
Plant Dealer Market Licenses	226
Small Scale Dealer	49
Total # of Dealers Licensed	5,549
Total Licenses Issued	7,376
Acres of Field Grown Stock Inspected	7,606
Acres of Perennial Plants Inspected	1,437
Acres of Native Trees Inspected	40
Acres of Container Stock Inspected	1,420
Acres of Scionwood Inspected	349
Acres of Seedlings & Transplants Inspected	178
Acres of Virus-free stock Inspected	50
Acres of Small-fruit stock Inspected	103
Total # of Acres Inspected	11,183

Interstate Certification

Through the nursery program, PPPM certifies plant material for interstate shipment. PPPM field staff are responsible for ensuring that plant materials meet the quarantine requirements of the receiving states. Where appropriate, PPPM enters into compliance agreements with the growers and shippers whereby a systems approach is used to facilitate movement of the commodity. This past year, a total of 165 compliance agreements were issued and monitored by PPPM. With the removal of federal certification from the nursery license, PPPM has largely switched to issuing federal certification through a redesigned Certificate of Quarantine Compliance. In some instances, Michigan firms are authorized to imprint invoices or other shipping documents with federal and state certification.

This past season, PPPM issued 150 state phytosanitary certificates for interstate shipment of commodities. These included certificates for propagative items, Christmas trees, and fruit as well as for hay and straw. PPPM staff are fully using the electronic version of the Certificate of Quarantine Compliance. Due to its adaptability to more uses and increased accountability for commodities shipped, this certificate has largely replaced the state phytosanitary certificate for interstate shipments. PPPM staff issued 999 Certificates of Quarantine Compliance during FY04.

2004 Rose Evaluation Trials

For a seventh year, PPPM worked with Dow Gardens in Midland, Michigan and the Rose Society to conduct a rose grow out and evaluation trials project. The project was initiated in 1997 due to concerns raised by the American Rose Society, the National Plant Board, and several states regarding the increased occurrence of rose mosaic viruses and concerns about accurate labeling. Objectives for this year's trials included checking for trueness to variety labeling, grade accuracy, and evaluating for the presence of rose mosaic viruses.

PPPM staff obtained all plants from nursery retail stores throughout the state. The plants were grown out at Dow Gardens under the care of a full-time

staff horticulturist and a master gardener. A total of 120 rose plants were entered in the trials representing 12 varieties of ten plants each. Plants were evaluated for presence of virus on the basis of laboratory tests. Laboratory testing using ELISA was incorporated into the evaluation. Laboratory tests were performed for two of the most common viruses encountered in the rose mosaic complex – prunus necrotic ring spot and apple mosaic virus.

Only three varieties were found to be completely free of virus. In the remaining nine varieties, one or more plants tested positive or exhibited symptoms. Out of the 100 plants tested (20 plants had no tissue to sample), apple mosaic virus was detected in five plants, representing 5% of the plants. Prunus necrotic ring spot was detected in 24 plants, representing 24% of the plants. This year PPPM tested bud tissue at planting time in May. Results from the testing show that this process can be used to detect virus early in the season on dormant plants as well as later when the plants have matured. PPPM will utilize this information to inform rose marketing firms of varieties exceeding the 10% level of infection. PPPM has begun to implement a new policy whereby specific varieties may be prohibited from sale in the state in succeeding years when found to be heavily infested, ie at or above 10% infection with viruses.

Export Certification

Under cooperative agreement with the USDA, commissioned PPPM staff members received training and authorization to issue federal phytosanitary certificates to facilitate trade in foreign markets. During 2004, PPPM staff issued federal phytosanitary certificates to facilitate the export of Michigan commodities shipped to over 55 countries worldwide. The vast majority went to our trading partners in Canada and Mexico, as well as to Europe and South America. A total of 2,149 federal certificates were issued covering the following commodities: beans and grains, 712 shipments; fruits and vegetables, 162 shipments; logs and lumber, 408 shipments; and propagative commodities (plants, cuttings, seeds and bulbs), 826 shipments.

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Apples to Mexico/Brazil

This was the eighth year that PPPM participated in a certification program to facilitate the movement of apples to Brazil. This was a cooperative effort between PPPM, the USDA, Michigan State University, and the Michigan Apple Committee. The acceptance of this protocol by Brazil has opened another lucrative market for Michigan apples, bringing in additional income for apple producers. Due to the soundness of the procedures, Arizona officials also use this protocol for shipments entering their state.

This was the third year of an initiative whereby certain growers qualified to ship apples to Mexico. Criteria for qualifying included storing the apples in controlled atmosphere storage for a minimum period of time at temperatures just above freezing. When combined with appropriate pesticide treatments, this protocol assures complete freedom from apple pests regulated by Mexico. A total of nine treatment facilities operated by seven brokers and shippers qualified for this year's program.

Christmas Tree Certification

During 2004 PPPM field staff inspected 12,626 acres of Christmas trees for compliance with federal gypsy moth and pine shoot beetle quarantines. The annual wholesale and retail sales of Christmas trees by Michigan producers is valued at over \$38 million, representing nearly 3.5 million trees. Of the 699 fields inspected, 97 percent were certified for shipment outside the state. Restrictions were lower this year than in 2003 due to decreased incidence of gypsy moth found in hardwood trees at the perimeter of the fields. Approximately 40% of those fields restricted were due to presence of gypsy moth egg masses, with the remainder for presence of pine shoot beetle.

This past year marked the eighth year of participation in the Pine Shoot Beetle (PSB) Compliance Management Program for certifying pine Christmas trees. In 2004, 13 firms enrolled 53 fields in the PSB Compliance Management Program, similar numbers to last year. Out of these fields, a total of 50 passed after meeting the program requirements. The remaining fields either failed to

meet requirements or were removed from the program voluntarily by the grower.

US/Canada Greenhouse Certification Program

A total of three Michigan firms are enrolled in the US/Canada Greenhouse Certification Program. Qualified greenhouse growers may ship certain types of plants to Canada under a special sticker certification. Under this program, firms that produce herbaceous perennials, bedding plants, annuals, cacti, and some aquatic plants may qualify for use of a special export certificate for shipments going to Canada. Woody ornamentals are excluded. To qualify, the firm must have a documented pest management program, grow all the plants in a secure screened greenhouse, and maintain records of all shipments. PPPM's roll is to monitor the firm for compliance with the program. Firms that qualify are issued special serially numbered sticker certificates for attachment to shipping documents. This past shipping season an estimated 250 shipments were made by the three firms enrolled in the program.

Invasive Noxious Weed Species

Giant hogweed was found in ten counties in the Lower Peninsula and in Gogebic County in the Upper Peninsula. The southern sites are localized infestations involving a few plants each. One site had previously been reported in a botanical publication. The infestation in the Upper Peninsula was delimited this year by PPPM and USDA staff. A total of 14 sites were found in Gogebic County in the Ironwood area. In addition, officials in Wisconsin also found several sites in that state directly across the river that forms the boundary between the two states. Local reports indicate that the Ironwood infestation has been present for decades, possibly since the early 1900's. Eradication activities are being planned with local, state, and federal agencies cooperating.

Gypsy Moth Program

PPPM continues to rely on the key regulatory strategies first implemented in 1994. These strategies include enhanced inspections, assessing

defoliation levels, and assuring that regulatory treatments and preventative pesticide sprays (for fir, Douglas fir and spruce) meet treatment requirements. Compliance monitoring, an integral part of these strategies, includes a check for proper application rates, correct spray timing, and use of approved insecticides. PPPM refined portions of its policy on inspection and certification of spruce, fir and Douglas fir trees sold as balled and burlapped nursery stock – one of the commodities with increased risk for transport of gypsy moth egg masses. This past season the spray window for treating trees was narrowed considerably to assure better control. Other refinements to the program are under review. PPPM is pleased to report that no regulatory incidents occurred this year involving movement of spruce trees to non-regulated states.

The gypsy moth suppression program saw an increase in acres treated to 23,514 in 2004 compared to 20,200 acres treated in 2003. Gypchek, a formulation of nucleopolyhedrosis virus (NPV) specific to gypsy moth, was applied to 1,067 acres where threatened or endangered Lepidoptera were a concern. The remaining acres were treated with Btk (Foray 48F), a naturally occurring soil bacterium that specifically targets moth and butterfly larvae. A total of 11 counties were treated in 2004. Treatments began May 17 and were completed on May 29.

SURVEY PROGRAM

Swede Midge

Known also as the cabbage gall midge and the cabbage crown gall fly, the Swede midge, *Contarinia nasturtii*, was discovered in Ontario in 2000 following several years of unexplained crop losses. Native to Europe, this gall-forming fly is a serious pest of broccoli, cauliflower, cabbage, and other cole crops. Swede midge larvae feed on developing shoots, resulting in blind or multiple heads and up to 80% yield losses. In 2004 surveys for Swede midge were performed in Allegan, Kent, Oceana, and Ottawa Counties where most cole crop production occurs and in Macomb and Monroe Counties because of their proximity to Ontario. A total of 36 broccoli, cabbage, cauliflower, and kale fields were both trapped for Swede midge adults and scouted for

signs and symptoms of larval feeding damage. This is the third consecutive year of surveying for Swede midge by PPPM, and to date this pest remains undetected in Michigan.

Soybean Rust

Soybean rust was first documented in Japan in 1902 and over the past century has spread across southeast Asia, Australia, Africa, and South America. As many as 60 species of legume can harbor soybean rust, including soybean, kidney bean, lima bean, peas, and kudzu, with yield losses up to 80% being reported. Soybeans are planted on over two million acres in Michigan and add \$350 million to the state's economy. In 2004 surveys for soybean rust were conducted at a total of 45 growing sites in 25 of Michigan's most important soybean growing counties. All samples collected proved negative for soybean rust. However, the fungal pathogens that cause soybean rust (*Phakopsora pachyrhizi* and *P. meibomia*) are capable of long-range dispersal through wind-borne spores. Soybean rust was detected in the southern United States for the first time in late 2004, likely a result of hurricane activity in the Gulf of Mexico during September.

Plum Pox Virus Certification

During the summer of 2004, approximately 1,900 plum pox virus (PPV) laboratory samples were collected to ensure proper certification of susceptible nursery stock. Samples were taken from the scionwood blocks at Hilltop Orchards in Hartford, Michigan and from all farms or research stations where scionwood would be cut for movement to Hilltop, or any other identified nursery. In addition, the PPV project included surveillance of production fields to ensure that appropriate setback distances for certification were adhered to. No positive samples were found. Over 130,000 PPV survey program samples have been collected since 2000 and no evidence of plum pox virus has been identified in Michigan.

Karnal Bunt

Karnal bunt of wheat, caused by the smut fungus *Tilletia indica*, was discovered in 1930 near the town of Karnal in northwest India. Since then it has been

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found in Iraq, Nepal, Pakistan, Mexico, and in Arizona in the US. PPPM again participated in the national Karnal bunt survey in 2004, gathering 13 wheat samples from grain elevators in the state's major wheat production counties. All samples were analyzed and found negative for Karnal bunt by the USDA Laboratory in Onley, Texas. The negative results of this survey facilitate the international export of wheat to countries where Karnal bunt is not known to occur.

Sudden Oak Death (*Phytophthora ramorum*)

Many states, including Michigan, have been conducting surveys for *P. ramorum*, AKA Sudden Oak Death or Ramorum blight, for several years in an early detection effort. PPPM initiated *P. ramorum* surveys starting in 2002. In 2004 PPPM, like most state departments of agriculture, initiated the most widespread surveys to date. As many Michigan nursery growers, dealers, and landscapers import host material from California, Oregon, and the European Union, it is essential to inspect, sample, and take prompt regulatory action to prevent the introduction and/or establishment of *P. ramorum*. PPPM conducted two categories of surveys. The first started in May at retail locations and the second started in June at production nurseries. PPPM planned and inspected the sites based on risk factors listed in the USDA organized National Nursery Survey Protocol. Sites were distributed across the state. Besides these surveys, the Michigan Department of Natural Resources surveyed for *P. ramorum* as part of a routine forest health-monitoring program. USDA Forest Service also examined hosts near nine nurseries that had received potentially infected nursery stock from the West Coast.

During the 2004 growing season, PPPM staff had inspected 41 high-risk production nurseries as part of the National Nursery Survey. PPPM staff collected a total of 1,435 separate samples across 29 host species. The top three species analyzed were rhododendron, viburnum, and lilac. A total of 231 additional samples were taken at 24 retail sites to look for ten specific exotic pest species, including *P. ramorum*. Another 65 samples were taken at nine retail stores where trace-forward information revealed the stores had received potentially infested

stock from the West Coast. All test results for all samples were negative for *P. ramorum*.

BIOTECHNOLOGY AND PLANT PATHOLOGY

Scionwood

PPPM Plant Pathology is actively involved in improving the quality of pome and stone fruit trees in Michigan. This program is established at a large commercial fruit tree nursery. The nursery maintains 12,467 stone and pome trees in four scionwood orchards for certification of budwood for virus-free status. In 2004, none of the indexed trees developed viral symptoms while only 0.9 % of 9,687 trees that were tested for PNRSV and PDV using ELISA were positive for those viruses. Currently 1,297 indexed trees are under observation in the MDA greenhouse at the Geagley Laboratory in East Lansing. In FY04, the nursery sold 298,031 certified fruit trees.

Blueberry Certification

PPPM staff conducts virus-free certification of blueberry plants to help growers obtain disease-free, vigorous plants for export and planting. Under this program, the Plant Pathology Section ELISA tested 700 samples, representing 990,000 plants in 95 varieties, from three commercial blueberry nurseries for Tobacco Ring Spot Virus (TRSV) and Tomato Ring Spot Virus (ToRSV). All samples tested negative for the viruses. Blueberries were not tested for shock and scorch viruses in 2004 as all plants tested in 2002 were found to be negative, an indication that these viruses are not presently in Michigan.

PPPM Plant Pathology is finalizing work on a Polymerase Chain Reaction (PCR) based technique for identifying blueberry cultivars and will soon offer this service at a fee. Interested growers can contact the Laboratory at (517) 203-1366 for more information.

Biotechnology and Plant Post-Entry Quarantine (PPQ) Import Permits

To facilitate safe introduction of foreign genetic material for quality improvement of fruit trees and

other crops in Michigan, PPPM reviews applications and issues import permits in cooperation with USDA-APHIS. In FY04, PPPM in agreement with USDA-APHIS, approved a total of 37 biotechnology permits for ten companies and two research institutions in Michigan. Two permits were for field trial studies, nine for interstate movement, and 26 were for both field trials and interstate movement. Biotechnology activities took place in eight counties.

Under the PPQ program, 15,000 Hibiscus cuttings and 23 Hydrangea plants were released from post-entry quarantine. Currently, 351 Hydrangea, 4 Rosa and 62,500 Clematis remain in quarantine.

Dry Bean Testing

The dry bean industry is an important component of Michigan agriculture. To maintain the quality of dry bean seed and meet seed certification and export requirements, PPPM tests dry bean samples for seed-borne diseases (anthracnose, common bean mosaic virus and common bean blight). In 2004, PPPM tested 126 dry bean samples of which 77 were certified and 49 were non-certified. Six samples (2.6%) of certified seed and five (10.2%) of non-certified seed were positive for bean blight. All certified seed samples tested negative for common bean mosaic virus (CBMV). The Pathology Lab is researching the possibility of using the PCR method in order to make the detection of bacteria in dry beans faster and more specific. The grow-out procedure currently used is slow and non-specific to pathogen and strain, but is popular with some growers and will be retained.

Michigan dry bean production experienced a slight increase in acreage in 2004; however, acreage in seed production remained unchanged at about 2,000 acres. Industry analysts predict improved prices for the commodity in 2005.

Seed Corn Certification

To enable the seed industry to meet the seed corn phytosanitary requirements for planting and export, PPPM Plant Pathology processed a total of 367 seed corn samples representing 22,495 acres from seven growers for fungal, bacterial and viral diseases in 2004. Samples were collected and delivered to the

Pathology Lab by field inspectors from PPPM and the Michigan Crop Improvement Association (MCIA). Twenty-eight of the seed corn fields submitted for certification tested positive for Stewart's wilt, *Erwinia stewartii*, while another 34 tested positive for Goss' wilt, *Clavibacter michiganensis* subsp. *nebraskensis*.

Nematode Survey

Since soybean cyst nematode (SCN) is a pest of quarantine significance in Michigan's export and domestic markets, the SCN survey was continued in 2004 to facilitate the movement of nursery stock and other farm products. In 2004, PPPM inspectors collected 66 nematode samples from 61 nurseries in 16 counties. In addition, 33 samples from seed potato fields belonging to 15 growers in six counties, representing approximately 1,050 acres, were analyzed. Neither SCN nor golden cyst nematodes were detected in the samples. However, high numbers of root lesion nematode, which can be a hindrance to stone-fruit export markets, were found in samples from one nursery. The affected nursery stock was treated prior to shipment.

Potato Virus Yn (PVYn)

In 2004, the Plant Pathology Lab tested 35 potato samples from eight growers for PVYn for export requirements. All samples tested negative for the virus.

Plum Pox Virus (PPV) Survey

The National Plum Pox Virus Survey conducted from 2000 through 2003 did not detect the PPV in Michigan and the state is now considered free from this disease. The survey has been terminated. PPPM tested 1,933 prunus samples from five growers in two counties for export purposes. All samples tested negative for PPV.

Sudden Oak Death (SOD) Survey

In 2004, Michigan was one of the states that received shipments of plant material from California and Oregon, which were infected with *Phytophthora ramorum*, a plant pathogenic protist that poses a threat to the nation's oak trees. In a survey

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conducted in the state, PPPM field inspectors collected 1,707 samples of various plant species and genera known to be susceptible to *P. ramorum* from 66 facilities. Conventional (cultural and morphological) and molecular (DNA) methods were used to diagnose the disease. All Michigan samples tested negative for *P. ramorum*. The disease has not been reported in Michigan

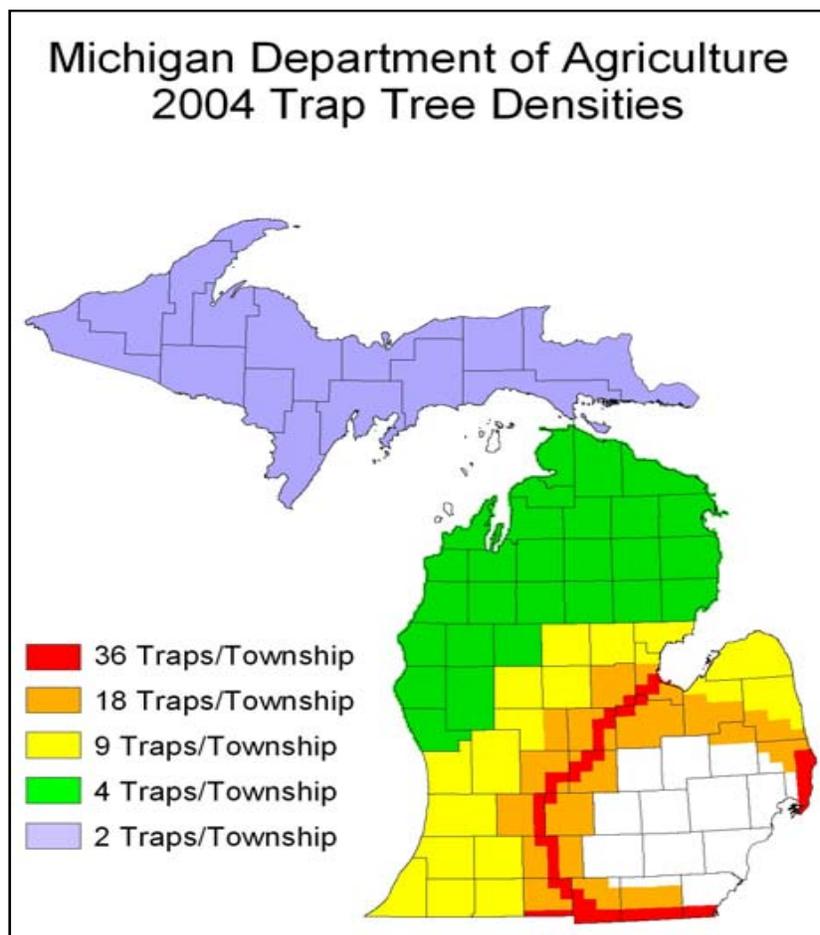
EMERALD ASH BORER

The destructive Asian beetle, the 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 found in 13 Michigan counties and has killed approximately 15 million of Michigan's 700 million ash trees. In addition, several smaller infestations have been found throughout Michigan as well as Maryland, Ohio, Indiana, and Virginia, all located outside the known generally infested area. These infestations are attributed to artificial movement of nursery stock, firewood, and logs.

During the past two years, MDA along with its partners, the Michigan Department of Natural Resources (MDNR), USDA, and 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 to lead to eradication.

Detection/Survey Activities

In May 2004, 10,000 trap trees were strategically set in every township at varying densities, in each of Michigan's 83 counties, except those known to be generally infested. Research performed in 2003 found that trap trees (ash trees girdled by cutting the conductive tissues around the circumference of the trunk and wrapped in Tanglefoot-coated shrink wrap to collect adult beetles) were significantly more attractive to the EAB than healthy trees, especially in low-level EAB populations. Use of trap trees proved to be far more effective than visual surveys and allowed survey crews to collect larvae and adults from approximately 150 trap trees, identifying eight new county infestations outside the 13-county quarantine. This project involved a total of nearly 125 people, including EAB surveyors and crew leaders, EAB regulatory inspectors, PPPM inspectors, and Conservation District foresters.



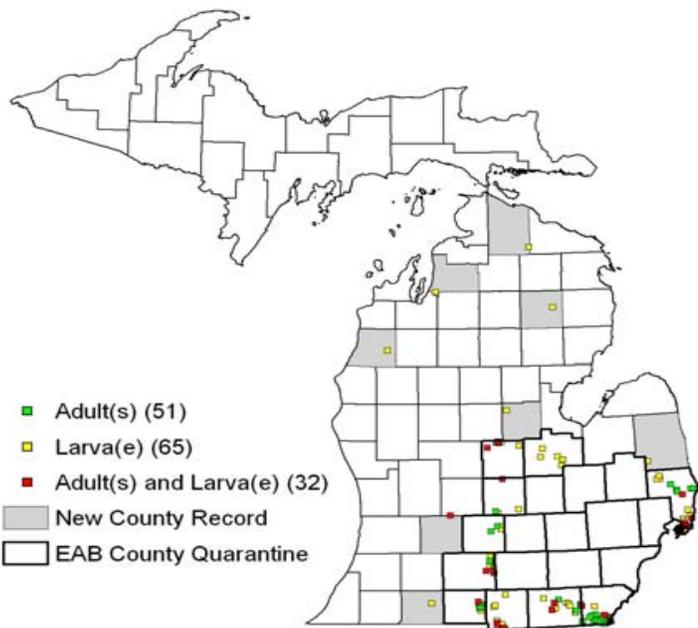
Trap tree densities ranged from 36 traps per township along the St. Clair River, the Michigan-Ohio border, and within the proposed “reduced ash zone”, to one tree per 36-square mile township in portions of the Upper Peninsula. The trap trees were established prior to adult flight, monitored throughout the summer for the presence of adult beetles in the Tanglefoot, and felled and peeled after adult flight to examine the trees for developing larvae.



The results of the program clearly demonstrated the usefulness of this tool as a method to detect EAB. Eighty-three trees were found positive for adult EAB during the monitoring phase and 97 trees were found positive for larvae during the removal/peeling phase. Thirty-two of the total 180 trap trees produced both adults and larvae. Eight new county records for EAB resulted from trap tree finds, and nine of the 14 EAB infestations currently found outside the EAB quarantine were detected using trap trees. Southern St. Clair County, which had been extensively surveyed visually and believed to be lightly infested with EAB, was found to be generally infested as a result of trap tree efforts. In short, the 2004 EAB Trap Tree Program provided the best picture to date of the distribution of EAB in Michigan.

In addition to the large-scale effort involved in the EAB trapping project, survey and regulatory crews conducted visual ash inspections at 70,030 sites in 2004, representing the examination of approximately 1,073,000 trees. PPPM inspectors surveyed 1,955 high-risk sites statewide, including sawmills, firewood dealers, campgrounds, and nurseries. Student employees performed a total of 819 inspections at 675 campgrounds throughout the Lower Peninsula. The EAB hotline received 3,355 calls in 2004, of which 447 merited follow-up by field staff. Taken together, these activities resulted in the discovery of five EAB infestations located outside the current 20-county EAB quarantine.

Michigan Department of Agriculture 2004 Trap Tree Program Results



Regulatory Activities

Preventing the artificial spread of EAB continues to be a priority for the state. In 2004, PPPM focused on enforcing the quarantine and increasing compliance. Regulatory activities included monitoring the movement of ash products, conducting regular inspections, and investigations.

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In December 2004, PPPM revised its EAB Quarantine to include seven new counties (Branch, Calhoun, Clinton, Eaton, Gratiot, Hillsdale, and Saginaw) bringing the total to 20 quarantined counties. The updated quarantine also reflects a total of 16 outlier sites.

PPPM continues to identify and contact firms and persons that may artificially spread EAB. Licensed nursery and landscape firms have received mailings informing them about the EAB quarantine and the amended quarantine document with license renewals. Inspectors continued contacting 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 marshalling facilities. PPPM and EAB inspectors contacted an approximate total of 12,000 firms in the past year, including 8,800 nursery and plant dealers and 3,200 high-risk firms.



PPPM regulatory staff established firewood checkpoints along major interstates leading out of regulated areas during key travel weekends in 2004. The timing of the events were selected to coincide with the Memorial Day weekend, Labor Day weekend, and the weekend prior to the opening of the firearm deer hunting season. These events resulted in the confiscation of 9,100 pieces of firewood, with very few being ash. Some signs/

symptoms of EAB were noted. Confiscated wood was disposed of at EAB marshalling yards.

In April of 2004, EAB regulatory staff and USDA-APHIS-PPQ staff met to develop standard procedures for issuing and monitoring EAB related compliance agreements. Compliance agreement templates were developed utilizing criteria that had to be met in order to deregulate ash and ash products and to allow for the movement of such products. Very specific stipulations had to be met in order for firewood to be deregulated. It was also agreed that any request for an EAB related compliance agreement required a site inspection of the requestor to be conducted cooperatively by PPPM and USDA-APHIS-PPQ inspectors. In 2004, PPPM issued three compliance agreements, bringing the total to date to 18.

These standard procedures were revised at the end of 2004 to address some logistical and jurisdictional issues. When moving regulated articles within the State of Michigan from within the quarantine area to outside the quarantine area, a compliance agreement between the firm and the state is issued and addresses the State of Michigan EAB Interior Quarantine. When regulated articles are moved from within Michigan to another state, a limited permit (PPQ form 530) is issued through the USDA-APHIS-PPQ Officer.

On a regular basis, PPPM staff inspects firms or persons with compliance agreements to verify that appropriate treatment and disposal methods are met, that permits are current, 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. In 2004, one compliance agreement for firewood may be revoked because the firm could not meet the firewood stipulations.

In March 2004, August 2004, and again in December 2004, PPPM revised the quarantine to reflect information gathered from survey and data collection information. This ensures the state's strategy and quarantine is responsive to changing information and founded on the best available science and data. PPPM inspectors have provided additional assistance in the trace-back work for the EAB

outliers found. This trace-back work includes the inspection of any regulated ash article, saw logs, firewood, and nursery stock, and the possible source of the artificial movement. This activity led to investigations of 17 violations of the quarantine with five leading to legal action or prosecution.

PPPM is looking into alternative wood utilization avenues with the ash fiber. The expansion of the quarantine and the new information where EAB has been found has resulted in exploring alternative ways and finding new sources for digesting wood fiber and wood utilization.

Alternate uses of the ash wood product were explored during the eradication and containment actions of 2004. Ash logs that could be milled into other items were deregulated, allowing movement into non-quarantine areas. This wood was used to manufacture items such as furniture parts, baseball bats, and vacuum cleaner parts. Revenue gained from these value-added products can be returned to the property owner or to the municipality.

Control/Eradication Activities

To date, Michigan has detected several isolated EAB infestations outside the known generally infested area. These outliers were prioritized for removal based on their pest populations, location, risk of spread, and national/international significance. PPPM completed ten control activities in 2004. Six were eradication actions that occurred in Saginaw County, Shields; Eaton County, Delta Township; Calhoun County, Marshall; Kent County, Wyoming; Berrien County, St. Joseph; and Roscommon County, St. Helen. Four were containment actions in Eaton County, Pottersville; St. Clair County, Cottrellville; Ingham County, Lansing/Meridian area; and Branch County, Quincy. To eradicate EAB, PPPM staff removed all ash trees located within a ½-mile radius of the last known EAB infestation in an outlier area. They also conducted 200-yard cuts of ash trees in key control areas in order to suppress and minimize further EAB spread. To date, this activity has impacted approximately 8,300 property owners. The combined total of trees removed from the eradication and containment actions resulted in over 233,000 ash trees removed.

Sanitation and Disposal Activities

In response to the regulation of ash movement out of the quarantine, PPPM expanded the marshalling yard operations from the existing four yards to a total of eight yards by the close of FY04. PPPM sponsored marshalling yards were in place in the following locations by September 2004: Ann Arbor, Flint, Macomb, Plymouth, Riverview, Waterford, Westland, and Whitmore Lake. In 2004, a total of 123,914 tons of material was chipped for incineration at a co-generation plant for the production of



electricity. To date over 200,000 tons of wood chips have been produced at these yards.

In addition to disposal by chipping within the marshalling yards, PPPM also worked with contractors to develop and expand the utilization of wood in alternate uses to chipping for fuel in order



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to help sustain the marshalling yard operations and reduce costs of the grinding operations. The marshalling yard operations were supported by PPPM in their proposals to bandsaw lumber, railroad ties, and other products from the logs brought into the marshalling yards. In addition, logs were permitted to move to a permanent sawmill that was established in Flatrock, in place to digest ash logs for the manufacture of ash doweling for tool handles and other implements. Approximately 6,000 ash logs from PPPM outlier removals and from marshalling yards were moved to Flatrock for milling into useable products. In cases where logs were marketed from outlier eradication actions, the value was returned to the community.

In recognition of the benefit of the marshalling yards to the overall EAB program objectives, PPPM is planning to expand the marshalling yard operations to meet the needs of property owners in additional locations where EAB containment is a recognized program need. Continued efforts by PPPM and partners will occur to identify and enhance wood utilization markets in order to move to self-sufficiency on the part of the marshalling yards over time. Currently the marshalling yards are configured to receive ash at no cost. While disposal of other species of wood is also a part of the program, fees may be charged for non-ash materials received for processing.

Communications and Outreach

Timely and clear communications, outreach and education efforts are essential in every aspect of the EAB program. Increased public awareness and understanding enhances compliance with the quarantine and support's the state's overall eradication efforts.

In 2004, Communications staff developed a detailed outreach and education process for each area impacted by EAB, to outline the state's plan, and to provide an opportunity for impacted property and business owners to ask questions. This process included a series of public meetings, media updates, and "tag a long" opportunities.

PPPM continued to sponsor the EAB collaborative communications committee whose membership includes communications specialists from the state's

EAB Response Project partners. This group meets weekly to ensure a coordinated communication effort and consistent deliverable public message.

PPPM produced and disseminated numerous outreach and educational materials to stakeholders as well as the general public. Staff hosted numerous informational booths, educational seminars, workshops, and group discussions at the state and national level, including a workshop for the green industry professionals and local planners in February and an EAB symposium on October.

Communications staff participated in three firewood checkpoint events and conducted a survey to gauge public awareness of EAB. A paid advertising campaign was initiated and included 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 Granholm declared May 24-30 as "Emerald Ash Borer Awareness Week."

PPPM hosted legislative and local tours in EAB impacted areas, as well as conducted briefing sessions regarding the latest EAB news and efforts.

PPPM worked with the top 100 hunting supply/licensing retail stores the week prior to firearm deer

season. Retailers were given a total of 100,000 “Don’t Move” Firewood” flyers to distribute to customers.

Restoration

The overall objectives of the state’s EAB restoration program are to support response/ eradication efforts; and assist impacted communities and property owners to restore, maintain, and protect the health and diversity of Michigan’s forest resources.

EAB funding provided 54 grants totaling more than \$855,000 to communities within the 13 quarantined counties. More than 10,000 trees will be replanted through these grants. Eleven grants were awarded to communities located in EAB outlier locations, totaling \$201,000. More than 1,800 trees will be replanted in these areas.

Tree Removal

The U.S. Congress appropriated \$1.2 million for tree removal in Southeast Michigan. In May, the Southeast Michigan Council of Governments (SEMCOG) was invited to assist PPM in identifying a system to equitably distribute this federal funding to municipalities for ash tree removal in the six county core area.

A total of 17,153 ash trees (4 inches and larger) were removed in the 52 municipalities interested in participating in the program.

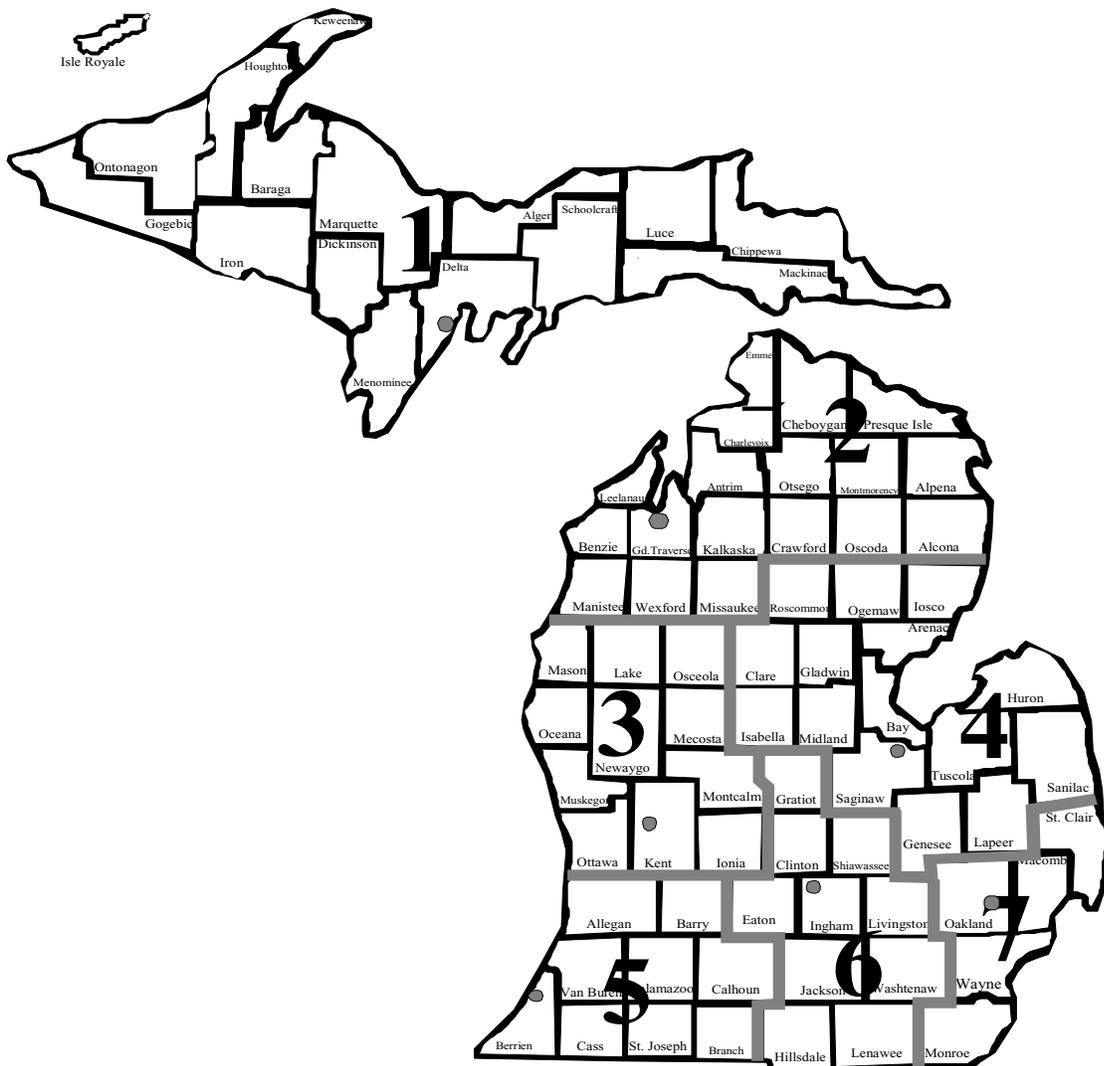
Pesticide and Plant Pest Management Division

More information...

For more information on this report or for questions on Pesticide and Plant Pest Management Division program activities, consult the MDA website at www.michigan.gov/mda, contact the division at (517) 373-1087 or a regional office listed below.

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Region 5	St. Joseph	(269) 428-2575
Region 6	Lansing	(517) 335-1830
Region 7	Southfield	(248) 356-1701



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