



Maryland Department of Agriculture

Office of Resource Conservation

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Joseph Bartenfelder, Secretary
James P. Eichhorst, Deputy Secretary

The Wayne A. Cawley, Jr. Building
50 Harry S. Truman Parkway
Annapolis, Maryland 21401
www.mda.maryland.gov

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410.841.5863 Baltimore/Washington
410.841.5734 Fax
800.492.5590 Toll Free

PESTICIDE REGULATION SECTION

July 20, 2016

Mr. Karl Aro
Maryland General Assembly
Office of the Executive Director
Legislative Services Building
90 State Circle
Annapolis, MD 21401

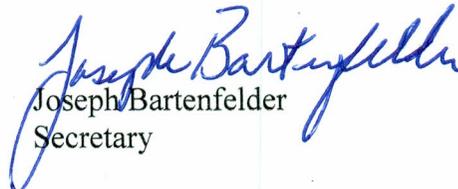
Dear Mr. Aro:

The Maryland Pesticide Registration and Labeling Law require the Maryland Department of Agriculture to develop a comprehensive pesticide data program and, in accordance with Section 2-1312 of the State Government Article, to provide the General Assembly with an annual report of pesticide data for Maryland.

As required by the State Government Article, I am sending the Department of Legislative Reference five (5) copies of the Pesticide Data Report for fiscal year 2016. Additional copies of the report are available for any member of the General Assembly whom the President or the Speaker may indicate should receive a copy, or for any member who asks for the annual report.

I trust that this complies with the requirements of the law and intent of the General Assembly. Please feel free to contact me if you have any questions, a comment, or need additional copies of the report.

Sincerely,


Joseph Bartenfelder
Secretary

Enclosures: Maryland Pesticide Data Report for 2016

2-2746

Services



MARYLAND
PESTICIDE DATA REPORT
FOR 2016

MARYLAND
DEPARTMENT OF AGRICULTURE



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MARYLAND PESTICIDE DATA REPORT FOR 2016

I. INTRODUCTION

The Maryland Pesticide Registration and Labeling Law (Title 5, Subtitle 1, Agriculture Article, Ann. Code Md.), Section 5-102(D), requires the Secretary of Agriculture to develop a comprehensive pesticide data program and to provide the General Assembly, in accordance with Section 2-1246 of the State Government Article, a report on pesticide data. The annual data program is to include the number and types of enforcement actions taken and figures for the number, types, and uses of pesticides in Maryland.

A pesticide, as defined generally by state and federal law, is any substance, or mixture of substances, intended to prevent, destroy, repel, or mitigate any pest. There are at least 21 different classes (types) of pesticides based on their target pests, including algaecide = target pest is algae; avicide = birds; bactericide = bacteria; fungicide = fungi; growth regulator = insect or plant growth; herbicide = weeds; insecticide = insects; rodenticide = rodents; and slimicide = slime molds.

II. BACKGROUND

The Maryland Department of Agriculture (MDA) is the State agency responsible for regulating the distribution, sale, storage, use and disposal of pesticides in Maryland. The Department cooperates with other State agencies and institutions and federal agencies to conduct pesticide education, regulatory and enforcement programs. Departmental activities and responsibilities are described briefly, as follows:

A. Pesticide Regulation Section

1. Enforcement Program

The Pesticide Regulation Section of the Maryland Department of Agriculture enforces federal (Federal Insecticide, Fungicide, and Rodenticide Act or FIFRA) and state (Pesticide Applicators Law) pesticide use laws and regulations. Under the enforcement program, MDA conducts routine inspections of licensed pesticide businesses, public agencies and restricted use pesticide dealers. Inspections include review of pesticide application records, restricted use pesticide sales records, safety equipment, storage areas, application equipment and vehicles and anti-siphon devices. Use observations are conducted to observe actual pesticide applications to field crops, structures, lawns and ornamentals to ensure compliance with label directions and state and federal regulations.

Pesticide misuse, incidents, and consumer complaints are investigated. In the event of a violation, the Department has the authority to suspend, revoke or deny a

license or certificate and to assess a civil penalty. As part of a Cooperative Agreement with the U.S. Environmental Protection Agency (EPA), the Pesticide Regulation Section conducts pesticide producer establishments, Marketplace, Worker Protection, Container-Containment and, pesticide imports inspections. EPA also refers complaint investigations and special initiative inspections to the Department for investigation.

2. Applicator Certification and Training Program

The Pesticide Regulation Section certifies private and commercial pesticide applicators to verify the competence of the applicator. Private applicators (farmers) are given closed-book written exams to become certified for a three year period. Certification authorizes them to purchase and apply restricted use pesticides on their own property for the purpose of producing agricultural commodities. Certificates are renewed by MDA after submission of proof of update training. MDA certifies commercial applicators (employees of pest control businesses and public agencies) who meet minimum standards of experience or education requirements and who have passed written exams in specific pest control categories. Commercial applicator certificates are renewed annually, after required training has been obtained in order to maintain their level of competency. MDA approves and monitors applicator recertification training courses and sets minimum standards for approval of courses for recertification purposes. Private and commercial applicator training sessions are coordinated with county extension agents who are provided training materials such as slide sets, videos and educational brochures by MDA. In addition, MDA registers employees who work under the supervision of certified commercial applicators. Prior to registration with the Department, and within 30 days of employment, the employee must be trained according to standards developed by MDA.

MDA issues licenses and permits to pesticide businesses or public agencies that apply general or restricted use pesticides. Dealers who sell restricted use pesticides must obtain a permit issued by MDA to do so. MDA issues licenses to pest control consultants who either identify pests or recommend pesticides or other techniques for the purpose of controlling pests.

3. Technical Information Collection and Dissemination Program

The Pesticide Regulation Section provides information to pesticide applicators, dealers, federal, state and local agencies and the general public on issues concerning pesticide use and pesticide regulation. Training materials, informational brochures and fact sheets are developed for pesticide applicators in order to provide compliance assistance when new guidelines or regulations are implemented. A series of

"Pesticide Information Sheets" was developed to provide information on pesticide issues and regulations to consumers and pesticide applicators. The Pesticide Regulation Section developed a Consumer Information Bulletin for use by licensed lawn and landscape firms for distribution to their customers. In addition, the Section has compiled pesticide product label information that must be given to all pest control customers to inform them of any safety precautions or environmental hazards associated with each pesticide used. A listing of pesticide sensitive individuals is available so that these listed individuals can receive advance notification prior to lawn and ornamental pesticide applications being made to adjacent properties by licensed pest control businesses or public agencies. Maryland is one of only twelve (12) states that have a mandated pesticide sensitive individual notification program.

The Department provides information to applicants on where and how to obtain study materials for certification and conducts certification examination sessions every other month in three regional locations. Private applicators (farmers applying restricted use pesticides) receive exam study materials provided by the Department and are offered certification examinations in county extension offices on an as-needed basis.

Homeowners are given information on licensing requirements for pest control firms, as well as information on termite inspections and control, proper pesticide handling and alternatives to chemical pest control. Table top displays, brochures, and "Pesticide Information Sheets" have been developed for use at various trade shows, grower meetings, and State and county fairs.

During 2015, MDA continued to expand the Pesticide Regulation Section's Homepage so that information on pesticide business licensing requirements, certification exam dates, recertification training sessions, pesticide container recycling dates, Pesticide Information Sheets, and Integrated Pest Management in Schools is available on the Internet. Consumers can now electronically file complaints, report pesticide incidents, download application forms to apply for certification, request employee I.D. cards and request additional information about pesticide regulations and management programs. An added feature to the Section's website is a searchable database of registered pesticide products, licensed pesticide businesses and pesticide applicators. Pesticide dealers can verify an applicator's certification, applicators can search for pesticide products by brand name, active ingredient, use site or pests controlled and homeowners can locate licensed pest control businesses in their area.

4. Water Quality Protection, Endangered Species Protection and Worker Protection Programs

MDA is involved in four Federal (EPA) regulatory programs that are being implemented through the states. The Department has developed a State water quality

management plan for managing the use of pesticides to protect water resources as part of its Water Quality Protection Program. The Department monitors EPA's "Pesticides of Interest" list annually to maintain a list of "Pesticides of Concern" within Maryland. Under the Endangered Species Protection Program, the Department is responsible for programs to protect federally listed endangered species that may be harmed by the use of certain pesticides. The Department has implemented and conducts the federal Worker Protection Standard Program to protect certain pesticide users, handlers and farm workers from exposure to pesticides. The Department also inspects agricultural facilities to ensure bulk pesticide storage tanks, containment structures and mixing/loading pads meet state and federal requirements. The Department has been coordinating these efforts with appropriate state and federal agencies that have certain other responsibilities in these areas.

5. Special Programs

The Pesticide Regulation Section conducts special programs relating to pesticide management, when funding is available. These special programs address specific pesticide issues, environmental concerns or regional situations that require additional focus and attention beyond routine programs. Special programs may include development of informational materials and pesticide educational programs, participation in pesticide monitoring programs, and coordination of pesticide container and unusable pesticide disposal programs.

6. Chesapeake Bay Programs

MDA is an active participant in efforts to restore the Chesapeake Bay. Pesticide management commitments have been incorporated into the Toxics 2000 Strategy as part of the Chesapeake 2000 Agreement and include commitments for adoption of integrated pest management, development of programs for pesticide container recycling and unusable pesticide disposal, and implementation of agricultural best management practices. These pesticide management programs conducted by the Pesticide Regulation Section have placed Maryland in a leadership role and have given MDA recognition as one of the key Bay agencies in toxics reduction. Future toxics programs will be shaped by MDA and implemented through the Section's regulatory and educational programs.

7. Integrated Pest Management in Schools

The Pesticide Regulation Section has been conducting an Integrated Pest Management in Public Schools Program since 1995, in cooperation with the Maryland State Department of Education, Maryland Association of Boards of Education, county school systems, University of Maryland, Maryland State Pest

Control Association, and EPA. The purpose of the program is to review each school system's pest management practices and to provide technical assistance to Maryland public school systems to facilitate the implementation of IPM programs in order to reduce the risk of exposing students and staff members to pesticides. Mandatory IPM programs have been required in Maryland public schools and on school grounds since 2000.

B. State Chemist Section

1. Registration

The State Chemist Section (SCS) is responsible for registration of all pesticide products distribute, sold, or transported in Maryland. The purpose for product registration is to ensure the sale and distribution of commodities that are effective and safe for humans and the environment. In 2016 the section registered 12, 497 products.

2. Inspection

Product quality and safety are determined by chemical analysis of products sampled by the Section's staff which inspects, on a regular schedule, warehouses and retail outlets. During 2016, 215 products were sampled for formulation analysis. SCS inspectors also collected 358 samples of fruit juice, produce, fruit and processed food to be analyzed by USDA/FDA to aid in establishing pesticide tolerances in foods consumed by children and infants.

3. Chemical Analyses

In 2016 the Section analyzed thirty-four MDA/EPA and DC/EPA sample for pesticide investigations. The Section also analyzed sixteen MDA/EPA samples and one DC/EPA sample for formulation content.

4. Food Safety Program

The SCS continues to generate pesticide data relative to determining the safeness of Maryland-grown vegetables/fruit sold at roadside stands and farmer markets. No samples were collected in 2016. The data is sent to EPA and the U.S. Department of Agriculture (USDA) for incorporation into national data banks.

Maryland Department of Agricultural Contacts:

Kevin Conroy	Dennis W. Howard	Tom Phillips
Assistant Secretary	Program Manager	State Chemist/Program Manager
Office of Plant Industries	Pesticide Regulation Section	State Chemist Section
(410) 841-5870	(410) 841-5710	(410) 841-2721
kevin.conroy@maryland.gov	dennis.howard@maryland.gov	tom.phillips@maryland.gov

III. PESTICIDE REGISTRATION DATA AND ENFORCEMENT

The Pesticide Registration and Labeling Law requires a distributor of pesticide products to Annually register the products with MDA's State Chemist Section (SCS) before distribution in the State. The State Chemist Section utilizes a computerized registration process, which has expedited and improved the accuracy of the registration process and has enabled the Section to compile more information about registered pesticide products.

During 2016, pesticide product registration data include

- | | | |
|--|---|--------|
| 1. Number of registrants | = | 1,001 |
| 2. Number of pesticide products registered | = | 12,497 |

As a result of the State Chemist Section's enforcement and registration program (pesticide dealer inspections, product sample collection, chemical analysis and label review), the following regulatory actions were taken against pesticide products violating the State Pesticide Registration and Labeling Law:

- | | | |
|---|---|-----|
| • Market place samples collected and analyzed | = | 215 |
| • Total chemicals analyses | = | 245 |
| • Non-registered product (products offered for sale but not registered with the Department) Stop Sale Order | = | 9 |

In support of the Pesticide Regulation Section's enforcement activities, and for other State agencies, the SCS laboratory analyzed samples (soil, water, tissue, swabs, product, etc.) for pesticide residues. The following is a summary of the analyses:

Investigation Samples (pesticide misuse, accidents):

Samples analyzed	=	43
Total number of analyses	=	4,725

Food Safety Program: Monitoring of Maryland produce offered for sale from June – September (1997 – 2015)

Numbers of samples containing pesticides:

1977 – 51 samples collected	=	25 positive
1998 – 50 samples	=	19 positive
1999 - 51 samples	=	15 positive
2000 – 75 samples	=	19 positive
2001 – 75 samples	=	52 positive
2003 - 60 samples	=	1 positive
2004 – 72 samples	=	none detected above EPA tolerances
2005 – 89 samples	=	none detected above EPA tolerances
2006 – 56 samples	=	24 positive
2007 – 48 samples	=	none detected above EPA tolerances
2008 – 64 samples	=	none detected above EPA tolerances
2009 – 64 samples	=	none detected above EPA tolerances
2010 – 70 samples	=	none detected above EPA tolerances
2011 – 92 samples	=	none detected above EPA tolerances
2012 – 94 samples	=	none detected above EPA tolerances
2013 – 80 samples	=	none detected above EPA tolerances
2014 – 72 samples	=	none detected above EPA tolerances
2015 – No samples		
2016 – No samples		

*It would appear that samples of produce grown in Maryland are free of pesticides, e.g., none detected at levels equal to or greater than the tolerance levels established by the U.S. Environmental Protections Agency.

IV. PESTICIDE USE ENFORCEMENT INSPECTION AND ACTIONS

During 2106, inspections of licensed pest control businesses and public agencies were conducted as follows:

1. Routine business inspections	=	470
2. Routine public agency inspections	=	132
3. Pesticide Dealer Inspections	=	84
4. Pesticide Use Observations	=	77
5. Pesticide Samples collected for analysis	=	59
6. Application records reviewed	=	568

Violations detected during pest control business inspections are summarized in Table 1 and include:

1. Number of businesses and public Agencies with violations	=	470
2. Unregistered employee violations	=	6
3. Records incomplete or inaccurate	=	69
4. Vehicles not properly identified	=	24
5. No anti-siphon device	=	8
6. No First Aid/Safety Equipment violations	=	3
7. No customer information	=	12

During 2016, regulatory or enforcement actions taken against individuals or firms violating the Maryland Pesticide Applicators Law. The actions taken or penalties assessed from specific violations of the law or regulations are summarized, as follows:

1. Consumer Complaint Investigations = 40 (Investigations initiated as a result of written complaints from consumers regarding pest inspections or pesticide misuse.)
2. Investigational Conferences = 2 (Informal meeting held with licensee and/or complainant to gather additional information about an ongoing investigation or to alert licensee to a situation requiring immediate action.)
3. Administrative Hearing = 0 (Formal Hearing before an Administrative Law Judge, because of the magnitude of violation warrants it or, because of a repeat violation by the firm or individual).
4. Penalties Assessed:
 - a. Notices of Warning = 156 (Certified Letter notifying licensee, permittee, or individual that they have committed a violation or, that a situation needs to be corrected).
 - b. Field Notices = 14 (Violations noted by field Inspector during routine inspection. Licensee, permittee or individual is informed of an infraction and give a compliance period to correct the infraction).
 - c. Criminal Action = 0 (Action taken against an individual or company that is operating without a pesticide business license or who has repeatedly violated pesticide laws. Individual is prosecuted through county court system).
 - d. Civil Penalties = 7 (A civil penalty may be assessed in lieu of or in addition to a suspension or revocation of a license, permit, certificate, or employee

registration card. The Secretary may impose up to a \$2,500 penalty per violation). Licensees were assessed a total of \$5,980 in civil penalties.

Under the federal pesticide enforcement cooperative agreement, the following inspections were conducted by the Pesticide Regulation Section Inspection staff:

1. Pesticide producer establishment inspections	= 28
2. Pesticide marketplace inspections	= 26
3. Pesticide Import Inspections	= 0
4. EPA referrals for inspection/investigation	= 1
5. Pesticide Container/Containment inspection	= 9

V. PESTICIDE APPLICATOR CERTIFICATION AND TRAINING PROGRAM

During 2016, the following licensing and certification activities were conducted and are summarized below.

1. Pesticide businesses licensed	= 1,693
2. Public agencies permitted	= 312
3. Pesticide dealer permits	= 150
4. Pest control applicators certified	= 4,505
5. Private applicators certified	= 3,185
6. Commercial applicators examined	= 763
7. Total examinations administered	= 2,097

In order to maintain applicator certification, private applicators must participate in Departmental approved training once every three years. Commercial applicators of pesticides must attend an annual recertification training session. The following data indicate the training held in 2016.

1. Commercial applicator training sessions held	= 512
2. Private applicator training sessions held	= 129
3. Commercial applicators recertified	= 3,286
4. Private applicators recertified	= 1,570

VI. PESTICIDE USE DATA

The Pesticide Regulation Section regulates the use of pesticides in Maryland (See Section II). An essential factor in conducting effective regulatory or educational programs on pesticides is data relating to the quantity and distribution of pesticide product usage in the State. It is a costly and complicated process to collect pesticide usage data. Therefore, the Department conducted use surveys on a 3 – year cycle, beginning in 1982 and followed with Annual surveys for 1985, 1988, 1991, 1994, 1997, and for 2000. Due to limited resources (funds and personnel), the Department was limited to conducting additional pesticide usage Surveys in 2004 and 2011. The data was compiled by the National Agricultural Statistics Services (NASS), and agency of the U.S. Department of Agriculture, in cooperation with MDA. The Department contracts with NASS to conduct the surveys and to provide final Data, but MDA has no access to the raw data in order to protect the confidentiality of the Data and privacy of the respondents.

Maryland is unique in having such extensive pesticide use data, as no neighboring state has similar data. These data meet the commitment made by Maryland as part of the Chesapeake Bay Agreement. In addition, the data has been used in a variety of ways, including as a basis for conducting surface water surveys or ground water surveys, and as a basis for developing state pesticide management plans to deal with pesticides with a potential to be a problem in water sources. MDA is planning on contracting with NASS to conduct future pesticide usage surveys.

VII. WATER QUALITY PROTECTION, ENDANGERED SPECIES PROTECTION AND WORKER PROTECTION PROGRAM

MDA, as state lead agency for pesticide management, is responsible for developing a Pesticide Management Plan (PMP) to protect water quality resources. The Pesticide Regulation Section has participated in EPA sponsored ground water protection training Courses on pesticide monitoring and wellhead protection in order to obtain information and guidance on developing Maryland's PMP. The PMP is one facet of an overall Comprehensive State Ground Water Protection Program (CSGWPP) which includes all state programs affecting ground water resources of the State.

MDA coordinated efforts with the Maryland Department of the Environment (MDE) and Maryland Department of Natural Resources (DNR) to initiate development of Maryland's CSGWPP and PMP. Data collected from pesticide monitoring programs have been used to develop the generic Pesticide Management Plan. Ground water protection

educational materials were developed for farmers, commercial applicators and pesticide dealers and incorporated into applicator recertification training programs. MDA has also contracted with the United States Geological Survey (USGS) in a number of monitoring projects located in the Chesapeake Bay.

MDA continues to support the endangered species protection program, initiated in 1992, to protect the Maryland darter from adverse effects due to pesticide use. Informational brochures were distributed to growers, commercial and private applicators, as well as, pesticide dealers that outlined the program and listed measures recommended for protection of this federally listed endangered species, located in Harford County, Maryland.

The federal worker protection standards (WPS) became effective in August of 1992. MDA continues to disseminate information on the federal program in pesticide applicator training sessions. Several WPS Compliance Review presentations were conducted for more than 1,000 growers throughout Maryland. MDA has conducted on-farm compliance assistance inspections to help farmers and producers comply with the WPS requirements. MDA continues to contract with Telamon Corporation, an AmeriCorps project participant, to provide safety training to farmers, farmworkers, children of farmworkers and health care providers. EPA has proposed revisions to the Worker Protection Standards that are expected to be in place in 2017.

VIII. SPECIAL PROGRAMS

MDA continues to conduct an empty pesticide container recycling program in Maryland. During 2014, the MDA Pesticide Container Recycling Program collected and Recycled 65,050 empty pesticide containers weighing 32 tons from growers and commercial pesticide applicators at 32 locations in seven counties and at 13 pesticide dealer/custom applicator sites.

IX. INTEGRATED PEST MANAGEMENT IN SCHOOLS

MDA continues to promote and implement the Integrated Pest Management (IPM) Program in Maryland Public Schools. Legislation was passed in 1999 that expanded the 1998 law to include pesticide use on school grounds. Schools are required to provide

the 1998 law to include pesticide use on school grounds. Schools are required to provide notification to parents, students, and staff of pesticide applications to school buildings and on school grounds. Regulations to implement IPM plans for school buildings and school grounds. MDA Pesticide Regulation Section staff reviewed and approved revised IPM plans that incorporated programs for managing pest problems on school grounds, and provided technical assistance in the development of the plans. All of Maryland's Public schools have fully implemented their IPM programs. MDA staff ensure continued compliance with these IPM regulations. A total of 42 public schools were inspected in 2016.

- X. A summary and comparison of program activities conducted by the Pesticide Regulation Section are provide in Appendix A. Note: Inspection numbers were down in FY 2016 due to the loss of two Inspectors during the fiscal year. One Inspector accepted a job with another State Agency and the other Inspector was out on extended medical leave. The Pesticide Regulation Section is currently in the process of hiring another Agricultural Inspector.

APPENDIX A

PESTICIDE REGULATION SECTION ACTIVITIES 2014 - 2016

	2014	2015	2016
Pesticide Businesses Licensed	1,809	1,842	1,693
Not-For-Hire Businesses Licensed	156	173	156
Commercial Pest Control Applicators Certified In One Or More Pest Control Categories	3,377	3,406	3,495
Registered Personnel Employed by Licensed Businesses and Public Agencies	7,360	7,392	7,502
Public Agency Permits Issued	313	315	312
Public Agency Applicators Certified in One Or More Pest Control Categories	1,007	1,010	1,010
Private Applicators Certified To Date	3,246	3,345	3,286
Dealer Permits Issued	148	148	150
Applicator Certification Examination Sessions Held	18	18	18
Individuals Taking Certification Examinations	764	758	763
Examinations Administered In All Categories	2,000	2,158	2,097
Number Of Businesses Inspected	894	1,099	*470
Number Of Businesses With Violations	274	277	122
Unregistered Employee Violation	21	13	6
Record Incomplete or Inaccurate Violations	162	96	69
Vehicles No Properly Identified Violations	43	24	24
No Antisiphon Device Violations	20	8	8
No First Aid/Safety Equipment Violations	6	4	3
Incomplete Or No Customer Information Violations	11	13	12
Pesticide Dealer Inspections	77	79	84
Pesticide Application Records Reviewed	911	983	563
Hearings And Investigational Conferences	2	3	2
Consumer Complaint Investigations	40	36	40
Pesticide Use Observations	27	75	77
Pesticide Samples Collected for Analysis	48	52	61
Market Place Inspections	32	30	26
Pesticide Producer Establishment Inspections	31	26	28
Container/Containment Inspections	9	9	10