



MARYLAND
PESTICIDE DATA REPORT
FOR 2017

MARYLAND
DEPARTMENT OF AGRICULTURE



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MARYLAND PESTICIDE DATA REPORT FOR 2017

1. INTRODUCTION

The Maryland Pesticide Regulation 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 is 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; insecticides – insects; rodenticides – rodents; and slimicide – slime molds.

II. BACKGROUND

The Maryland Department of Agriculture (MDA) is the State agency responsible for regulation 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 (PRS)

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 regulation. Under the enforcement program, MDA conducts routine inspections of licensed pesticide businesses, public agencies and restricted uses pesticide dealers. Inspections include a review of pesticide application records, restricted uses pesticide sales records, safety equipment, pesticide storage areas, application equipment, vehicles and anti-siphon devices. Use observation 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 inspections at Pesticide Producer Establishments, Market Places, Worker Protection, Container-Containment and Pesticide Imports. 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 pesticide applicators (employees of pest control businesses and public agencies) who meet the 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 regulations. Training materials, information 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" were 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 law 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 uses. 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 2017, MDA continued to expand the Pesticide Regulation Section's Homepage so that information on pesticide business licensing requirements, Certification exam dates, Pesticide Information Sheets and, Integrated Pest Management in Schools is available on the internet. Consumers can 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 pest control businesses and pesticide applicators.

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 pesticide 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 "Pesticide of Concern" in Maryland. Under the Endangered Species Protection Program, the Department is responsible program 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 worker from exposure to pesticides. EPA is currently revising some sections of the Worker Protection Standards. The Department also inspects agricultural facilities to ensure bulk pesticide storage tank, containment structures and mixing/loading pads meet state and federal requirements.

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 education programs, as well as, 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 Toxic Strategy 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 have placed Maryland in a leadership role and have given MDA recognition as one of the key Bay agencies in toxic reduction.

7. Integrated Pest Management in Schools and on School Grounds

The Pesticide Regulation Section has been conducting an Integrated Pest Management (IPM) 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 systems 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 (SCS)

1. Registration

The State Chemist Section (SCS) is responsible for registration of all pesticide Products distributed, 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 2017 the State Chemist Section registered 13,000 pesticide 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 2017. Two hundred and fifteen products were sampled for formulation analysis, State Chemist 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 2017 the State Chemist Section analyzed 49 pesticide samples that were collected by the Pesticide Regulation Section during complaint investigations, as well as, at producer establishments and market place inspections to determine if the pesticide products contained the active ingredients specified on the pesticide product labels.

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III. PESTICIDE REGISTRATION DATA AND ENFORCMENT

The Pesticide Registration and Labeling Law requires a distributor of pesticide Products to annually register the product 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 accuracy of the registration process and has enabled the Section to compile more information about registered pesticide products.

During 2017 pesticide product registration data included

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| 1. Number of registrants | = 1,212 |
| 2. Number of pesticide products registered | = 14,774 |

As a result of the State Chemist Section's enforcement and registration program (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 = 43
- Total chemical analyses = 201
- Non-registered products (products offered for sale but not registered with the Department) Stop Sale Order = 17

In support of the Pesticide Regulation Section's enforcement activities, the SCS laboratory analyzed samples (soil, water, plant tissues, swabs, product, etc.) for pesticide residues. The following summary of the analyses:

Investigation Samples (pesticide misuse, accidents):

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|--------------------------|------|
| Samples analyzed | = 49 |
| Total number of analyses | = 62 |

IV. PESTICIDE USE ENFORCEMENT INSPECTION AND ACTIONS

During 2017, inspection of licenses pest control businesses and public agencies were conducted as follows:

1. Routine business inspections	=	953
2. Routine public agency inspections	=	38
3. Pesticide Dealer Inspections	=	72
4. Pesticide Use Observations	=	27
5. Pesticide Samples collected for analysis	=	49
6. Applicator records reviewed	=	886

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

1. Unregistered employee violations	=	12
2. Records incomplete or inaccurate	=	63
3. Vehicles not properly identified	=	11
4. No anti-siphon device	=	7
5. No First Aid/Safety Equipment	=	5
6. No customer information	=	4

During 2017, 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 = 34 (Investigations initiated as a result of written complaints from consumers regarding pest inspections or pesticide misuse.)
2. Investigational Conferences = 0 (Informal meeting held with licensee and/or complainant to gather additional information about an ongoing investigation or to alert a licensee to a situation requiring immediate action.
3. Administrative Hearing = 0 (Formal Hearing before an Administrative Law Judge, because the magnitude of the violation(s) warrants it or, because of a repeat violation by the firm or individual).

4. Penalties Assessed:

- a. Notice of Warning = 289 (Certified Letter notifying licensee, permittee, or individual that they have committed a violation or, that a situation needs to be corrected).
- b. Field Notices = 16 (Violation noted by field Inspectors during routine inspections. Licensee, Permittee or individual is informed of an infraction and is given 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 = 9 (A civil penalty may be assessed in lieu of or in addition to a suspension or revocation of a license, permit, certificate, or an employee registration card. The Secretary may impose up to a \$2,500 penalty per violation). Licensees were assessed a total of \$7,000.00 in Civil Penalties.

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

1. Pesticide producer establishment inspection	= 28
2. Pesticide marketplace inspections	= 43
3. Pesticide Import Inspections	= 0
4. EPA Referrals for inspection/investigation	= 1
5. Pesticide Container/Containment inspections	= 9

V. PESTICIDE APPLICATOR CERTIFICATION AND TRAINING PROGRAM

During 2017, the following licensing and certification activities were conducted and are summarized below.

1. Pesticide businesses licensed	= 1,521
2. Public agencies permitted	= 330
3. Pesticide dealer permits	= 971
4. Pest control applicators certified	= 4,583
5. Private applicators certified	= 3,175
6. Commercial applicators examined	= 806
7. Total examinations administered	= 2,154

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 training held in 2017.

1. Commercial applicator training sessions held	=	518
2. Private applicator training sessions held	=	132
3. Commercial applicators recertified	=	3,316
4. Private applicators recertified	=	1,357

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 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 pesticide usage surveys on a 3 year cycle, beginning in 1982 and followed with 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), an agency of the U.S. Department of Agriculture, in cooperation with the Maryland Department of Agriculture. 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. 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 the 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 application recertification programs. MDA has also contracted with the United States Geological Survey (USGSO) in a number of monitoring projects located in the Chesapeake Bay.

MDA continues to support the United States Environmental Protection Agency (EPA) in its efforts to protect endangered species since it was initiated in 1992. The first endangered species listed in Maryland was the Maryland Darter. MDA developed informational brochures and distributed them to growers, commercial and private applicators 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 application training programs. The EPA is in the process of revising some of the Worker Protection requirements. Once they are completed and put in place MDA will provide information to farmers and farm workers regarding any of the new regulations.

VIII. SPECIAL PROGRAMS

MDA continues to conduct an empty pesticide container recycling program in Maryland. During 2017, the MDA Pesticide Container Recycling Program collected and recycled ????? empty pesticide containers weighing ?? 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

notification to parents, students, and staff of pesticide application to school buildings and on school ground. MDA Pesticide Regulation Section staff reviewed and approved revised plans that incorporated programs for managing pest problems on school ground 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 52 public schools were inspected in 2017

**X. A SUMMARY AND COMPARISON OF PROGRAM ACTIVITIES
CONDUCTED BY THE PESTICIDE REGULATION SECTION**

Note: Inspection numbers were down in FY 2017 due to the loss of two Inspectors during the fiscal year due to medical problems.