

RIGHT-OF-WAY PESTICIDE USE IN NEW JERSEY: 2012 SURVEY

Introduction

The New Jersey Pesticide Control Program (NJPCP) began a series of pesticide use surveys in 1985. These surveys address pesticide use in the state of New Jersey for agriculture, golf courses, termite control, right-of-way, mosquito control, and lawn care. The lawn care survey is conducted every three years and targets pesticides used for lawn care purposes. This report focuses on the sixth survey completed in the right-of-way series (2012).

Regarding survey procedures, three mailings were made over the course of six months to licensed applicators carrying a Category 6 (right-of-way) code on his or her license. Survey forms, along with instructional letters and a return envelope, were mailed to these individuals asking for their 2012 right-of-way pesticide use. A list of applicators carrying a Category 6 on their license was kept in the office. As surveys were received the applicators were marked off the list. Second and third mailings were made to non-respondents indicating that the previously mailed survey had not been received.

Each survey form received by the NJPCP was logged in and entered into a database. When all responses were received the database was reviewed for any duplication of entries. Subroutines in the database identified active ingredients and calculated pounds of active ingredients from the information supplied by the applicators.

Once all three mailings were completed, 515 out of 587 (87%) surveys were received.

Table 1 lists the pesticides by chemical name and their respective amounts appearing in the survey.

Table 2 lists the most frequently used compounds and their percentages of the total right-of-way use.

Table 3 lists the use of the compounds above by site.

In reporting and evaluating pesticide use, it is important to consider the many, diverse influences on pesticide use. No single factor, or even set of factors, can completely account for fluctuations in the amounts of pesticide active ingredients used from survey to survey. Weather conditions such as temperature and rainfall, in terms of duration, timing and amounts or degrees, influence pest pressure and the associated response. Economic factors play a significant role, ranging from crop demand to golf course playability to product and/or service cost. The changing face of land use also plays a

part. While agricultural acreage has been declining, new home building starts and the associated lawns around those new homes have been increasing. Another factor is the adoption of IPM (Integrated Pest Management). Short term, some pest control situations may require increased pesticide applications beyond the alternative means contained in an IPM program. Long term, however, IPM should result in overall pesticide use reduction. This may be confounded by the increased use of reduced-risk alternatives that may have higher application rates than the materials they replace.

Table 1. Compounds appearing in the 2012 Right-of-Way survey and their amounts (pounds active ingredient).

2,4-D	1427	Iron pholate	1
Aminocyclopyrachlor	589	Isoxaben	12
Aminopyralid	355	MCPA	151
Bromacil	9	Mecoprop	40
Carbaryl	<1	Metolachlor	12
Chloropicrin	19	Metsulfuron	71
Chlorsulfuron	6	NEEM	7
Cyfluthrin	<1	Oil	23
Dicamba	1281	Oryzalin	45
Dichlobenil	12	Pelargonic acid	114
Diquat	<1	Pendimethalin	848
Dithiopyr	7	Penoxsulam	<1
Diuron	1272	Picloram	428
Fosamine ammonium	146	Prodiamine	799
Glufosinate-ammonium	41	Prometon	58
Glyphosate	26811	Sulfometuron	804
Hexazinone	406	Tichlorfon	11
Imazapic	14	Triclopyr	1182
Imazapic-ammonium	566	Trifluralin	31
Imazapyr	1945		
Indaziflam	94		
		TOTAL:	39636

Table 2. Highest use compounds in 2012. Shown are compounds $\geq 2\%$ of total.

Glyphosate	26811	67%
Imazapyr	1945	49%
2,4-D	1427	36%
Dicamba	1281	32%
Diuron	1272	32%
Triclopyr	1182	3%
Pendimethalin	848	2%
Sulfometuron	804	2%
Prodiamine	799	2%

Table 3. Right-of-Way 2012 pesticide use (pounds active ingredient) by site.

Railways	15766	40%
Roads	10656	27%
Other*	4588	11%
Powerlines	4216	11%
Building perimeters/ Fencelines	2808	7%
Substations	1583	4%
Pipelines	17	<1%
Total:	39636	100%

* Site includes sewers, air strips, parking lots, trails, and miscellaneous industrial locations.