RIGHT-OF-WAY PESTICIDE USE IN NEW JERSEY: 2000 SURVEY

Introduction

In the last month of 2000 a right-of-way pesticide use survey was initiated by the NJDEP/Pesticide Control Program (PCP). The specific purpose of this project was to identify what chemicals and how much of each were used in 2000 for right-of-way pest control. A more general purpose of the survey was to supplement data gathered from previous pesticide use surveys for addressing the impact of pesticide use statewide.

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 2000 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 PCP 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, 428 out of 449 (95%) 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. Some of the site categories indicated in the figure cover other locations as well. **Roads** includes public roads and airfield runways. **Parking Lots** includes driveways and stone lots. **Powerlines** includes substations. The categories **Pipelines** and **Railways** include no other sites. **Other** includes fencelines, building perimeters, sewers and miscellaneous industrial sites.

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. In agricultural settings, issues such as cropping patterns and the associated pest impacts vary from year to year. 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.

[Curt Brown, RS II]

Table 1. Compounds appearing in the 2000 Right-of-Way survey and their amounts (pounds active ingredient).

2,4-DP	2,4-D	1391
Acephate Benfluralin Bromacil		1
Benfluralin Bromacil	Acephate	<1
BT Carbaryl 6 Chlorothalonil 25 Dicamba 319 Dithiopyr 4 Diuron 8910 Fenoxaprop-ethyl <1 Fosamine ammonium 638 Glufosinate ammonium 12 Glyphosate 37574 Hexazinone 5154 Imazapyr 2202 Isoxaben 5 MCPP 6 Mefluidide 1 Metolachlor 3 Metsulfuron 17 Norflurazon 3 Oryzalin 3357 Oxyfluorfen 6104 Paraquat 62 Pelargonic Acid 76 Pendimethalin 46 Picloram 296 Prodiamine 18 Prometon 507 Simazine 139 Sulfometuron 1219 Tebuthiuron 508 Triclopyr 8339		<1
Carbaryl 6 Chlorothalonil 25 Dicamba 319 Dithiopyr 4 Diuron 8910 Fenoxaprop-ethyl <1 Fosamine ammonium 638 Glufosinate ammonium 12 Glyphosate 37574 Hexazinone 5154 Imazapyr 2202 Isoxaben 5 MCPP 6 Mefluidide 1 Metolachlor 3 Metsulfuron 17 Norflurazon 3 Oryzalin 3357 Oxyfluorfen 6104 Paraquat 62 Pelargonic Acid 76 Pendimethalin 46 Picloram 296 Prodiamine 18 Prometon 507 Simazine 139 Sulfometuron 1219 Tebuthiuron 508 Triclopyr 8339	Bromacil	2635
Chlorothalonil25Dicamba319Dithiopyr4Diuron8910Fenoxaprop-ethyl<1	BT	1
Dicamba319Dithiopyr4Diuron8910Fenoxaprop-ethyl<1	Carbaryl	6
Dithiopyr4Diuron8910Fenoxaprop-ethyl<1	Chlorothalonil	25
Diuron8910Fenoxaprop-ethyl<1	Dicamba	319
Fenoxaprop-ethyl Fosamine ammonium Glyphosate ammonium Glyphosate 37574 Hexazinone 5154 Imazapyr 2202 Isoxaben 5 MCPP 6 Mefluidide 1 Metolachlor 3 Metsulfuron 17 Norflurazon 3 Oryzalin 3357 Oxyfluorfen 6104 Paraquat 62 Pelargonic Acid 76 Pendimethalin 46 Picloram 296 Prodiamine 18 Prometon 507 Simazine 139 Sulfometuron 1219 Tebuthiuron 508 Triclopyr 8339	Dithiopyr	4
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Metolachlor3Metsulfuron17Norflurazon3Oryzalin3357Oxyfluorfen6104Paraquat62Pelargonic Acid76Pendimethalin46Picloram296Prodiamine18Prometon507Simazine139Sulfometuron1219Tebuthiuron508Triclopyr8339	MCPP	6
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Norflurazon3Oryzalin3357Oxyfluorfen6104Paraquat62Pelargonic Acid76Pendimethalin46Picloram296Prodiamine18Prometon507Simazine139Sulfometuron1219Tebuthiuron508Triclopyr8339	Metolachlor	3
Oryzalin 3357 Oxyfluorfen 6104 Paraquat 62 Pelargonic Acid 76 Pendimethalin 46 Picloram 296 Prodiamine 18 Prometon 507 Simazine 139 Sulfometuron 1219 Tebuthiuron 508 Triclopyr 8339	Metsulfuron	17
Oxyfluorfen 6104 Paraquat 62 Pelargonic Acid 76 Pendimethalin 46 Picloram 296 Prodiamine 18 Prometon 507 Simazine 139 Sulfometuron 1219 Tebuthiuron 508 Triclopyr 8339	Norflurazon	3
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Pelargonic Acid Pendimethalin 46 Picloram 296 Prodiamine 18 Prometon 507 Simazine 139 Sulfometuron 1219 Tebuthiuron 508 Triclopyr 8339	Oxyfluorfen	6104
Pendimethalin46Picloram296Prodiamine18Prometon507Simazine139Sulfometuron1219Tebuthiuron508Triclopyr8339	Paraquat	62
Picloram296Prodiamine18Prometon507Simazine139Sulfometuron1219Tebuthiuron508Triclopyr8339	_	76
Prodiamine18Prometon507Simazine139Sulfometuron1219Tebuthiuron508Triclopyr8339		46
Prometon 507 Simazine 139 Sulfometuron 1219 Tebuthiuron 508 Triclopyr 8339	Picloram	296
Simazine139Sulfometuron1219Tebuthiuron508Triclopyr8339	Prodiamine	18
Sulfometuron1219Tebuthiuron508Triclopyr8339	Prometon	507
Tebuthiuron 508 Triclopyr 8339	Simazine	
Triclopyr 8339	Sulfometuron	1219
1 5		
Trifluralin 12	1 2	
	Trifluralin	12

TOTAL: 79591

Table 2. Highest use compounds in 2000. Shown are compounds >=3% of total.

Glyphosate	37574	47.2%
Diuron	8910	11.2%
Triclopyr	8339	10.5%
Oxyfluorfen	6104	7.7%
Hexazinone	5154	6.5%
Oryzalin	3357	4.2%

Table 3. Right-of-Way 2000 pesticide use by site.

Railways	19920	25.0%
Powerlines	19148	24.0%
Roads	10289	12.9%
Parking Lots	948	1.2%
Pipelines	36	0.0%
Other*	29250	36.8%
Total:	79591	100.0%

^{*}site includes fence lines, building perimeters, sub stations, sewers and miscellaneous industrial sites.