

## **RIGHT-OF-WAY PESTICIDE USE IN NEW JERSEY: 1992 SURVEY**

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### Introduction

In the early months of 1993 a right-of-way pesticide use survey was conducted 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 1992 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 1993 to applicators licensed to use pesticides for right-of-way purposes (Category 6). For the primary mailing, state agencies including the NJ Department of Transportation, NJ Turnpike Authority, and various county road maintenance centers were sent a survey and instructional letter asking for their right-of-way use information and a list of all applicators associated with those results. A list of applicators carrying a category 6 on their license was kept in the office. As the primary surveys were received, the various applicators were marked off the list. A secondary survey mailing was made to category 6 applicators who remained on the list, and a third mailing 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 entries were 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, 326 out of 358 (91%) 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. **Fences** includes walkways and building perimeters.

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.

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**Table 1.** Compounds appearing in the 1992 Right-of-Way Survey and their amounts (pounds active ingredient).

2,4-D	2285
Acephate	9
Atrazine	3
Bromacil	11
Chlorsulfuron	3
Dicamba	914
Diquat	27
Diuron	30618
Fosamine Ammonium	87
Glyphosate	12910
Hexazinone	31
Imazapyr	2243
Isoxaben	1
Maleic Hydrazide	462
MCPA	15
Mecoprop	11
Mefluidide	52
Metsulfuron	4
Oryzalin	421
Paraquat	5
Pendimethalin	34
Prometon	246
Simazine	1833
Sulfometuron	1538
Tebuthiuron	119
Triclopyr	390
TOTAL:	54272

**Table 2.** Highest use compounds in 1992. Shown are compounds  $\geq 3\%$  of total.

Diuron	30618	56%
Glyphosate	12910	24%
2,4-D	2285	4%
Imazapyr	2243	4%
Simazine	1833	3%
Sulfometuron	1538	3%

**Table 3.** Right-of-Way 1992 pesticide use by site.

Roads, Runways	8014	15%
Parking & Stone Lots	7402	14%
Powerlines	1313	2%
Pipelines	53	0%
Railways	32543	60%
Fences, Walkways	2435	4%
Other*	2513	5%
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Total:	54272	100%

\*site includes sub stations, sewers and miscellaneous industrial sites.