NJ Department of Environmental Protection
Pesticide Control Program
Pesticide Evaluation & Monitoring

LAWN CARE PESTICIDE USE IN NEW JERSEY: 1990 SURVEY

Towards the end of 1990, a lawn care 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 1990 for lawn care purposes. 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.

Surveys were mailed over an eight month period, the first mailing going to all New Jersey registered pesticide businesses with a responsible applicator holding a category "3B" (turf) on his or her license. A second mailing went to all applicators holding a category "3B," and a third mailing (uncertified) went out to non-respondents. Survey forms were mailed along with instructional letters and return envelopes asking for 1990 lawn care pesticide use. Lists of 3B businesses and applicators were kept in the office and marked off as the surveys returned.

Each survey form received by the PCP was entered into a database. When the data entry was completed the database was reviewed for any duplication of entries and input errors. 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, 2668 out of 3472 (77%) applicators were accounted for.

Table 1 lists the chemicals and their respective amounts appearing in the survey.

Table 2 selects out the highest use compounds.

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, RSII] revised 2/02

Table 1. Pesticide amounts (lbs active ingredient) reported in the New Jersey 1990 Lawn Care Pesticide Use Survey.

HERBICIDES:	
2,4-D	321990
2,4-DP	22810
Amitrole	5
Ammonium Sulfamate	81
Benfluralin	28373
Bensulide	8043
Bentazon	13202
Bromacil	61
Bromoxynil	15
Chlorthal-Dimethyl	6429
Dalapon	6
Dicamba	34796
Dichlorbenil	82
Diquat	21
DSMA	646
Endothal	16
EPTC	1
Ethofumesate	32
Fenoxaprop-ethyl	217
Fluazifop-butyl	<1
Glyphosate	14468
Imazapyr	159
Imazethapyr	<1
Isoxaben	77
MCPA	15200
Mecoprop	78618
Metalochlor	122
Metsulfuron	<1
MSMA	3311
Naphtha	19
Oryzalin	1847
Oxadiazon	350
Oxyfluorfen	<1
Paraquat	48
Pendimethalin	152646
Picloram	4
Prometon	746
Sethoxydim	2
Siduron	2299
Simazine	647
Sodium arsenate	23
Sodium chlorate	450
Sodium metaborate	1020
Sulfometuron	150
Tebuthiuron	6
Triclopyr	46816
Trifluralin	12289
TOTAL HERBICIDES:	768143

INSECTICIDES:	
Acephate	53
Bendiocarb	1518
Bt	1
Carbaryl	22984
Chlorpyrifos	22111
Cyfluthrin	100
Cypermethrin	1
Diazinon	11547
Dicofol	19
Dimethoate	5
Disulfoton	2
Ethoprop	221
Fenvalerate	<1
Fluvalinate	2
Isazofos	4465
Isofenphos	15276
Lindane	4
Malathion	28
Methoxychlor	10
Milky spore	<1
Oil	2128
Soap	71
Trichlorfon	34794
TOTAL INSECTICIDES:	115340

FUNGICIDES:

Anilazine	1302
Benomyl	1919
Chloroneb	20
Chlorothalonil	5986
Clopyralid	173
Fenarimol	52
Fosetyl-al	79
Iprodione	6301
Mancozeb/Maneb	2625
Metalaxyl	294
PMA	2
Propamocarb HCL	477
Propiconazole	116
Quintozene	275
Thiophanate-methyl	500
Thiram	244
Triadimefon	1379
Vinclozolin	74
TOTAL FUNGICIDES:	21818

GROWTH HORMONES:

Amidochlor	1
Flurprimidol	65
Maleic Hydrazide	<1
Mefluidide	174
TOTAL GR HORMONES:	240

TOTAL PESTICIDE USE: **905541**

Herbicides:	84.8%
Insecticides:	12.7%
Fungicides:	2.4%
Growth Hormones:	0.1%

Table 2. Highest use compounds from the main pesticide categories. Shown are compounds >= 3% of category.

Compound	Lbs active ingredient	% of category	% of total use
HERBICIDES:			
2,4-D	321990	41.9%	35.6%
Pendimethalin	152646	19.9%	16.9%
Mecoprop	78618	10.2%	8.7%
Triclopyr	46816	6.1%	5.2%
Dicamba	34796	4.5%	3.8%
Benfluralin	28373	3.7%	3.1%
2,4-DP	22810	3.0%	2.5%
INSECTICIDES:			
Trichlorfon	34794	30.1%	3.8%
Carbaryl	22984	19.9%	2.5%
Chlorpyrifos	22111	19.1%	2.4%
Isofenphos	15276	13.2%	1.7%
Diazinon	11547	10.0%	1.3%
Isazofos	4465	3.9%	0.5%
FUNGICIDES:			
Iprodione	6301	28.9%	0.7%
Chlorothalonil	5986	27.4%	0.7%
Mancozeb/Maneb	2625	12.0%	0.3%
Benomyl	1919	8.8%	0.2%
Triadimefon	1379	6.3%	0.2%
Anilazine	1302	6.0%	0.1%