

MOSQUITO CONTROL PESTICIDE USE IN NEW JERSEY – 2001

In the early part of 2002 the NJDEP/Pesticide Control Program (PCP) conducted a mosquito control pesticide use survey. The specific purpose of this project was to identify what chemicals and what quantities of each were used in 2001 for mosquito control. The survey was to supplement data gathered from previous pesticide use surveys for addressing the impact of pesticide use statewide. There is a general interest in the trends of pesticide use for mosquito control, especially due to the issue of West Nile virus transmission through mosquitoes.

Regarding survey procedures, three mailings were made over the course of six months to county mosquito control commissions and individuals carrying an 8B (mosquito control) or 8C (campground applicator) category code on his or her license. Survey forms, along with instructional letters and a return envelope, were mailed to these agencies or individuals asking for their 2001 mosquito control pesticide use. A survey mailing list was kept in the office. As surveys were received the various mosquito control 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 entered into a database. When the data entry was completed 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 the three mailings were completed, 411 out of 459 (90%) surveys were received.

Table 1 lists the chemicals and their amounts in pounds of active ingredient appearing in the 2001 survey. The trade names corresponding with these chemicals are also included. Various factors, such as weather, can influence pest populations from year to year and vary that year's pesticide use response. Allotted funding from year to year could also affect pesticide use totals.

Table 2 lists the chemicals and their amounts (a.i.) applied by county for 2001.

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, Research Scientist II] Revised 10/10/02

Table 1. Compounds appearing in the 2001 Mosquito Control Pesticide Use Survey and their amounts (pounds active ingredient).

Chemical	Brand Name	Pounds a.i.
BT & Similar	Bactimos, Vectobac	2384
CYFLUTHRIN	Tempo	6
ISOOCTADECANOL	Agnique	757
MALATHION	Atrapa, Fyfanon	7406
METHOPRENE	Altosid	5927
OIL	Golden Bear	51667
PBO	Scourge	2297
PERMETHRIN	Astro	25
RESMETHRIN	Scourge	759
TEMEPHOS	Abate	14256
Total:		85484

Table 2. Pesticide amounts (in active ingredient) in the 2001 Mosquito Control Pesticide Use survey by county.

County	Pounds a.i.	Percent of Total
Atlantic	4118	5 %
Bergen	2379	3 %
Burlington	6971	8 %
Camden	426	1 %
Cape May	8336	10 %
Cumberland	6050	7 %
Essex	449	1 %
Gloucester	2756	3 %
Hudson	78	0 %
Hunterdon	232	0 %
Mercer	4258	5 %
Middlesex	9454	11 %
Monmouth	528	1 %
Morris	2320	3 %
Ocean	5291	6 %
Passaic	8579	10 %
Salem	1912	2 %
Somerset	18338	21 %
Sussex	1481	2 %
Union	1198	1 %
Warren	330	0 %
Total:	85484	100%