

MOSQUITO CONTROL PESTICIDE USE IN NEW JERSEY - 1998

In the early months of 1999 a mosquito control 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 1998 for mosquito 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 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 1998 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 all three mailings were completed, 328 out of 347 (94%) surveys were received.

Table 1 lists the chemicals and their amounts in pounds of active ingredient appearing in the survey. The trade names corresponding with these chemicals are also included.

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

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 1998 Mosquito Control Pesticide Use Survey and their amounts (pounds active ingredient).

| Chemical | Brand Name | Pounds a.i. |
|------------|-----------------------------|-----------------|
| BT | Aquabac, Bactimos, Vectobac | 778 |
| MALATHION | Cythion, Fyfanon | 9059 |
| METHOPRENE | Altosid | 1150 |
| NALED | Dibrom | 57 |
| OIL | Golden Bear | 46097 |
| PBO | Scourge | 1766 |
| PERMETHRIN | Permethrin | 7 |
| PHENOTHRIN | Anvil | 9 |
| RESMETHRIN | Scourge | 580 |
| TEMEPHOS | Abate | 3933 |
| Total: | | 63436 lbs. a.i. |

Table 2. Pesticide amounts (in active ingredient) in the 1998 Mosquito Control Pesticide Use survey by county.

| County | Pounds a.i. | Percent of Total |
|------------|-------------|------------------|
| Atlantic | 3838 | 6.0% |
| Bergen | 625 | 1.0% |
| Burlington | 1663 | 2.6% |
| Camden | 949 | 1.5% |
| Cape May | 3222 | 5.1% |
| Cumberland | 3575 | 5.6% |
| Essex | 363 | 0.6% |
| Gloucester | 9073 | 14.3% |
| Hudson | 98 | 0.2% |
| Hunterdon | 0 | 0.0% |
| Mercer | 3495 | 5.5% |
| Middlesex | 10862 | 17.1% |
| Monmouth | 9 | 0.0% |
| Morris | 5755 | 9.1% |
| Ocean | 1551 | 2.4% |
| Passaic | 951 | 1.5% |
| Salem | 1134 | 1.8% |
| Somerset | 13733 | 21.6% |
| Sussex | 1256 | 2.0% |
| Union | 1082 | 1.7% |
| Warren | 201 | 0.3% |
| Total: | 63436 | 100.0% |