

REPORT OF
PESTICIDE SALES AND COMMERCIAL USE
FOR
CALENDAR YEAR 2000

PREPARED BY

MAINE BOARD OF PESTICIDES CONTROL
MAINE DEPARTMENT OF AGRICULTURE, FOOD & RURAL RESOURCES
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REVISION NOTES

The revisions of June 27th result from information prepared for a presentation to the Joint Standing Committee on Agriculture, Conservation and Forestry on June 4, 2002. They include a new section titled Interpretation of Reports plus three new tables that (1) sort the pesticides by major use classification, (2) sort the homeowner products by quantity but list the type of product, and (3) compare retail sales for 2000, 1997 and 1995.

The revisions of September 6th correct errors in Appendices I-A and I-B that resulted from an error in the original query that incorrectly multiplied the quantities when there was more than one federal or state registration number.

REPORT DISCUSSION

Introduction

In 1997, the Maine Legislature passed LD 1726, An Act to Minimize Reliance on Pesticides. One of the two major provisions of the bill created a state policy for finding ways to use the minimum amount of pesticides needed to effectively control targeted pests in all areas of application.

The second provision directed the Board to implement a system of record keeping, reporting, data collection and analysis that provides information on the quantity of products and brand names of pesticides sold. In addition, the Board was directed to apply this system to compile, by October 1st of each year, an annual report containing the quantity of product sold in the previous year, sorted by the trade name and United States Environmental Protection Agency registration numbers. Further, the report was to be sorted by sector of use, wherever possible. The Board was also directed to build cooperation with the University of Maine Cooperative Extension to improve these pesticide information databases and to optimize reporting analyses.

The Board produced reports of the 1998 and 1999 sales and use data before there was general agreement that sorting by product name and EPA registration number did not produce a useable report that allowed evaluation of the relative levels of pesticide use by principle use sectors within the state. Legislation passed in 2000 released the Board from reporting in 2000 and 2001, directing it instead to study ways to improve the quality of the data collection and sorting. In 2001, legislators pointed to small, focused reports produced previously by the Board that summarized sales of agricultural pesticides by pounds of active ingredient. Subsequently, legislation was passed directing the Board to sort the data by active ingredient and prepare a new report by April 1, 2002.

Constraints on Staff Resources

Because the 2001 legislation did not provide any new money to accomplish these tasks, production of the newly required reports presented some major hurdles for the Board's staff. First, density conversion factors to translate gallons of liquid products into pounds of active ingredients had to be acquired and entered into a database for all active ingredients contained in each liquid product sold in the state. This data is not readily available from any one source. Consequently, the staff person in charge of water quality and worker safety who is knowledgeable in databases and pesticide formulations was diverted from her job responsibilities. A labor intensive process of searching for density data for each of over 500 active ingredients ensued that consumed hundreds of staff hours. Second, this staff person was assigned to check the veracity of the hundreds of reports, enter the thousands of lines of data, and develop a database system capable of

summarizing sales and use amounts and converting them to pounds of active ingredients. It required over two months of staff time to develop the report to this point. Significant additional man hours will be needed in the future to improve the poor quality of submitted reports, ensure that required reports are received from all distributors and continue efforts to sort the data by sector of use.

Limitations of the Data

In addition to some of the obstacles discussed above, the Board is still confronted with a fundamental problem that limits the usefulness of the attached reports. The statutory reporting requirements as currently constructed do not capture all the pesticide sales in the state and have a potential for some double reporting.

In 1997, legislation was passed with the hope it would improve the reporting for the vast majority of pesticide (the general use or over the counter pesticides) sales in the state. Prior to that time, all licensed retailers of general use pesticides, including department and hardware stores, had to report their annual pesticide sales, but products sold in less than one quart or five pound sizes were exempt from the reporting requirement. When the Board pointed out difficulties encountered trying to obtain accurate reports from these retailers and that large quantities of smaller sized products were not being reported, the legislature decided to remove the container size exemption but take the burden off the smaller stores by identifying a smaller group to do the reporting. The actual language in the revised statute, 22 M.R.S.A. § 1471-W (3), reads, "Any person who distributes general use pesticides to licensed general use pesticide dealers in the State shall keep and maintain records of these sales for reporting purposes." While it seemed like a good idea at the time, we now realize it creates a system where sales of the same products could be reported more than once, and it ignores some fairly substantial amounts of sales that go directly from out-of-state to large in-state end-users and licensed restricted use pesticide dealers. Examples of high volume sales directly to end-users include the following:

- Exterminators
- Lawn care companies
- Golf courses
- Right-of-way maintenance companies
- Forest management companies
- Internet sales to any end-user
- Catalogue sales to any end-user
- Chlorine to many industrial/municipal sites
- Biocides to many industrial/municipal sites
- Wood preservatives to pressure treatment facilities

Sales Reports

There are three sets of calendar year 2000 Maine pesticide sales reports attached, tallied by total volume of active ingredient sold. Each set is sorted both alphabetically and then by volume of sale. These sets are comprised of:

- Wholesale sales,
- Retail sales, and
- Sales of homeowner products.

Wholesale Reports (Appendices I-A & I-B)

The wholesale reports were compiled from reports submitted by distributors who sell pesticides to licensed Maine general use pesticides dealers. Therefore, this information represents sales of pesticides to retailers such as department stores, hardware stores, farm & garden supply stores and other retailers that distribute over the counter pesticides. Several types of pesticides are exempt from the general use pesticide dealer licensing requirements, and those products are not covered by these reports:

- Household use pesticide products containing no more than 3% active ingredients;
- DDVP impregnated strips containing no more than 25% active ingredient;
- Pest supplies, such as shampoos, tick and flea collars and dusts;
- Disinfectants, germicides, bactericides and virucides;
- Insect repellents;
- Indoor and outdoor animal repellents;
- Moth flakes, crystals, cakes and nuggets;
- Indoor aquarium supplies;
- Swimming pool supplies;
- Aerosol products; and general use paints, stains and wood preservatives and sealants.

Aside from those products that are exempted from licensing and sales reporting as described above, there are a number of types of general use pesticide sales that are not subject to the reporting requirements as described earlier in this report, including the following:

- Sales from out-of-state distributors to large in state end-users; and
- Sales from out-of-state distributors to licensed in state restricted use pesticide dealers.

In addition, some sales of general use pesticides may be reported more than once where products are distributed between licensed general use pesticide dealers in the state.

Retail Reports (Appendices II-A & II-B)

The attached retail pesticide sales reports are derived from reports submitted by licensed restricted use pesticide dealers distributing products in Maine. This includes both in-state and out-of-state licensed dealers. These distributors tend to cater primarily to commercial agriculture, forestry, exterminators and golf courses.

Homeowner Reports (Appendices III-A & III-B)

The attached homeowner pesticide sales reports represent a subset of the wholesale reports and are based on product data obtained from New York State intended to identify products most likely marketed primarily to homeowners. At the time of product registration, New York's Product Registration Section asks registrants to specify the major use of each product. Household or home garden are two of their categories and their staff adds a code for either use to the product's EPA registration number in their database. At the Board's request, New York officials provided a listing of all their EPA registration numbers with the two homeowner codes. This information was then used to check the Maine database to identify products most likely marketed primarily to homeowners.

Use Reports (Appendices IV-A & IV-B)

The pesticide use reports are compiled from annual pesticide use summary reports submitted by licensed commercial pesticide applicators. Commercial applicators are those individuals who:

- Apply any pesticide as a service for compensation;
- Apply any pesticide in connection with their duties as an employee of a local, state or federal government;
- Apply any pesticide in an area open to the public; or
- Apply restricted use pesticides on sites other than their own agricultural land.

Examples of the most prevalent types of commercial pesticide applications include:

- Exterminating,
- Lawn care applications,
- Right-of-way applications,
- For hire agricultural applications, and
- Forestry applications.

Use Reports from Other Sources

The 2001 revisions to the Board's reporting statute directs the Board to include summaries of pesticide survey results conducted by the University of Maine Cooperative Extension (UMCE) or the United States Department of Agriculture (USDA). The Board's director wrote both agencies requesting pesticide use information for Maine. Their responses are enclosed as Appendices V-A and V-B and they point out that they have no sector of use information available at this time.

Interpretation of Reports

The preceding sections of this report detail a number of hurdles and statutory limitations to acquiring quality pesticide sales and use data and translating that data into useful reports. Although the Board's staff would prefer not to make any tallies due to the illogical and incomplete reporting system, it does recognize the public's interest in an interpretation of the information that was reported. Accordingly, Table 1 was created to present a side by side comparison of the information contained in the appendices for Wholesale, Retail and Commercial Use. First, the reported quantities of each active ingredient were rounded off to thousands of pounds. All of the active ingredients that had more than 500 pounds of sales in one of the appendices were included in this table. The information was first arranged alphabetically by the type of pesticide, and then within type, the active ingredients were arranged alphabetically by common name. Please note the results have been aggregated for herbicides such as 2,4-D, dicamba, endothall, picloram and triclopyr that are active as acids but marketed as salts or esters. The table also contains columns to show how many products containing that active ingredient were registered in Maine in 2001.

The Board's staff added the quantities within the three columns of sales and use records and obtained the following totals:

Wholesale Sales	= 3,867 Thousands of Pounds of Active Ingredients
Retail Sales	= 3,519 Thousands of Pounds of Active Ingredients
Commercial Use	= 2,530 Thousands of Pounds of Active Ingredients

Unfortunately, the many deficiencies in the reporting system do not allow the Board's staff to calculate even an estimate of total sales or usage from the above figures. In addition to sales and use that are not reported, some sales data may represent duplication of reporting. Then there is the simple fact sales reports cannot be converted to use reports.

The side by side comparisons in Table 1 provide an excellent opportunity to point out some gaps in the current reporting system. Diquat dibromide is the most widely used potato vine desiccant but it is a general use pesticide that is primarily sold by restricted use pesticide dealers serving the agricultural community. Thus, persons distributing the product into the state are not delivering it to a general use dealer and are therefore not required to report those wholesale sales. In addition, a high percentage of this product is applied by potato farmers who are not required to report use data. Two other good examples include the slimicides and wood preservatives where no quantities are reported being sold at either level but significant quantities are clearly being used by commercial applicators in industrial settings.

Table 2 was similarly prepared from the homeowner sales reports in Appendix III-A rounded off to thousands of pounds, and the active ingredients arranged by highest to lowest pounds of sales. Diazinon, a widely used insecticide, had the highest level of sales

while the popular herbicides glyphosate and 2,4-D were ranked second and third respectively. It is interesting to note that sales of diaznon products labeled for indoor home uses will be discontinued after December 31, 2002 while products labeled for outdoor use must cease by December 31, 2004.

At least one distributor reported on sales of DEET that is an active ingredient in many insect repellants. However, these types of products are exempt from licensing and reporting so actual sales are no doubt much higher than the reported amount.

Table 3 presents a comparison of the active ingredients rounded off to the nearest 1,000 pounds from the retail sales in Appendix II-A with two previous tallies of agricultural and forestry sales from the years 1995 and 1997. The Board's staff cautions readers that the 2000 figures were received from more dealers than were included in the previous two tallies. In addition, some of the agricultural dealers are now carrying more ornamental and turf care products so this may be another reason some of the numbers are higher in 2000 than in 1995 or 1997. The best value from this table lies in the Registration Notes that indicate the status of EPA's review of the active ingredient.

Recommendations

Detailed below, the Board's staff has attempted to identify some potential revisions to Maine law intended to improve the quality of the annual pesticide sales and use reports.

- Consider revisions to 22 M.R.S.A. § 1471-W (3) that would require any person who distributes pesticides into the state to report the amounts of the sales, regardless to whom those sales are made. Such an approach should eliminate many of the reporting loopholes and the potential for double reporting.
- Consider revisions to 7 M.R.S.A. § 607 (2) to require pesticide registrants to submit additional useful information about the pesticide products at the time of registration similar to New York State. Examples of other useful information may include: 1) pounds of active ingredients per gallon of liquid formulation; 2) type of pesticide such as insecticide, herbicide etc.; 3) probable use sector such as agriculture, turf, structures, aquatic, industrial etc.; and 4) label signal word or other toxicity data.
- NOTE: The Board has surveyed a number of states and found that many already routinely ask for additional data from registrants at the time of registration renewal. On May 3, 2002 the Board voted to direct the staff to request additional information on all future registration applications including but not limited to primary intended use of the product and the pounds of active ingredient per liquid volume.
- Identify funding and provide a position to administer the state pesticide sales and use information program. Other states charged with compiling pesticide sales and use data have come to recognize the complexity of the task and allocated

resources accordingly. For instance, in New York State this program is contracted to Cornell University which has eight staff members working on the program.

- Consider requiring commercial agricultural producers to submit annual pesticide use reports in addition to the commercial applicator reports the Board currently receives.
- Modify the Board's rule requiring reporting by commercial pesticide applicators (Chapter 50) to tailor the reports to correspond to the type of information that is of interest to the legislature.

NOTE: The Board's staff is currently redesigning the report form with standardized target codes so future, annual applicator reports may be clearly categorized by sector of use.