

Pesticide Use Trends in the U. S. : Pesticides for Home and Garden Uses¹

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Introduction

The EPA, in cooperation with the USDA and FDA, is responsible for regulating the production and use of pesticides in the U.S. This document is one of a series that provides data on volumes used and sales of pesticides from the latest EPA survey data available, 2006 – 2007. This document focuses on the market sector for pesticides used for the home and garden. The intent of this information is only to present an objective profile and does not attempt to interpret, reach conclusions about, or make inferences regarding the data. Conclusions should not be drawn in regards to impacts on human health, the environment, or the economy.

Data sources

The data reported in this document are based upon EPA estimates. EPA does not have a program devoted specifically to estimating pesticide use; rather, they use the best available information from the public domain and proprietary sources. The data are approximate values and not statistically precise.

The sources that EPA consults for compiling this information include the following:

- The Pesticide Data Center in the Biological and Economic Analysis Division of EPA's Office of Pesticide Programs;
- Several national database services for compiling agricultural pesticide use data, including the USDA; and
- Others from private pesticide marketing research companies.

Explanation of data components

The home and garden use category includes pesticides applied to homes, lawns, and gardens by homeowners and tenants occupying those spaces. The expenditure data presented in Table 1 separate broad classes of pesticides – herbicides, insecticides, fungicides, and other pesticides. The "herbicide" data combine plant growth regulators (PGR) with them, while "fungicides" and "insecticides" exclude sulfur and petroleum oil. Data summarized for "other"

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pesticides combine the total for nematocides, fumigants, other miscellaneous pesticides, and other chemicals used as pesticides, including sulfur and petroleum oil. The use data shown in Table 2 are presented similarly, except that nematocides and fumigants are presented as a separate category. Table 2 does not cover wood preservatives, specialty biocides, chlorine/hypochlorites, and other chemicals used as pesticides, such as sulfur and petroleum oil. "Other conventional" pesticides include rodenticides and other miscellaneous conventional pesticides. In reporting the amount used, data are presented as pounds of active ingredient (a.i.). Totals may not add precisely due to rounding.

U.S. home and garden pesticide expenditures

Total expenditures for home and garden pesticide use as a whole were slightly higher in 2007 compared to 2006 (Table 1). U.S. home and garden pesticide expenditures totaled an average of more than \$2.5 billion in both 2006 and 2007. Expenditures on insecticides/miticides accounted for the largest portion of total expenditures – approximately 60% for both years, followed by expenditures on herbicides/plant growth regulators, other pesticides, and fungicides. There was relatively no change in percentage quantities of pesticide expenditures for each class of pesticide between years.

U.S. home and garden pesticide amount used

U.S. home and garden total pesticide amount used in 2006 and 2007 ranged from 71 to 78 million pounds, depending upon year (Table 2). The largest portion of total U.S. home and garden pesticides used each year was with herbicides at approximately 65 million pounds in 2006 and 55 million pounds in 2007. Insecticide use followed herbicides in 2006; however, fungicides were second in amount used in 2007.

Most commonly used conventional home and garden pesticide active ingredients

Table 3 shows the ten most commonly used conventional home and garden pesticide active ingredients in 2007 compared with 2003 and 2001. The most used active ingredient during all years was 2,4-D, totaling between 8 million and 11 million pounds. Glyphosate was the second most commonly used active ingredient in two of the three years. Of the top ten active ingredients most used in 2007, seven were herbicides and three were insecticides. Because some commercial applicators apply pesticides in the home and garden sector, there may be some usage reported in the industrial/commercial/governmental market sector.

Additional information

- Grube, A., T. Kiely, D. Donaldson, and L. Wu. 2011. Pesticide Industry Sales and Usage: 2006 and 2007 Market Estimates. EPA's Biological and Economic Analysis Division, Office of Pesticide Programs, and Office of Prevention, Pesticides, and Toxic Substances, http://www.epa.gov/opp00001/pestsales/07pestsales/market_estimates06-07.pdf.

Table 1. U.S. home and garden pesticide expenditures by pesticide class – 2006 and 2007.

Class	Millions \$	% of Total
2006		
Herbicides/PGR	723	28
Insecticides/Miticides	1,567	61
Fungicides	64	2
Other	213	8
Total	2,567	100
2007		
Herbicides/PGR	749	28
Insecticides/Miticides	1,629	61
Fungicides	66	2
Other	220	8
Total	2,664	100

Table 2. U.S. home and garden pesticide amount used by pesticide class – 2006 and 2007.

Class	Millions Pounds a.i.	% of Total
2006		
Herbicides/PGR	46	65
Insecticides/Miticides	16	23
Fungicides	7	10
Nematicides/Fumigants	1	1
Other	1	1
Total	71	100
2007		
Herbicides/PGR	43	55
Insecticides/Miticides	14	18
Fungicides	19	24
Nematicides/Fumigants	1	1
Other	1	1
Total	78	100

Table 3. Ten most commonly used conventional home and garden pesticide active ingredients (millions pounds active ingredient).

Active Ingredient	Type*	2007		2003		2001	
		Rank	Range**	Rank	Range	Rank	Range
2,4-D	H	1	8-11	1	8-11	1	8-11
Glyphosate	H	2	5-8	5	5-8	2	5-8
Carbaryl	I	3	4-6	2	6-9	6	2-4
MCPP	H	4	4-6	3	5-8	5	4-6
Pendimethalin	H	5	3-5	4	5-8	3	3-6
Pyrethroids	I	6	2-4	7	2-4	---	<1
Malathion	I	7	2-4	6	3-6	8	2-4
Dicamba	H	8	1-3	9	1-3	7	2-4
Trifluralin	H	9	1-3	---	<1	---	<1
Pelargonic acid	H	10	<1	---	<1	---	<1

* H = herbicide; I = insecticide; F = fungicide.
** Range is the estimate taken from several data sources.
A dash (---) indicates that an estimate is not available.