Oregon Department of Agriculture

Pesticide Use Reporting System

REVISED

2006 Amended Annual Report

July 2008

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INTRODUCTION

This amended report replaces the previously published 2006 PURS Report. No use data for the online system were gathered in 2006. The Household Pesticide Use Survey, however, started in February 2006. This amended report includes the data and analysis from the 2006 Household Pesticide Use Survey.

ABSTRACT

The 1999 Oregon Legislature passed legislation identified as Pesticide Use Reporting Program. This statute directed the Oregon Department of Agriculture (ODA) to develop and implement a system to collect, organize, and report information on all categories of pesticide use in Oregon.

A temporary online system was released in January 2002. Funding to complete the online system was withdrawn in October 2002.

The 2005 Oregon Legislature again provided funding for PURS. Changes were made in how data was to be collected, including greater confidentiality and location reporting. The online system was developed during 2006 as scheduled, within budget, and satisfied system objectives. PURS was deployed January 2007, to receive reports for pesticide applications made during calendar year 2007.

The Household Pesticide Use Survey component of PURS started February 2006. Gilmore Research Group recruited at least 250 households quarterly to participate in pesticide use diaries. A modified version of the online PURS system was used to analyze the data obtained from the use diaries.

A total of 1,580 households agreed to complete use diaries. However, only 1,376 households completed at least one month of reporting. Over one-third of those households reported they did not use any pesticides. The remaining two-thirds provided 3,086 reports.

Only 30% of the reports received contained sufficient information to calculate pounds of active ingredients. The other 70% did not contain sufficient information because:

- Participants were unable to specify the amount of pesticide used.
- Participants were unable to determine what products were pesticides.
- Participants were unable to provide correct product identification.

Because of these difficulties, the data was insufficient to extrapolate to all households in Oregon.

The greatest percentages of pesticide applications were reported to have taken place outdoors. All types of “bugs” (fleas, insects, mosquitoes, and spiders) represented the largest percentage of purpose for control. Moss control products accounted for the largest number of pounds of active ingredients.

BACKGROUND

The 1999 Oregon Legislature passed, and Governor John Kitzhaber signed, legislation identified as Pesticide Use Reporting Program - Chapter 1059, Oregon Laws 1999. This statute assigned to the Oregon Department of Agriculture (ODA) the development and implementation of a comprehensive, reliable and cost-effective system. This system is intended to collect, organize and report information on all categories of pesticide use in Oregon. The goal of collecting this information is to ensure public health and safety and to protect Oregon's water and environment. The system specified in statute became known as the Oregon Pesticide Use Reporting System (PURS). Since this statute contained a "sunset" date of December 31, 2009, it was considered to be temporary, and was presented as notes in the Oregon Pesticide Control Act, Oregon Revised Statutes – Chapter 634, following ORS 634.042.

Development of PURS was planned to include two software releases. The first of these releases occurred in January 2002, and was known as the "temporary" PURS or tPURS. The second release, to be known as the "permanent" PURS or pPURS, was planned to replace tPURS by January 2003. The tPURS software provided a secure interface for entering pesticide use data, but was severely limited in its capabilities to process and manage data. The pPURS was intended to have additional required capabilities; including summarizing and reporting entered information. Funding to complete pPURS was withdrawn in October 2002. The utilization of tPURS to receive pesticide use reports continued into 2003 until available funding was exhausted. No further effort was expended on the development of this online component of PURS until the 2005 – 2007 biennium.

In addition to collecting data from those required to report pesticide use, ODA was assigned the task of gathering information on the use of pesticides by households. During 2002, ODA obtained a contractor experienced in conducting public surveys. In June 2002, two focus groups were organized, one in Portland and another in The Dalles. These focus groups assessed several key research issues:

- What is or is not perceived as a pesticide by households?
- How many months would households be willing to participate in a detailed survey?
- What is the easiest yet most comprehensive form a household would be willing to complete?
- What information could a household reasonably find and then accurately record from a pesticide label (i.e., product name, EPA Registration Number)?

The information obtained through these focus groups was used to design a very detailed information-gathering scheme to be tested in a pilot study. In August 2002, 1,219 households were randomly contacted by telephone to participate in this pilot study. The pilot study was conducted through November 2002. The findings of the pilot study were used to refine elements of the intended household pesticide use survey. Changes made from the original design of the survey included adjusting the number of participants, approaches in obtaining and retaining participants and instructions for the survey participants.

ONLINE SYSTEM

The 2005 Oregon Legislature provided a total of $1.9 million for the ODA to operate PURS during the 2005-2007 biennium. This amount included funds specific for the final development, implementation and operation of the online component of PURS.

ODA resumed development efforts with the original contractors, Global Village Consulting, Inc. as technical developer, and CASE Associates as the QA/QC contractor. The online component was developed during 2006, as per schedule, within budget, and satisfied system objectives. PURS was deployed on January 2, 2007, to receive reports for pesticide applications made during calendar year 2007.

The 2005 Legislature changed some of the requirements of PURS from what was originally specified in Chapter 1059, Oregon Laws 1999. Due to additional confidentiality concerns, PURS was re-developed as two separate systems: one system for collecting demographic information (Registration System) and one system for collecting pesticide use reports (Reporting System). Information that would identify the applicator, such as name or address, is no longer maintained with reports of pesticide use.

The 2002 version of PURS based the reporting of pesticide use location on the site category. Site categories that were not Urban/General Indoor or Urban/General Outdoor were required to report location by township, range and section (TRS). Reporting by Global Positioning System (GPS) coordinates was accepted in place of TRS. Sites categories of Urban/General Indoor and Urban/General Outdoor were to report by ZIP code if the pesticide use was on private property, or by physical address if the use was on public property.

The 2005 Legislature changed location reporting, requiring the use of either ZIP code or of the third-level hydrologic unit code (HUC) also called water basin. Reporting by ZIP code is required for pesticide use on Urban/General Indoor and Urban General Outdoor sites. Pesticide use on all other sites is to be reported by water basin. A map of Oregon identifying the recognized water basins is contained in Figure 1 below.

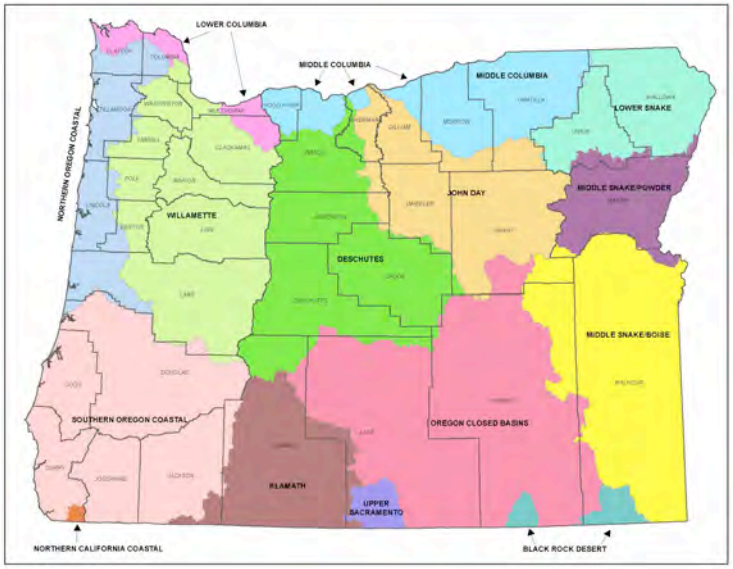

Figure 1 - Oregon Water Basin Map

The 2005 Legislature also adopted changes to prevent collection of information that "would reveal the identity of the owner or lessee or the specific location of property where a person has applied a pesticide." In response to these changes, the site categories and specific sites used in PURS were changed. Previously, many site categories were sub-divided into numerous specific sites. These specific sites provided more detailed information about the pesticide use, sometimes identifying the specific crop. For some locations, such detailed information could potentially identify a particular entity. For example, a single ZIP code might contain only one golf course. Therefore, reporting the specific site "golf course" in that ZIP code could identify that specific golf course. The current list of site categories and specific sites are listed below:

- Agriculture
  - Field crops
  - Fruits/nuts
  - Livestock/poultry
  - Nursery/Christmas tress
  - Oil Crops
  - Pasture/forage/hay
  - Seed crops
  - Vegetables
  - Other
- Aquatic
- Forestry
- Public health/regulatory pests
- Research
- Right-of-way
- Urban/general indoor
  - Dwelling/residence
  - Site with public access
  - Site with non-public access
  - Other
- Urban/general outdoor
  - Site associated with dwelling/residence
  - Site with public access
  - Site with non-public access
  - Other
- Other

PURS allows reporters to view, copy and edit previously submitted reports. These features allow reporters to print their reports of pesticide use to meet other needs they may have (i.e., purchaser's requirements), to use previously filed reports to prepare new reports, and to correct information contained in previously submitted reports. PURS also has the ability to receive large numbers of reports through an electronic data submission (EDS) mechanism. Following is the list of information on each pesticide use reported into PURS:

- Reporter ID – number provided to the reporter through the PURS Registration System;
- Date of pesticide use – reported as month, day and year, allows a reporter to aggregate reports on a monthly basis in certain circumstances;
- Site category – broad description of the site;
- Specific site – more detailed description of the site, pertains to only three site categories (Agriculture, Urban/General Indoor, Urban/General Outdoor);
- Location – based on site category; five-digit ZIP code for Urban/General Indoor and Urban/General Outdoor sites, water basin for all other sites;
- Identification of each pesticide product used –database available within PURS to determine and select specific product;

- Quantity – amount of undiluted product used including units of measure (e.g., ounces, fluid ounces, pounds, quarts); and,
- Purpose – general identification of reason for pesticide use (e.g., weed control, insect control).

During PURS development, continuous outreach was made to pesticide applicators explaining changes to PURS, reporting requirements and procedures. ODA staff made more than 50 presentations to a variety of reporters during 2006. Informational mailings were made to groups of possible pesticide reporters who were non-traditional contacts of the pesticides regulatory program. Such groups included local chambers of commerce, city offices, water districts, rural fire departments, hospitals, housing authorities, and associations representing lodging, grocery and dining businesses. Numerous articles were written and provided to these and other groups for their use in communicating with member businesses and other entities.

HOUSEHOLD USE

Overview

During 2006, ODA resumed a contract with The Gilmore Research Group (Gilmore). Work between ODA and Gilmore began in 2002 to develop a statewide survey to obtain information on pesticide use by households. That work had included conducting and evaluating focus groups and developing and performing a pilot study, as well as finalizing procedures for conducting a statewide survey of household pesticide use each calendar quarter. In January 2006, Gilmore began conducting quarterly household pesticide use surveys.

Gilmore telephone screeners were used to recruit households to participate in the diary portion of the survey. Using a purchased sample of phone numbers selected randomly from throughout Oregon, Gilmore contacted a total of 12,248 households in 2006. General pesticide use information was collected from all households interviewed, whether or not they agreed to participate in the diary portion of the survey. During the telephone contact, respondents were asked if they would be willing to use a diary form to keep track of their use of pest control products over a three-month period. Detailed address information was collected from those who agreed. Approximately 40% of all households contacted agreed to participate in the diary portion of the survey. For those who agreed to participate in the diary keeping, Gilmore mailed reporting forms within one week of recruitment. The mailing included a letter from the ODA Director thanking the respondent for agreeing to participate and provided phone numbers and a web site (see Appendix A).

The pilot study conducted in 2002 identified that many households would not fill out their diary forms on a regular basis. Another identified problem was the lack of complete information. To address these problems and assure gathering of more accurate information, Gilmore made monthly telephone calls to participants. These calls provided opportunities for participants to ask questions. In addition, calls were used to remind participants to keep track of their use of pest control products. Through these calls, Gilmore obtained interim monthly pesticide use information, which was later compared with the contents of submitted diary forms. See Table 1 regarding the household pesticide use survey component of PURS for 2006.

Table 1 - Summary of Participants

Quarter 1 February-April	
Number phoned	2,955
Number who completed phone survey	629
Number who agreed to participate in use diary	435
Number who completed one month of reporting	47
Number who completed two months of reporting	54
Number who completed three months of reporting	282
Quarter 2 May-June*	
Number phoned	3,207
Number who completed phone survey	564
Number who agreed to participate in use diary	362
Number who completed one month of reporting	79
Number who completed two months of reporting	234
Quarter 3 July-September	
Number phoned	3,002
Number who completed phone survey	598
Number who agreed to participate in use diary	376
Number who completed one month of reporting	46
Number who completed two months of reporting	66
Number who completed three months of reporting	213
Quarter 4 October-December	
Number phoned	3,084
Number who completed phone survey	640
Number who agreed to participate in use diary	404
Number who completed one month of reporting	33
Number who completed two months of reporting	41
Number who completed three months of reporting	276

* Recruitment for participants in the first quarter's surveys was conducted during January 2006. Surveys were not started until February 2006. The Quarter 1 surveys were for February – March – April. In order to align the quarterly survey schedule with standard recognized calendar quarters; Quarter 2 consisted of May – June only.

The state was divided into nine regions, according to counties (Figure 2). Each quarter, attempts were made to obtain minimum numbers of participants for each region totaling at least 250 participants per quarter from the entire state. The percentage of participants for each region was to be 10% with the exception of region 6 at 17%. This method was used to obtain information from throughout Oregon rather than just from the areas of highest population, such as in and around the Portland Metro area.

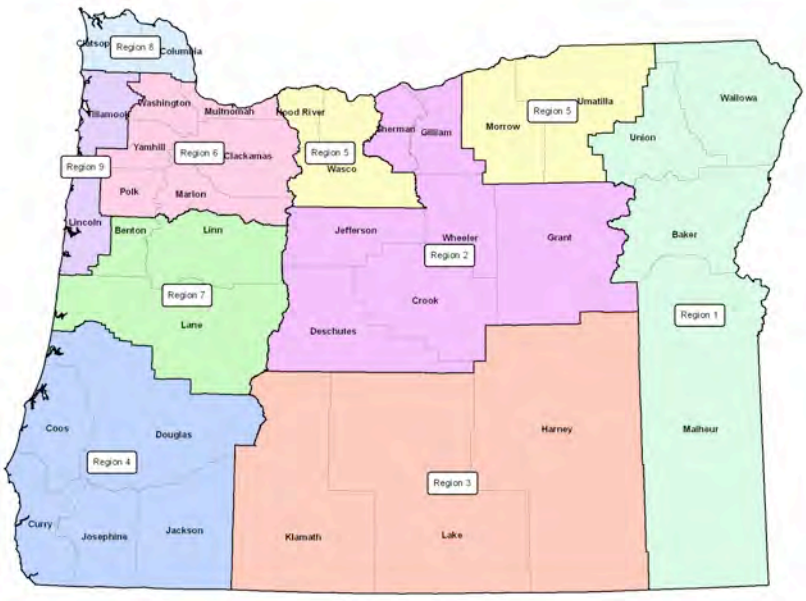

Figure 2 – State map with regions used in the Household Use Survey

Many households contacted declined to participate in the survey. Other reasons contact did not result in survey participants included:

- no answer,
- answering machine,
- number for a business, fax or modem, and
- language barrier or hearing difficulties.

Figure 3, illustrates the number of participants by region.

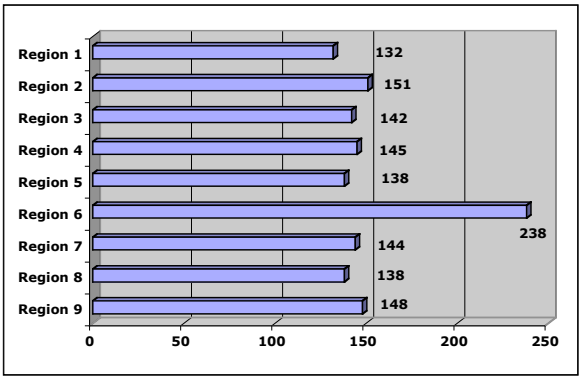

Figure 3 – Number of Participants by Region

A total of 1,580 households agreed to complete use diaries. However, only 1,376 participants actually completed at least one month of reporting. Reporting included both those people who made pesticide applications and those that did not use any pesticides.

Over one-third (512) of the participants reported that they did not use any pesticides during the quarter in which they participated. The other 864 participants provided 3,086 reports (Figure 4). Only 30% of the reports of pesticide applications contained sufficient information to calculate pounds of active ingredients.

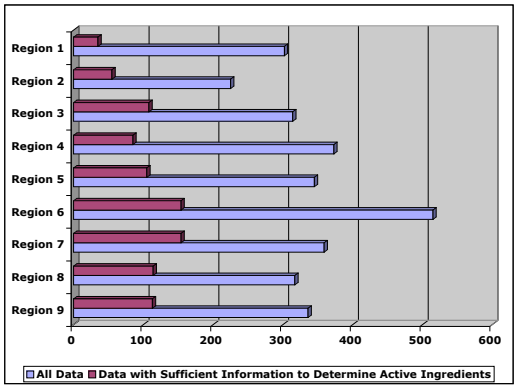

Figure 4 – Number of Reports of Pesticide Use Received by Region

Several reasons why reports contained insufficient information to calculate pounds of active ingredients included:

- **Participants were unable to specify the amount of pesticide used.** For some products, such as those in spray cans, it is difficult to provide actual amounts used.
- **Participants were unable to determine what products were pesticides.** Under federal and Oregon law "pesticide" is a very broad term that includes insecticides, herbicides, rodenticides, fungicides, etc. Basically, anything that kills, repels, or mitigates a pest is a pesticide. Many persons do not understand this meaning of "pesticide." Thus, some products that are pesticides may not have been reported. And, some products that are not pesticides were reported. Because of this confusion, the department chose to use the term "pest control products" rather than "pesticide" when conducting the Household Pesticide Use Survey.
- **Participants did not provide correct product identification.**
    1. Each pesticide product is assigned a distinct registration number through the United States Environmental Protection Agency (US EPA). This EPA registration number is on the label of each product and identifies that product. The survey used this EPA registration number to identify specific products used. A number of reports did not include the EPA registration number. Some reports included another number, such as the barcode, instead of the EPA registration number.
    2. Relying only upon a product's name may not identify the specific product used. For example, there are about 75 different products that contain "Roundup™" in the trade name. Some contain the single active ingredient glyphosate but in varying concentrations. Some contain additional active ingredients. In addition, there are a number of "generic" products containing glyphosate that some persons may refer to as "Roundup™". Despite education outreach activities by ODA and the survey contractor, many participants did not understand how to identify the product used.

Conclusions

Households that reported have difficulty identifying pesticide products. There are also concerns about the ability of households to read the label and correctly identify information. Some variation was seen between reported purposes for households east of the Cascades vs. households west of the cascades.

Moss control products account for 50% of the pounds of active ingredient, but only 2% of the reports identified moss control as the purpose. Moss control products contain higher percentages of active ingredients and typically have higher application rates, than do other types of products.

One specific chemical grouping, including pyrethrins and synthetic pyrethroids, accounted for 28% of total insecticide poundage. Organophosphates, another insecticide chemical group, accounted for 17% of total insecticide poundage, while carbamates accounted for 5%. Of the herbicides, phenoxies accounted for 16%. Removing sodium nitrate, sulfur and carbon (see Appendix B) from the list of rodenticides to look at bait products, zinc phosphide accounted for 90% while strychnine accounted for 9%.

Overall, looking at pounds of active ingredient, the greatest number of pounds reported were for:

- ferrous sulfate monohydrate (30%) [moss control],
- glyphosate (25%) [weed control],
- zinc sulfate monohydrate (18%) [moss control],
- ferric sulfate (3%) [moss control], and
- metaldehyde (3%) [slug/snail control].

The main five active ingredients by greatest number of records were:

- glyphosate (8%) [weed control],
- permethrin (7%) [insect control],
- fipronil (6%) [insect control],
- s-methoprene (6%) [insect control], and
- tetramethrin (5%) [insect control].

Table 2, next page, identifies active ingredients by type and highlights those that were reported in the greatest amount. In total, 96 active ingredients were identified as being used.

Table 2 – Main Active Ingredients Reported, Presented by Pesticide Type

	Active Ingredient	Lbs. reported	Percentage[1]
Insecticides	**11.23 Total**		
	Bifenthrin	2.74	24%
	Fipronil	2.66	24%
	S-methoprene	2.25	20%
	Diazinon	1.32	12%
	Carbaryl	0.57	5%
	All others	1.69	15%
Herbicides	**36.47 Total**		
	Glyphosate	28.02	77%
	2,4-D	3.16	9%
	Mecoprop	1.53	4%
	MCPA	1.10	3%
	Diquat dibromide	0.62	2%
	All others	2.04	6%
Moss control	**58.12 Total**		
	Ferrous sulfate monohydrate	33.83	58%
	Zinc sulfate monohydrate	19.99	34%
	Ferric sulfate	3.90	7%
	Potassium salts of fatty acids	0.36	1%
	Ammonium salts of fatty acids	0.04	<1%
Rodenticides	**2.98 Total**		
	Sodium nitrate	1.5	50%
	Sulfur	1.13	38%
	Carbon	0.28	9%
	Zinc phosphide	0.06	2%
	All others	0.01	<1%
Insect repellents	**0.62 Total**		
	DEET	0.60	96%
	p-Menthane-3,8-diol	0.02	3%
Fungicides	**0.33 Total**		
	Calcium polysulfide	0.09	27%
	Chlorothalonil	0.09	27%
	Tebuconazole	0.06	18%
	Triforine	0.05	15%
	Captan	0.03	9%
	All others	0.01	3%
Slug/snail control	**3.03 Total**		
	Metaldehyde	2.99	99%
	Iron phosphate	0.04	1%
Animal Repellents	**1.06 Total**		
	Bone oil	1.06	100%

[1]Percentages may not add to 100% due to rounding.

The number of reports with sufficient information to determine pounds of active ingredient varied among the 9 regions. See Figure 5 below.

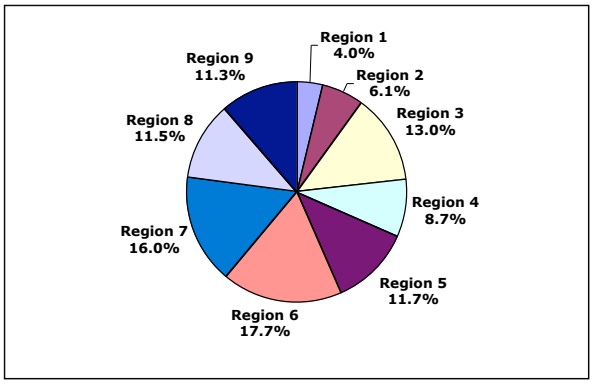

Figure 5 – Percentage by Region of Reports that Had Sufficient Information to Determine Active Ingredients

While approximately 70% of the reports contained insufficient information to determine pounds of active ingredient used, most did contain information about site of pesticide application and the intended purpose for the application. Following are summaries about site and purpose of reported pesticide use, both for all reports and those that contained sufficient information to calculate pounds of active ingredients. The purpose of product use, presented by quarter is also included for reports that contained sufficient data to calculate pounds of active ingredient.

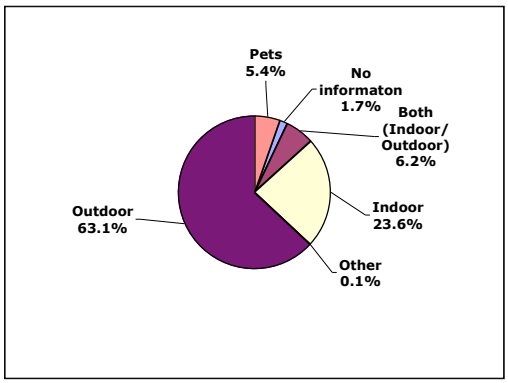

Figure 6 – Reported Sites for All Data (from all 3,086 total reports received)
Percentages may not add to 100% due to rounding.

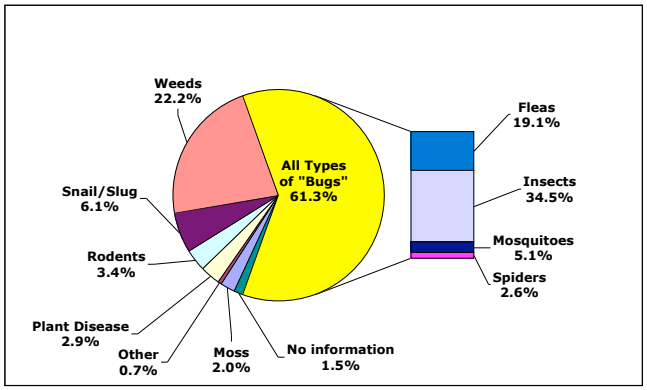

Figure 7 – Reported Purposes for All Data

Percentages may not add to 100% due to rounding.

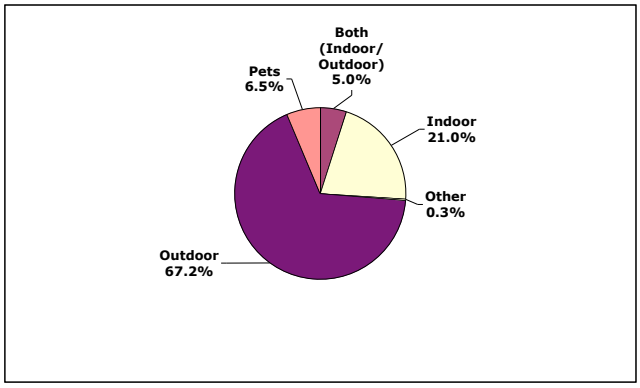

Figure 8 – Reported Sites for Data with Active Ingredient Information

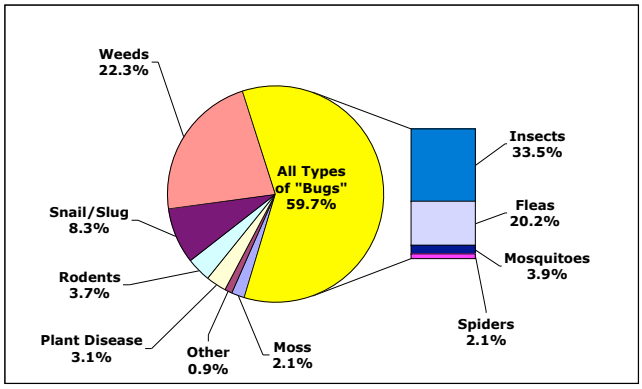

Figure 9 – Reported Purposes for Data with Active Ingredient Information

Percentages may not add to 100% due to rounding.

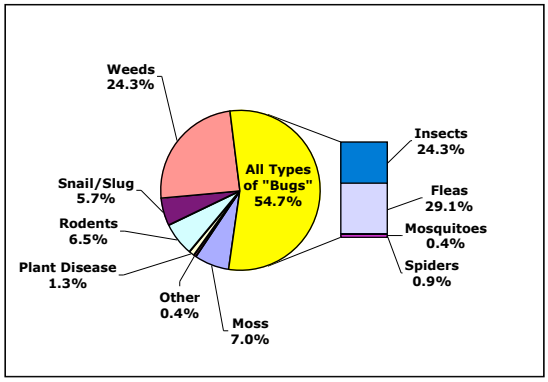

Figure 10 – Reported Purposes for Data with Active Ingredient Information – Quarter 1
Percentages may not add to 100% due to rounding.

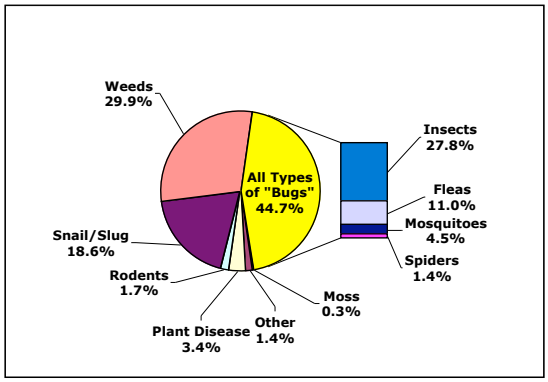

Figure 11 – Reported Purposes for Data with Active Ingredient Information – Quarter 2

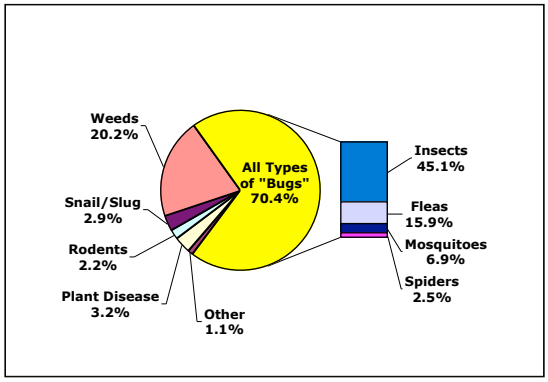

Figure 12 – Reported Purposes for Data with Active Ingredient Information – Quarter 3

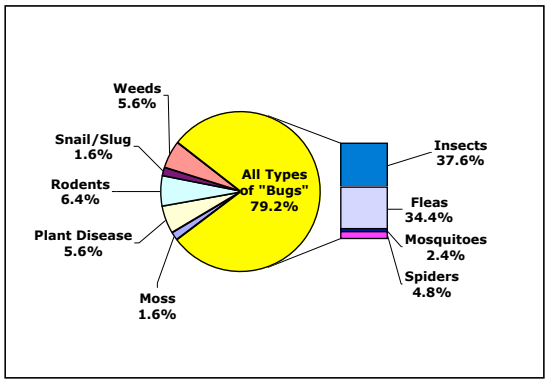

Figure 13 – Reported Purposes for Data with Active Ingredient Information – Quarter 4

The following (Figure 14) illustrates pesticide types reported by percentage of pounds of active ingredient. Additional charts are below that separate this information into each of the nine regions. Type of pesticide is related to purpose information previously presented. For example, herbicides are used for weed control, insecticides are used for "bug" control, etc.

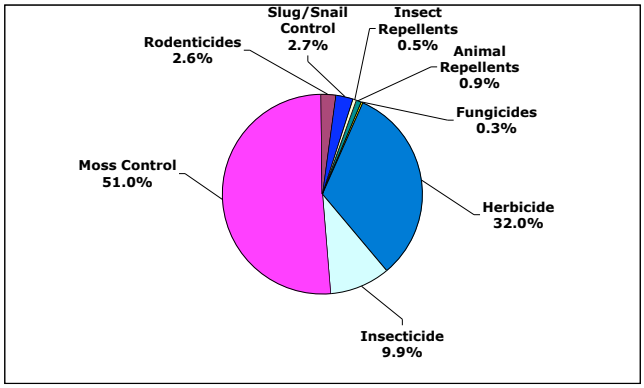

Figure 14 - Active Ingredients by Type – Entire State
Percentages may not add to 100% due to rounding.

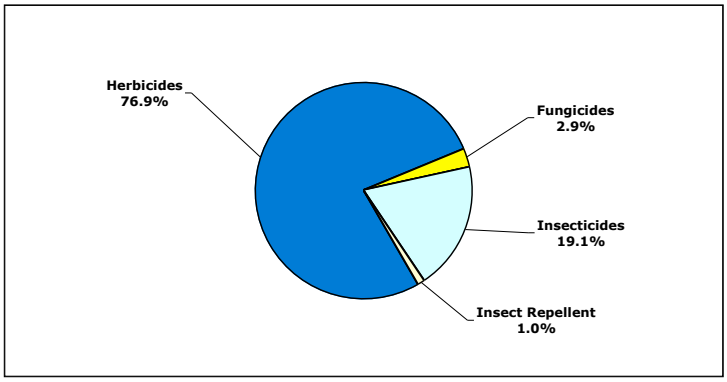

Figure 15 – Active Ingredients by Type – Region 1
Percentages may not add to 100% due to rounding.

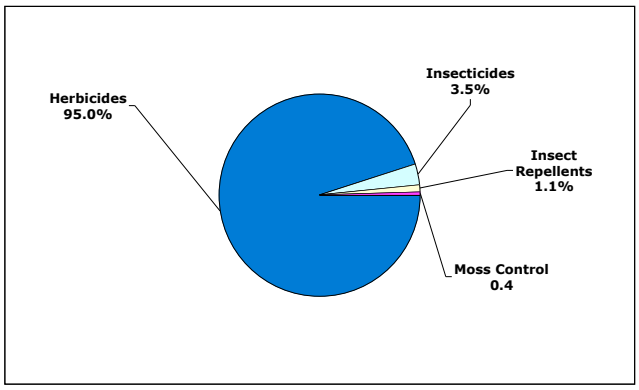

Figure 16 – Active Ingredients by Type – Region 2

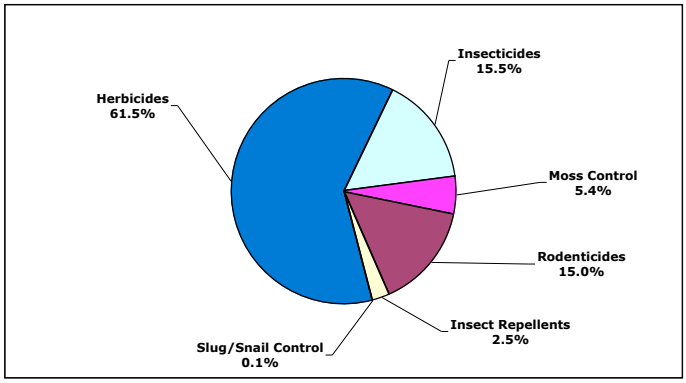

Figure 17 – Active Ingredients by Type – Region 3

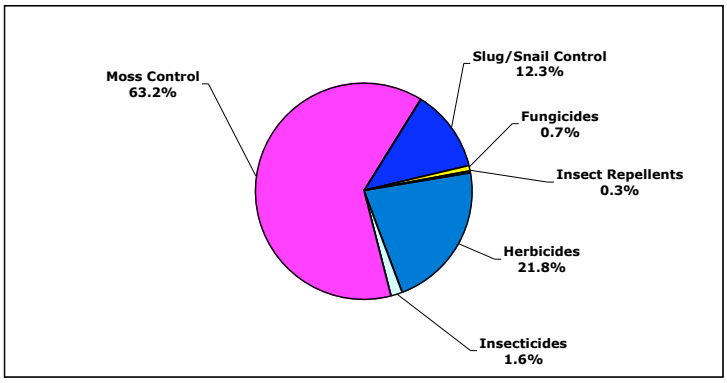

Figure 18 – Active Ingredients by Type – Region 4
Percentages may not add to 100% due to rounding.

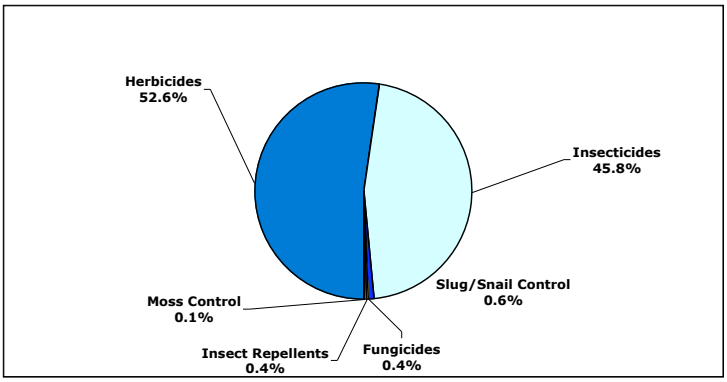

Figure 19 – Active Ingredients by Type – Region 5
Percentages may not add to 100% due to rounding.

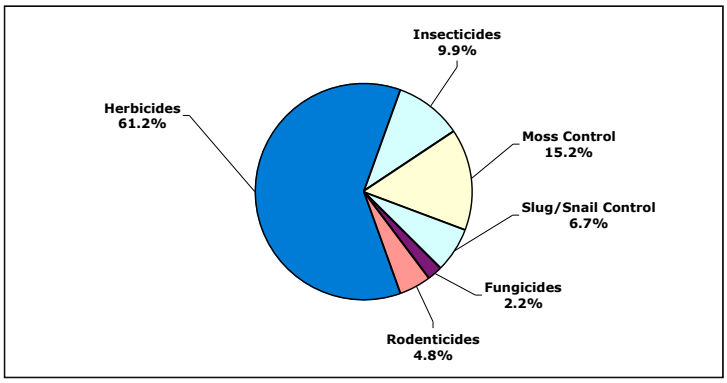

Figure 20 – Active Ingredients by Type – Region 6

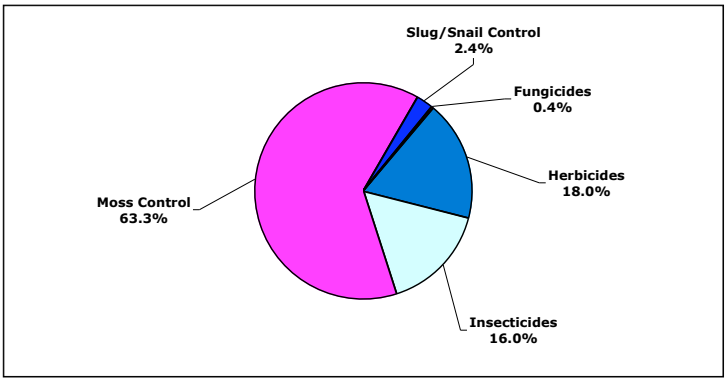

Figure 21 – Active Ingredients by Type – Region 7
Percentages may not add to 100% due to rounding.

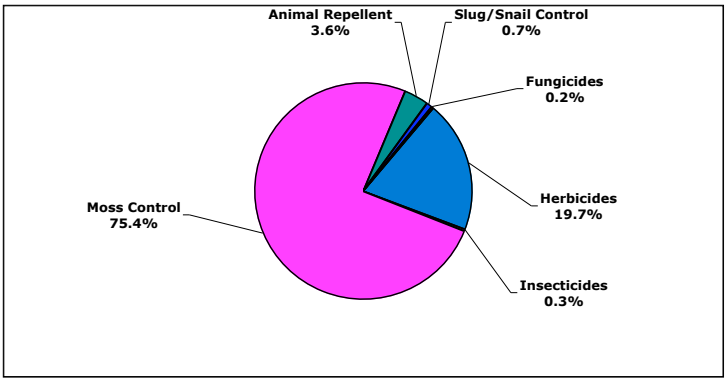

Figure 22 – Active Ingredients by Type – Region 8
Percentages may not add to 100% due to rounding.

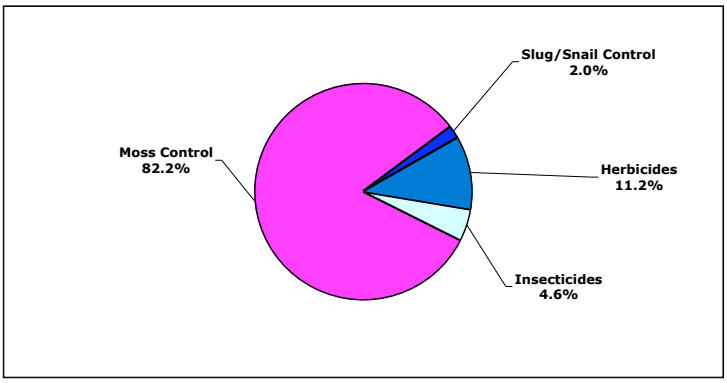

Figure 23 – Active Ingredients by Type – Region 9

APPENDIX

Appendix A – Diary Packet

Oregon
Theodore R. Kulongoski, Governor

Department of Agriculture
Office of the Director
635 Capitol Street NE
Salem, OR 97301-2532
(503) 986-4552
FAX (503) 986-4750

Date: January 18, 2006

To: Oregon Household

From: Katy Coba, Director

RE: Household Pest Control Product Survey

Thank you so much for agreeing to participate in the Household Pest Control Product Survey sponsored by the Oregon Department of Agriculture. Information gathered in this survey will be used by environmental and health researchers to evaluate the use of pesticides in Oregon. The information you provide will be aggregated with the responses of hundreds of other households who are also participating in the survey to get a total picture of household pesticide use around the state. Accurate information is essential to the success of this research. The fact that you are participating in the survey should not affect the pest control products you buy and use in any way.

For this survey, we are simply asking that you use the enclosed form to keep track of pest control products used by your household for 90 days, beginning on the first day of the month indicated on the top of the form. Before entering information on the survey form, be sure to refer to the instructions and the "Frequently Asked Questions" sheet that are also enclosed with the form.

Rest assured that all the information you provide on the form will remain strictly confidential. Gilmore Research Group is conducting the survey on behalf of the Oregon Department of Agriculture. Your name, address, and phone number will be used only for purposes of sending and receiving survey materials; this information will not be shared with the Department or any other agency. Your contact information will not be associated with the form you return, so do not place your name or any other personal information anywhere on the form.

If you have questions or need assistance with filling out the survey form, please telephone Gilmore Research Group at 1-800-940-5456, extension 254, and ask for Michelle or Margie. You will also receive a follow-up communication from Gilmore Research Group sometime within the next two weeks.

Please feel free to make photocopies of the survey form as needed. If you would like more information about the survey you may also go to the Oregon Department of Agriculture website at http://oregon.gov/ODA/PEST/purs_index.shtml.

Gilmore Research Group will be calling you monthly to collect the information from your survey form and to answer any questions. You will also be asked to mail the completed forms to Gilmore Research Group at the end of the 90 day survey period. Your assistance in this survey is very much appreciated and will contribute greatly to understanding use of pest control products by Oregon households, and the potential impact of these products on human health and the environment.

Tips to help find the EPA Reg Number

We realize that the EPA Reg. number can be difficult to find at times, however this information is very important to the study. Here are some helpful hints to finding the number.

-Any application of any product inside or outside a home with an EPA should be recorded

-The EPA number contains **2 or 3 sets of digits**.

-It is clearly labeled **"EPA Reg. No."**

-It's usually found in small print on either the front or back of the label and towards the bottom of the container.

-The EPA Reg number ALWAYS has a dash and is ONLY NUMBERS.

-Different sized containers of the same product have different EPA numbers, so it is important to list each one.
Here are some common examples:

Bayer, Advantage 11556-117, 11556-122, 11556-118, 11556-119

Monsanto Company, Round Up 524-445, 71995-20, 71995-17, 524-343, 524-436

Merial Limited, Frontline 65331-5, 65331-4, 65331-1, 65331-3

***Please remember to write down the EPA Reg. number before you throw a package away. ***

PRIVATE TRACKING NUMBER 00584

Household Pest and Weed Control Product Reporting Form

February-April

USE ONE LINE FOR EACH APPLICATION OF A PRODUCT (report multiple applications in one day as a single application).

Amount and unit reporting:

IF CONCENTRATED: For products that you need to mix with water, report only the amount of undiluted concentrate used. Report in standard units such as, cups, tablespoons, teaspoons, pounds, pints, quarts, ounces, etc. Do not report total amount of the mixed solution used.

IF DRY: For products, such as a weed and feed, moss killer or granular slug bait, report the total number of pounds used.

IF LIQUID: For pre-mixed "ready to use" products, including aerosols and solutions in squirt bottles, indicate approximate percentage (%) of the container used or ounces used.

DATE mm/dd/yy	WHERE USED	BRAND NAME OR MANUFACTURER	PRODUCT NAME	EPA Reg. No. (*not* EPA Est. No.)	FULL CONTAINER SIZE (Indicate amount and unit.)	TOTAL AMOUNT OF PRODUCT USED AND UNIT (See notes above.)	PROBLEM OR PURPOSE OF APPLICATION
/ /	❑ Indoor ❑ Outdoor ❑ Both ❑ Other, specify%				Full Container Amount: ___ ___ ___ Unit: ❑ Ounces ❑ Quarts ❑ Pounds ❑ Other, specify % ❑ Pints	Total Amount Used: ___ ___ ___ Unit: ❑ Ounces ❑ Teaspoons ❑ % (of Container ❑ Pounds ❑ Pints ❑ Other, specify% ❑ Tablespoons ❑ Quarts	❑ Fleas ❑ Snail/slug ❑ Insects ❑ Spiders ❑ Mosquitoes ❑ Weeds ❑ Moss ❑ Other, specify % ❑ Plant disease ❑ Rodents
/ /	❑ Indoor ❑ Outdoor ❑ Both ❑ Other, specify%				Full Container Amount: ___ ___ ___ Unit: ❑ Ounces ❑ Quarts ❑ Pounds ❑ Other, specify % ❑ Pints	Total Amount Used: ___ ___ ___ Unit: ❑ Ounces ❑ Teaspoons ❑ % (of Container ❑ Pounds ❑ Pints ❑ Other, specify% ❑ Tablespoons ❑ Quarts	❑ Fleas ❑ Snail/slu ❑ Insects ❑ Spiders ❑ Mosquitoes ❑ Weeds ❑ Moss ❑ Other, specify % ❑ Plant disease ❑ Rodents
/ /	❑ Indoor ❑ Outdoor ❑ Both ❑ Other, specify%				Full Container Amount: ___ ___ ___ Unit: ❑ Ounces ❑ Quarts ❑ Pounds ❑ Other, specify % ❑ Pints	Total Amount Used: ___ ___ ___ Unit: ❑ Ounces ❑ Teaspoons ❑ % (of Container ❑ Pounds ❑ Pints ❑ Other, specify% ❑ Tablespoons ❑ Quarts	❑ Fleas ❑ Snail/slug ❑ Insects ❑ Spiders ❑ Mosquitoes ❑ Weeds ❑ Moss ❑ Other, specify % ❑ Plant disease ❑ Rodents
/ /	❑ Indoor ❑ Outdoor ❑ Both ❑ Other, specify%				Full Container Amount: ___ ___ ___ Unit: ❑ Ounces ❑ Quarts ❑ Pounds ❑ Other, specify % ❑ Pints	Total Amount Used: ___ ___ ___ Unit: ❑ Ounces ❑ Teaspoons ❑ % (of Container ❑ Pounds ❑ Pints ❑ Other, specify% ❑ Tablespoons ❑ Quarts	❑ Fleas ❑ Snail/slu ❑ Insects ❑ Spiders ❑ Mosquitoes ❑ Weeds ❑ Moss ❑ Other, specify % ❑ Plant disease ❑ Rodents
/ /	❑ Indoor ❑ Outdoor ❑ Both ❑ Other, specify%				Full Container Amount: ___ ___ ___ Unit: ❑ Ounces ❑ Quarts ❑ Pounds ❑ Other, specify % ❑ Pints	Total Amount Used: ___ ___ ___ Unit: ❑ Ounces ❑ Teaspoons ❑ % (of Container ❑ Pounds ❑ Pints ❑ Other, specify% ❑ Tablespoons ❑ Quarts	❑ Fleas ❑ Snail/slug ❑ Insects ❑ Spiders ❑ Mosquitoes ❑ Weeds ❑ Moss ❑ Other, specify % ❑ Plant disease ❑ Rodents
/ /	❑ Indoor ❑ Outdoor ❑ Both ❑ Other, specify%				Full Container Amount: ___ ___ ___ Unit: ❑ Ounces ❑ Quarts ❑ Pounds ❑ Other, specify % ❑ Pints	Total Amount Used: ___ ___ ___ Unit: ❑ Ounces ❑ Teaspoons ❑ % (of Container ❑ Pounds ❑ Pints ❑ Other, specify% ❑ Tablespoons ❑ Quarts	❑ Fleas ❑ Snail/slu ❑ Insects ❑ Spiders ❑ Mosquitoes ❑ Weeds ❑ Moss ❑ Other, specify % ❑ Plant disease ❑ Rodents
/ /	❑ Indoor ❑ Outdoor ❑ Both ❑ Other, specify%				Full Container Amount: ___ ___ ___ Unit: ❑ Ounces ❑ Quarts ❑ Pounds ❑ Other, specify % ❑ Pints	Total Amount Used: ___ ___ ___ Unit: ❑ Ounces ❑ Teaspoons ❑ % (of Container ❑ Pounds ❑ Pints ❑ Other, specify% ❑ Tablespoons ❑ Quarts	❑ Fleas ❑ Snail/slug ❑ Insects ❑ Spiders ❑ Mosquitoes ❑ Weeds ❑ Moss ❑ Other, specify % ❑ Plant disease ❑ Rodents

When this form is completed, use another enclosed form for additional applications.

SEE THE BACK OF THIS FORM FOR INSTRUCTIONS

Instructions for Household Pest Control Product Reporting Form

The reporting form is easy to fill out. You are asked to record information about your applications of pest control products in and around your home. Use one line per product application. Please combine and report multiple applications in one day as a single application. Report only applications you make to your own property in the 3 months indicated on your reporting form.

Hint: To make reporting your household's pest control product applications easier, you may want to post the form in a conspicuous place where all family members have access to it, such as on the refrigerator, above a workbench, next to a calendar, or where you store such products. That way any member of your family making an application will easily be able to fill out the form.

DATE: Record the two-digit month, day, and year information (in that order).

WHERE USED: Check *indoor*, *outdoor*, or *both* depending upon where you apply the product. If uncertain, check *other* and write in where you applied the product.

BRAND NAME OR MANUFACTURER: If uncertain about the brand or manufacturer of a product, please just use your best judgment. An example is "Acme Company." A trade mark is often associated with a brand name.

PRODUCT NAME: This is often in the largest type on the product container. An example is "Miracle Weed and Feed."

EPA REG. NO. (Environmental Protection Agency Registration Number): This is extremely important information. Please try to find this number for each product application you report. It is a two or three digit set of numbers connected by a hyphen, appearing in small print on either the front or back of the label and toward the bottom of the container. Examples are EPA Reg. No. 110-1825 or EPA Reg. No. 110-1825-970. Report all two or three sets of numbers. Do not report the EPA Est. No. (Environmental Protection Agency Establishment Number) or any CAS Numbers.

FULL CONTAINER SIZE: Report the total amount of product that the container holds (when new). This is usually found on the bottom of the front side of the package container. Be sure to both write a number and check a unit of measurement. For example, you would write ***3 2*** for a 32-fluid ounce container, then check the box next to *ounces*. If uncertain, check *other* and write in what you believe to be the correct information.

TOTAL AMOUNT OF PRODUCT USED: Report the total amount of product that you apply in a single day. Again, be sure to report both a number and check a unit of measurement. If you applied one-half of a 32-fluid ounce container you would write ***1 6***, then check the box next to *ounces*. Alternative, you could write ***5 0*** then check the box next to % to indicate that you used 50% or one-half of the container. If uncertain, simply provide an exact estimate of the total amount of product used. Do not report ranges, such as "2 to 3 ounces." Also, do not record amount as "applied until plant surface was wet" or "used 1 lb. per 1000 sq. ft. of lawn."

PROBLEM OR PURPOSE OF APPLICATION: Check the box that best describes why you applied the product. If there is more than one reason for the application, check all that apply. If the reason for the application is not on the checklist, please check *other*, then write-in the information.

EXAMPLE OF HOW TO FILL OUT ONE PRODUCT APPLICATION

DATE mm/dd/yy	WHERE USED	BRAND NAME OR MANUFACTURER	PRODUCT NAME	EPA Reg. No. (*not* EPA Est. No.)	FULL CONTAINER SIZE (Indicate amount and unit.)	TOTAL AMOUNT OF PRODUCT USED AND UNIT (See notes above.)	PROBLEM OR PURPOSE OF APPLICATION
02/03/06	❑ Indoor X Outdoor ❑ Both ❑ Other, specify:	Acme Company	Miracle Weed and Feed	110-1825-970	Full Container Amount: 2 0 Unit: ❑ Ounces ❑ Quarts X Pounds ❑ Other, specify: ❑ Pints	Total Amount Used: 1 0 Unit: ❑ Ounces ❑ Teaspoons ❑ % (of Container X Pounds ❑ Pints ❑ Other, specify: ❑ Tablespoons ❑ Quarts	❑ Fleas ❑ Rodents ❑ Insects ❑ Snail/slug ❑ Mosquitoes ❑ Spiders ❑ Moss X Weeds ❑ Other, specify: ❑ Plant disease

Frequently Asked Questions about the Household Reporting Survey

Q. What is the period during which I should track my household's pest control product use?
A. The reporting period begins **on the first day of the first month circled on the top of your reporting form.** Do not report any products used before or after the three months indicated.

Q. What are pest control products?
A. **Pest control products** represent a broad range of **items designed to kill, repel, control, or prevent things such as fleas, insects, weeds, rodents, plant diseases, snails and slugs, and moss**. Technically, **"weed and feed" products are also pest control products** and should be included on the reporting form. An important thing to remember is that pest control products that need to be reported in the survey have an EPA Reg. No. that is found on the product container.
Examples of pest control products include (but are not limited to) the following:

- mosquito repellent
- weed killer
- flea treatments or collars
- insect and spider killer
- plant disease control products
- weed and feed products
- snail and slug pellets
- ant bait
- moss control products
- mouse and mole baits

Q. What applications should I report on the reporting form?
Basically, any applications of any product inside or outside your home with an EPA Reg. No. should be recorded on the reporting form. Please report all pest control products you apply inside your personal dwelling space, as well as all products you apply outside in your lawn, yard, garden or on your trees and shrubs. Note, however, that only applications made on your personal residential property should be reported. **Do not report applications to agricultural crops or livestock, and do not report applications to rental properties where you do not reside. Also do not report applications not made by you or members of your household; do not report applications made by lawn care companies or other pest control professionals.** Also, report only products you actually use. Do not report product purchases or report products you may have in storage for future use.

Q. What is an EPA Reg. No. and how do I find it?
A. The **EPA Reg. No. contains two or three sets of digits**, and is clearly labeled "EPA Reg. No." It is **normally found in small print on either the front or back of the label and toward the bottom of the container**. Examples are: 5-21 or 110-1825 or 7023-360 or 4170-28-657.

Q. How do I report applications of prepackaged ant or mouse bait?
A. Report the application date as the date you place the bait station out. The amount of product used is the net contents or weight indicated on each bait station (or 100%). An example would be .2 oz.

Q. What should I do if I'm not sure whether the product I'm applying is really a pest control product?
A. If uncertain, **report all applications that you think are pest control products**. Also note that nearly all pest control products contain an EPA Reg. No. somewhere on the container.

Q. Do I report the use of a mousetrap baited with food or a mole trap?
A. No, technically speaking such traps are devices, not pest control products, and should not be reported.

Over
More Questions/Answers on the back.

Q. How do I estimate the amount of a product I use out of a metal aerosol spray can or opaque or plastic spray container?
A. For plastic spray containers it may be helpful to very carefully hold the container up to the light--be sure the lid is screwed on tightly and the container is clean. For either type of container, you may also feel of the weight of the container before and after application. If you are uncertain about how much of a product you have applied, **you may always estimate the amount you used as a percentage of the total container**. When in doubt about how much product you have used, **please just give us your best estimate**.

Q. What should I do if I need assistance completing the form or want more information about the research?
A. For general information about the household pest control product reporting survey component of the Pesticide Use Reporting System (PURS), you may go to Oregon Department of Agriculture website at http://oda.state.or.us/pesticide/index.html and click on Pesticide Use Reporting System (PURS), or go directly to http://purs.oda.state.or.us. You will note that there is a specific reference to online reporting of pesticide use. This is for governmental, commercial or professional users of pesticides, and not household users of pesticides. For specific questions about completing the reporting form you may also call Margie or Michelle of Gilmore Research Group at 800-940-5456 extension 254.

Q. What should I do if I do not use any pest control products during the reporting period?
A. Remember that pest control products represent a broad range of items (see above), so chances are you will use something during the reporting period. If at the end of this period you truly have not used any such products, simply **write, "none used" on the first line of the reporting form and report that to Gilmore Research Group when they call.** Reports of non-use are very important to the program.

Q. If I want to return the form through the mail, send it to the address below or use the postage-paid return envelope.
A. Mail it to: Gilmore Research Group, 2324 Eastlake Ave E, Seattle, WA. 98102.

Q. What does an example of a complete and accurate entry on the reporting form look like?
A. See below for two examples of how the same information may be reported.

EXAMPLES OF HOW TO FILL OUT PRODUCT APPLICATION

DATE mm/dd/yy	WHERE USED	BRAND NAME OR MANUFACTURER	PRODUCT NAME	EPA Reg. No. (*not* EPA Est. No.)	FULL CONTAINER SIZE (Indicate amount and unit.)	TOTAL AMOUNT OF PRODUCT USED AND UNIT (See notes above.)	PROBLEM OR PURPOSE OF APPLICATION
02/01/06	☐ Indoor ☑ Outdoor ☐ Both ☐ Other, specify %	Acme Company	Miracle Weed and Feed	110-1825-990	Full Container Amount: 20 Unit: ☐ Ounces ☐ Quarts ☑ Pounds ☐ Other, specify % ☐ Pints	Total Amount Used: 10 Unit: ☐ Ounces ☐ Teaspoons ☐ % (of Container ☑ Pounds ☐ Pints ☐ Other, specify % ☐ Tablespoons ☐ Quarts	☐ Fleas ☐ Snail/slug ☐ Insects ☐ Spiders ☐ Mosquitoes ☑ Weeds ☐ Moss ☐ Other, specify % ☐ Plant disease ☐ Rodents
DATE mm/dd/yy	WHERE USED	BRAND NAME OR MANUFACTURER	PRODUCT NAME	EPA Reg. No. (*not* EPA Est. No.)	FULL CONTAINER SIZE (Indicate amount and unit.)	TOTAL AMOUNT OF PRODUCT USED AND UNIT (See notes above.)	PROBLEM OR PURPOSE OF APPLICATION
02/05/06	☑ Indoor ☐ Outdoor ☐ Both ☐ Other, specify %	Holden Company	Hartz Control Home Flea and Tick Killer	2724-401-2596	Full Container Amount: 16 Unit: ☑ Ounces ☐ Quarts ☐ Pounds ☐ Other, specify % ☐ Pints	Total Amount Used: 6 Unit: ☐ Ounces ☐ Teaspoons ☑ % (of Container ☐ Pounds ☐ Pints ☑ Other, specify % sprays ☐ Tablespoons ☐ Quarts	☑ Fleas ☐ Snail/slug ☐ Insects ☐ Spiders ☐ Mosquitoes ☐ Weeds ☐ Moss ☐ Other, specify % ☐ Plant disease ☐ Rodents

Appendix B – Additional Information on Rodenticides

Sodium nitrate, sulfur and carbon are active ingredients in a product that is dropped into rodent holes and creates gases that are intended to kill rodents, including gophers, moles, and rats. This product has a very different mode of action from other rodenticides. It also contains high percentages of these active ingredients while many bait rodenticides are less than one percent active ingredient.