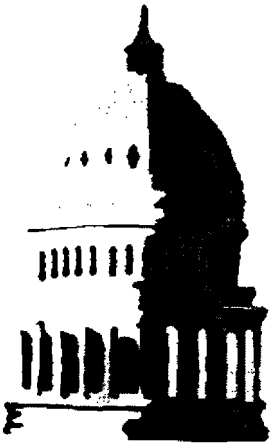
United States
Environmental Protection
Agency

Prevention, Pesticides
And Toxic Substances
(7503C)

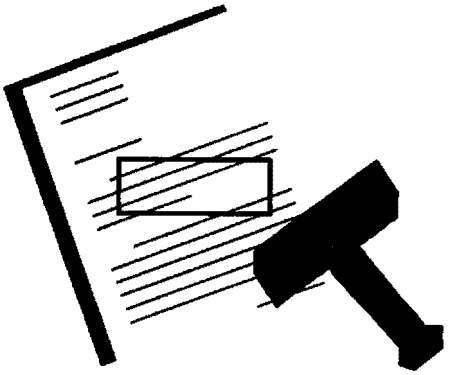
EPA-733-R-96-002

EPA

FINAL REPORT



Survey of 1993 Pesticide Usage by Certified Commercial Applicators of Non-Agricultural Pesticides



Information Resources Center
US EPA (3404)

FINAL REPORT:

RESULTS OF THE 1993 CERTIFIED COMMERCIAL PESTICIDE APPLICATOR SURVEY

Prepared for:

Economic Analysis Branch
Biological and Economic Analysis Division
Office of Pesticide Programs
Office of Prevention, Pesticides and Toxic Substances
U.S. Environmental Protection Agency

Prepared by:

Research Triangle Institute
Post Office Box 12194
3040 Cornwallis Road
Research Triangle Park, NC 27709-2194

EPA Contract No. 68-D2-0169

August 22, 1995

This report was prepared under EPA Contract No. 68-D2-0169 with Research Triangle Institute. The report was submitted to Edward Brandt, EPA Project Officer, and Alan R. Goozner, EPA Work Assignment Manager, EAB/BEAD/OPP/OPPTS. The report was submitted by Robert M. Lucas, Kerrie E. Boyle, Jill A. Dever, Barbara J. George, and Christy J. Jeffries of RTI. OPP staff prepared the work assignment and substantively participated in the preliminary examination of records, identification of population to be sampled, the survey design, the pilot, and the format for presenting the results.

Table of Contents

LIST OF EXHIBITS

LIST OF TABLES

OVERVIEW i

1. Background 1

2. Overview of the Survey Design 1

2.1 Target Population 2
2.2 Sample Design 2
2.3 Instrument Development 4
2.4 Data Collection 4
2.5 Data Processing 5
2.6 Sampling Weights 6

3. Characteristics of the Target Population 6

3.1 Certified Applicators 7
3.2 For-hire Applicators 9
3.3 Not-for-hire, Certified Applicators 10
3.4 For-hire Pesticide Application Businesses 10
3.5 Pesticide Usage Among Certified Applicators 11

4. Pesticide Usage Estimates 12

4.1 General Estimates of Pesticide Usage 13
4.2 Indoor Versus Outdoor Pesticide Usage 16
4.3 Pesticide Usage by Principal Target Pest 17

Appendix A C\CPAS Questionnaire

Appendix B List of Complete Active Ingredient Names

Appendix C Expanded Versions of Table 12.

Appendix D Expanded Version of Table 13. Pesticide Usage by Active Ingredient

Table of Contents (Continued)

Appendix E **Expanded Version of Table 14.** Pesticide Usage by Pesticide Type and Active Ingredient

Appendix F **Expanded Version of Table 15.** Restricted Product Pesticide Usage by Active Ingredient

Glossary of Selected C\CPAS Terms and Definitions

LIST OF EXHIBITS

Exhibit 1. Non-agricultural Pesticide Usage by Type of Respondent and Restricted vs General Use Products: 1993 C/CPAS x

Exhibit 2. Distribution of Certified Applicators by Type of Respondent: 1993 C/CPAS xi

Exhibit 3. Non-agricultural Pesticide User by Pesticide Type and Type of Respondent xii

Exhibit 4. 1993 C/CPAS Inference Regions 3

LIST OF TABLES

Table 1. Number of Certified Pesticide Applicators and Number of Certified Pesticide Applicators per Million 1993 U.S. Residential Population by For-hire Status and C/CPAS Region

Table 2. Number of Certified Pesticide Applicators by For-hire Status and Pest Control Certification Category

Table 3. Number of Non-agricultural Certifications from 1993 C/CPAS and 1992/1993 EPA State Reports by Pest Control Certification Category

Table 4. Number of Non-agricultural Certifications and Number of Certifications per Certified Applicator by For-hire Status and Pest Control Certification Category

Table 5. Number of For-hire Pesticide Applicators and Number of For-hire Pesticide Applicators per Million 1993 U.S. Residential Population by Certification Status and C/CPAS Region

Table 6. Number of For-hire Pesticide Applicators by Certification Status and Employer's Pest Control Certification Category

Table 7. Number of Not-for-hire Certified Applicators by Employer's Type of Business and C/CPAS Region

Table 8. Number of Commercial Pesticide Application Businesses by C/CPAS Region

Table 9. Number of Commercial Pesticide Application Businesses by Pest Control Certification Category

Table 10. Pesticide Usage by For-hire and Not-for-hire Certified Applicators and C/CPAS Region

Table 11. Not-for-hire Certified Applicator Pesticide Usage by C/CPAS Region and Employer's Type of Business

Table 12. Pesticide Usage by For-Hire Status, Employer's Type of Business and Pesticide Type

Table 13. Pesticide Usage by Active Ingredient

Table 14. Pesticide Usage by Pesticide Type and Active Ingredient

Table 15. Restricted Product Pesticide Usage by Active Ingredient

Table 16. C/CPAS Regional Pesticide Usage by Pesticide Type and Restricted Versus General Use

Table 17. C/CPAS Regional Pesticide Usage by Pesticide Type and Active Ingredient

Table 18. Pesticide Usage by Site Category and Indoors Versus Outdoors

Table 19. Indoors and Outdoors Pesticide Usage by Pesticide Type and Site Category

Table 20. Indoors and Outdoors Pesticide Usage by Site Category and Restricted Versus General Use

Table 21. Indoors and Outdoors Pesticide Usage by Type of Pest and Active Ingredient

Table 22. Indoors Pesticide Usage by Type of Pest

Table 23. Indoors Pesticide Usage by Type of Pest, Principal Indoor Pest and Restricted Versus General Use

Table 24. Indoors Pesticide Usage by Site Category, Type of Pest and Principal Indoor Pest

Table 25. Indoors Pesticide Usage by Type of Pest, Principal Indoor Pest and Active Ingredient

Table 26. Outdoors Pesticide Usage by Type of Pest

Table 27. Outdoors Pesticide Usage by Type of Pest, Principal Outdoor Pest and Restricted Versus General Use

Table 28. Outdoors Pesticide Usage by Site Category, Type of Pest and Principal Outdoor Pest

Table 29. Outdoors Pesticide Usage by Type of Pest, Principal Outdoor Pest and Active Ingredient

OVERVIEW

What is C/CPAS?

C/CPAS is an acronym for Certified/Commercial Pesticide Applicator Survey, a survey of pesticide applicators certified in five non-agricultural pest control categories:

- turf and ornamental
- right-of-way
- industrial, institutional, structural, and health-related
- public health
- aquatic.

Why was the survey conducted?

P.L. 101-624, the Food, Agricultural, Conservation, and Trade Act required the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Agriculture (USDA) to develop a database and to publish annual comprehensive reports concerning agricultural and non-agricultural pesticide use. The EPA and USDA negotiated a Memorandum of Understanding demarcating the specific application categories to be covered by the respective agencies to avoid duplication of effort, and the above five categories are EPA's responsibility. The C/CPAS survey is one of many EPA efforts required by this act.

What is a certified/commercial applicator?

Through cooperative agreements with states, the EPA conducts educational and training programs on the legal, safe, and effective use of pesticide products. Specific requirements vary from state to state, but all must satisfy minimal EPA requirements. Individuals who pass these training courses are certified applicators. Restricted use products can be applied legally only by or under the supervision of a certified applicator. Commercial applicators work for pesticide application businesses or other types of businesses or organizations and routinely apply pesticides as part of their jobs.

Commercial applicators who work for pesticide application businesses, such as typical pest control or lawn care businesses, are termed for-hire applicators because they

apply pesticides on the property of others for a fee. Not-for-hire applicators are pesticide applicators who apply pesticides on the property of their employers as part of their job. These latter applicators work for businesses or organizations such as golf courses, nurseries, or federal, state or local governments.

When was the survey conducted?

Planning for the survey began in 1991. The sample design, draft questionnaire, and other data collection forms and protocols were developed in 1992 in consultation with representatives of trade associations representing pest control and lawn care firms. The draft questionnaire was pretested with pest control and lawn care firms and individuals employed at nurseries, golf courses, and other industries. In the summer of 1993, final preparation for conducting the survey began. The questionnaire was finalized. Lists of certified applicators and licensed or registered pesticide application businesses were obtained from the states. These lists were processed to eliminate ineligible individuals or businesses, and a sample of about 3,000 businesses and 2,500 individuals was selected. Data collection began in late January 1994 and was completed in early April 1994. Data processing and statistical analysis began in April 1994 and will continue through the completion of this report.

Who was eligible for C/CPAS?

Two types of respondents were eligible for the C/CPAS, for-hire pesticide application businesses and not-for-hire certified applicators who did not work for a commercial pesticide application business. The businesses (or their employees) and the individual applicators also had to be certified in at least one of the five non-agricultural categories. The final eligibility criterion was that the business or individual had to have applied pesticides during 1993.

Who participated in C/CPAS?

A total of 2,000 for-hire pesticide applicator businesses and 1,645 not-for-hire applicators were eligible for and responded to the survey. However, not all of the respondents were able or willing to respond fully. Of the 2,000 for-hire businesses, about 85 percent provided sufficient information so that we could calculate the amount of pesticide active ingredients they used in 1993. A large fraction of the not-for-hire applicators (37 percent, or 609 respondents) reported that they did not use any pesticides during 1993. Of the 1,036 individuals that reported that they used some pesticides in this year, about 84 percent provided sufficient information so that we could calculate the amount of pesticide active ingredients they applied in 1993. Overall, 90 percent of the 1,645 responding individuals reported pesticide usage information (either zero or positive usage).

What data were collected?

The major objective of the C/CPAS was to make quantitative estimates of pesticide usage by active ingredient, site category, and principal target pest. Consequently, we asked each respondent to list every pesticide product they used in 1993. For each product,[1] we asked them to provide the product's EPA registration number, formulation code, product name, and amount of formulated product that they used during 1993. The respondent was then asked to estimate the percent of the total amount they used by selected site categories and by indoor versus outdoor use. For each site and indoor or outdoor use, we then asked the respondent to name the principal target pest. The list of site categories included an agricultural category allowing us to exclude agricultural usage from the data analysis.

Some additional information was collected from the respondents, depending on whether they were a for-hire application business or a not-for-hire applicator. If the respondent was a for-hire business, we collected information so that we could define the "business reporting unit" and accurately analyze the data. We also asked the business respondents to tell us their total number of year-round and seasonal pesticide applicators and the number of year-round and seasonal applicators that were certified.

---

[1]Because some respondents used a large number of products, we developed a special procedure to reduce their reporting burden. If a respondent reported that they used more than 20 products, we asked them to provide detailed data for all restricted use products and a random sample of at most 15 general use products.

If the respondent was an individual, we ascertained if they worked for a for-hire pesticide application business. If the individual worked for a for-hire business, they were considered ineligible because they were represented by their employer. If they did not work for a for-hire business, they were classified as a not-for-hire applicator. The not-for-hire applicators were asked about the kind of business or organization in which they worked, such as a golf course, nursery, or governmental agency. In some situations, the employer of the individuals was unable to provide pesticide usage information for only the individual selected for the survey. In these situations, we obtained the total pesticide usage information for all the applicators employed by the business or organization as well as the number of applicators at that business or organization so the data could be analyzed properly.

A second component of data collection was completed on a subsample of the respondents. A random sample of their pesticides usage records was selected and key data items were recorded. The record abstraction component was done on a pilot scale to gain experience in the many diverse record keeping situations that were expected to arise. An evaluation of record abstraction protocols and analysis of the data is planned and will be reported in a separate document.

How much pesticide usage was estimated?

We estimate that 69.2 million pounds of active ingredients[2] were applied in the U.S. during 1993 by the businesses and individuals eligible for the survey. The for-hire businesses accounted for 39.6 million pounds (57 percent) versus 29.6 million pounds (43 percent) for the not-for-hire applicators. Of the total estimate of active ingredients used in 1993, 11.1 million pounds (16 percent) were contained in restricted use products versus 58.1 million pounds (84 percent) contained in general use products.

Is there any non-agricultural pesticide usage not included in the survey?

Yes, major components of non-agricultural pesticides usage were not included in the C/CPAS. The survey focused on for-hire businesses or not-for-hire applicators

---

[2]Pounds of active ingredient were calculated by adjusting the total amount of product reported using the percent concentration of each active ingredient the product contained. Oils and solvents were excluded.

certified to use restricted products in the five non-agricultural usage categories but collected data on both restricted and general use product usage by these businesses and applicators. However, a large fraction of the general use products are applied by persons not covered by the survey, that is, persons not certified. Consequently, their usage is not included in the C/CPAS estimates.

One major category was intentionally excluded — wood preserving pesticide products used by commercial, wood-preserving plants. These plants were intentionally excluded because the American Wood-Preservers' Association periodically conducts a survey of the entire industry and publishes a comprehensive report that includes estimates of the amounts of active ingredients used and the types of materials treated. The comprehensive report provides accurate estimates of the usage of these chemicals. The C/CPAS, however, does include estimates of wood preservative usage by certified applicators not employed by commercial, wood-preserving plants.

The survey was not designed to estimate home and garden pesticide usage by home owners and renters. Consequently, this major component of general use product usage is not included in the C/CPAS pesticide usage estimates.

Some other major components of non-agricultural pesticide usage were only partly covered by the survey. For example:

- The C/CPAS estimates that 4.5 million pounds of active ingredients were applied by about 11,000 employees of golf courses. There are about 13,000[3] golf course facilities in the U.S., suggesting a potential underestimate of about 15 percent. A comparison of the C/CPAS estimate with other information available in the industry suggests that estimated pesticide usage on golf courses is underestimated by about 40 percent. A possible explanation is that pesticide usage on golf courses by not certified applicators (but under the supervision of a certified applicator) was not captured in the survey.

- A comparison of the C/CPAS estimated pesticide usage by employees of the nursery industry with other sources reveals that only a small portion (about 5 percent) of pesticides used by nurseries was captured in the survey. Many states certify nursery employees as private applicators, who were not eligible for the survey—this likely explains the low coverage of this component of the C/CPAS.

---

[3]Statistical Abstract of the United States, 1993, page 253. U.S. Department of Commerce. Economics and Statistics Administration. Bureau of the Census.

Other components of non-agricultural usage, such as usage by employees of federal, state, and local governments and utilities, compare well with other sources of their pesticide usage. These comparisons suggest that the C/CPAS provides estimates for pesticide usage and use characteristics for pest control businesses as well as for most other major commercial non-agricultural usage.

How well can C/CPAS estimate non-agricultural pesticide usage and use characteristics?

Because the businesses and individuals participating in the C/CPAS were selected using scientifically valid statistical sampling procedures, estimates can be made for most commercial non-agricultural pesticide usage (with the exception of the two major components mentioned above). The precision of these estimates reflecting the "sampling error" of the survey can also be calculated. The "sampling error" is the term used to describe the uncertainty associated with an estimate because we only collected data from a sample of the for-hire businesses and not-for-hire applicators as opposed to the entire population.

The target population of the C/CPAS showed considerable variation among the respondents in number, type of products and amount of pesticide used. Estimates based on a large number of respondents generally are more reliable (that is, they have acceptably small sampling errors) than estimates based on a few observations. The more detailed and specific an analysis, however, the fewer the number of respondents who contribute to the estimate, thereby diminishing the reliability of the estimate. This phenomenon is true in all surveys but is exacerbated by the tremendous variation in the C/CPAS population's usage of pesticide products.

As in any survey, other sources of error may affect the accuracy of the estimates. These other sources are discussed below.

What and how do other sources of error affect C/CPAS data quality?

Four major sources of nonsampling errors can be identified: business or individual nonresponse, item nonresponse, quality of the reported usage amounts, and analytic error.

Business or individual nonresponse.

C/CPAS was a voluntary survey; consequently, some businesses and individuals chose not to cooperate. To reduce the potential underestimation of total usage, statistical analysis techniques were used to compensate for those who chose not to cooperate.

Item nonresponse.

Item nonresponse results from the respondents' inability or unwillingness to answer specific questions, such as providing the EPA registration number for the products they used, the amount of products used, the percent used on the site categories and indoors versus outdoors, or the principal target pest.

A substantial effort was made to impute logical responses for the missing data items. For cases where a logical imputation could not be made with confidence, the items were coded as part of an other/missing category.

Usage amounts were never imputed. Consequently, this missing data introduced some underestimation of the usage estimates. The percent of missing amounts was small, suggesting that the underestimation was minor.

Quality of reported usage amounts.

Source of usage data largely determines quality. The respondents were encouraged to refer to usage records or purchase and inventory records to fill out a special form that was mailed to them prior to the interview. Most respondents completed the form before the interview using purchase records. Use of records, as opposed to recall, to provide the product amount data should have minimized this source of error.

Analytic error.

Converting amounts of formulated product to pounds of active ingredient is another source of error. Amounts of reported product were first standardized to pounds or gallons based on whether they were solid or liquid formulations. Gallons of liquid formations were then converted to pounds using the density of water. Because the density of most liquid products is not equal to the density of water, this assumption introduces error into the pounds active ingredient. This error is anticipated to be minor because most products' densities are not substantially different from water.

Some illogical associations between pesticide type and pest type arise from some of the data collection protocols. We asked the respondent to provide only one "principal" target pest for each site category/indoor/ outdoor usage report. Some products contain more than one active ingredient (for example, an insecticide and a herbicide). In these situations, some respondents reported the "insect pest" and others reported the "plant pest." Consequently, there were inconsistencies between pesticide type and pest type. An example was an insecticide used to control weeds. The usage amounts associated with these inconsistencies were generally minor.

Can individual applicators or businesses who participated in the survey be identified?

No, the C/CPAS was confidential. Data will be published only in aggregate form so that no respondents can be identified. Any data files that are provided to EPA or released to the public will be constructed so that no businesses or individual applicators can be identified. Only general geographic information, such as state, will be included on the file.

What were the results of the survey?

The main body of this report contains extensive tabulations and illustrations of the results of the C/CPAS. These results are supplemented with detailed appendices. We conclude this overview with illustrations of a few results.

Exhibit 1 illustrates the distribution of non-agricultural pesticides usage in the U.S. during 1993 by the two types of respondents, for-hire businesses and not-for-hire applicators, as well as by restricted versus general use product usage. The exhibit shows that the businesses used about 10 million pounds more of active ingredients than the not-for-hire applicators. The exhibit also shows that restricted use products were a relatively small part of total non-agricultural pesticide usage.

Exhibit 2 compares the number of certified applicators by for-hire versus not-for-hire status. The exhibit shows that the number of for-hire certified applicators (those that work for for-hire businesses), 69.8 thousand, is about three-fourths the number of not-for hire certified applicators, 95.7 thousand. The exhibit does not show that the for-hire business usage includes pesticides applied by 29.6 thousand applicators that are not certified.

Exhibit 3 illustrates pesticide usage in the U.S. during 1993 by pesticide type and type of respondent, for-hire business and not-for-hire applicators. The exhibit shows that herbicides are the most used pesticide by both types of respondents, about 40 percent of the total. Insecticides rank second in total usage. For-hire businesses use relatively more insecticides than not-for-hire applicators, 39 versus 24 percent, respectively. Note that both respondents use a relatively large amount of multi-type products. Multi-type products are so named because they can be used to control more than one type of pest, for example, copper sulfate can be used as both a fungicide and algaecide.

Some respondents applied pesticides on agricultural sites as well as on the five non-agricultural sites. For each product reportedly used, the respondent allocated total usage among the agricultural as well as the five non-agriculture site categories. Consequently, we were able to calculate the percent of a specific product's usage that was applied to non-agricultural and agricultural sites. The estimates illustrated in these two exhibits as well as all tabulations in the remainder of the report exclude agricultural usage.

Exhibit 1. Non-agricultural Pesticide Active Ingredient Usage by Type of Respondent and Restricted vs. General Use Products: 1993 C/CPAS

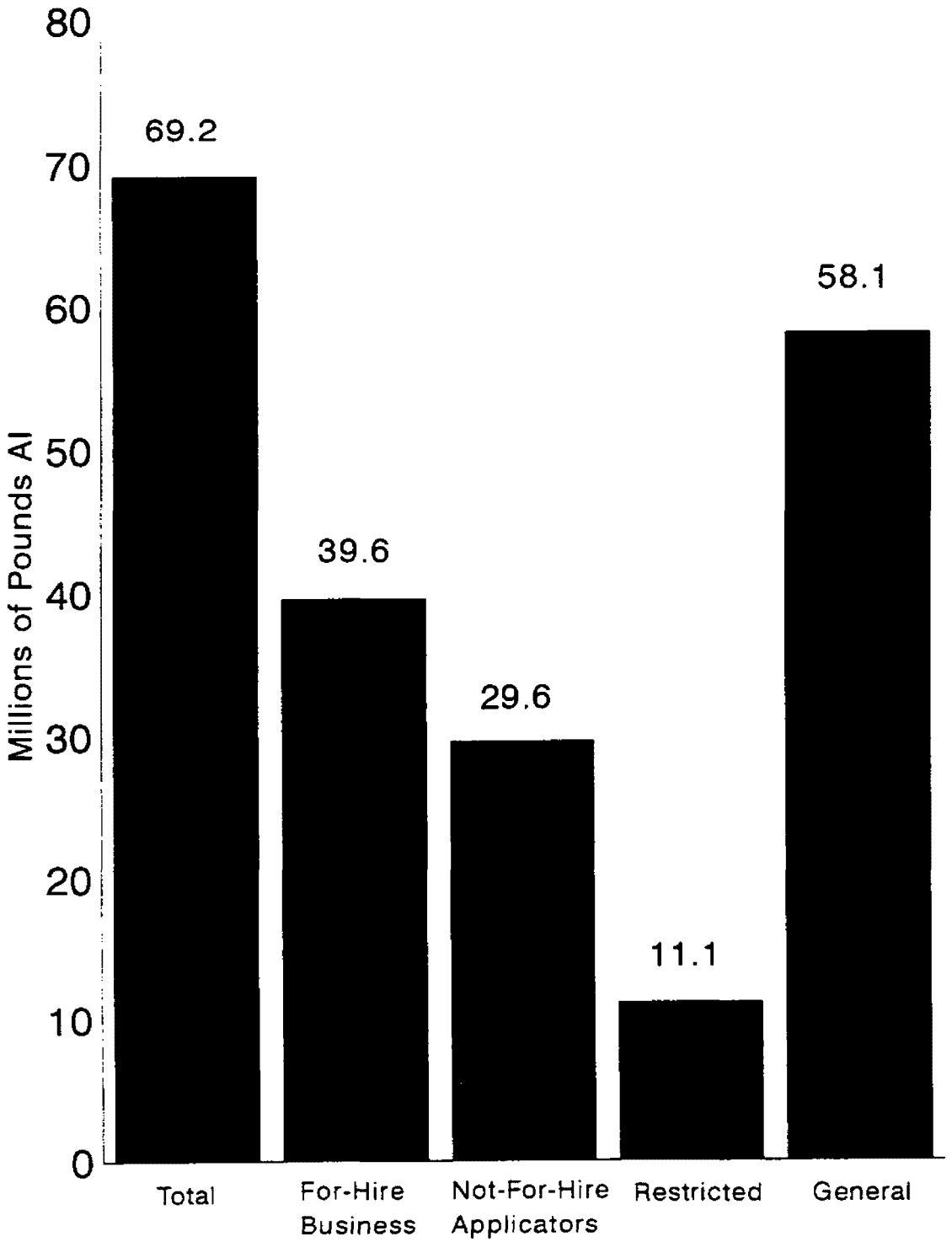


Exhibit 2. Distribution of Certified Applicators by Type of Respondent: 1993 C/CPAS

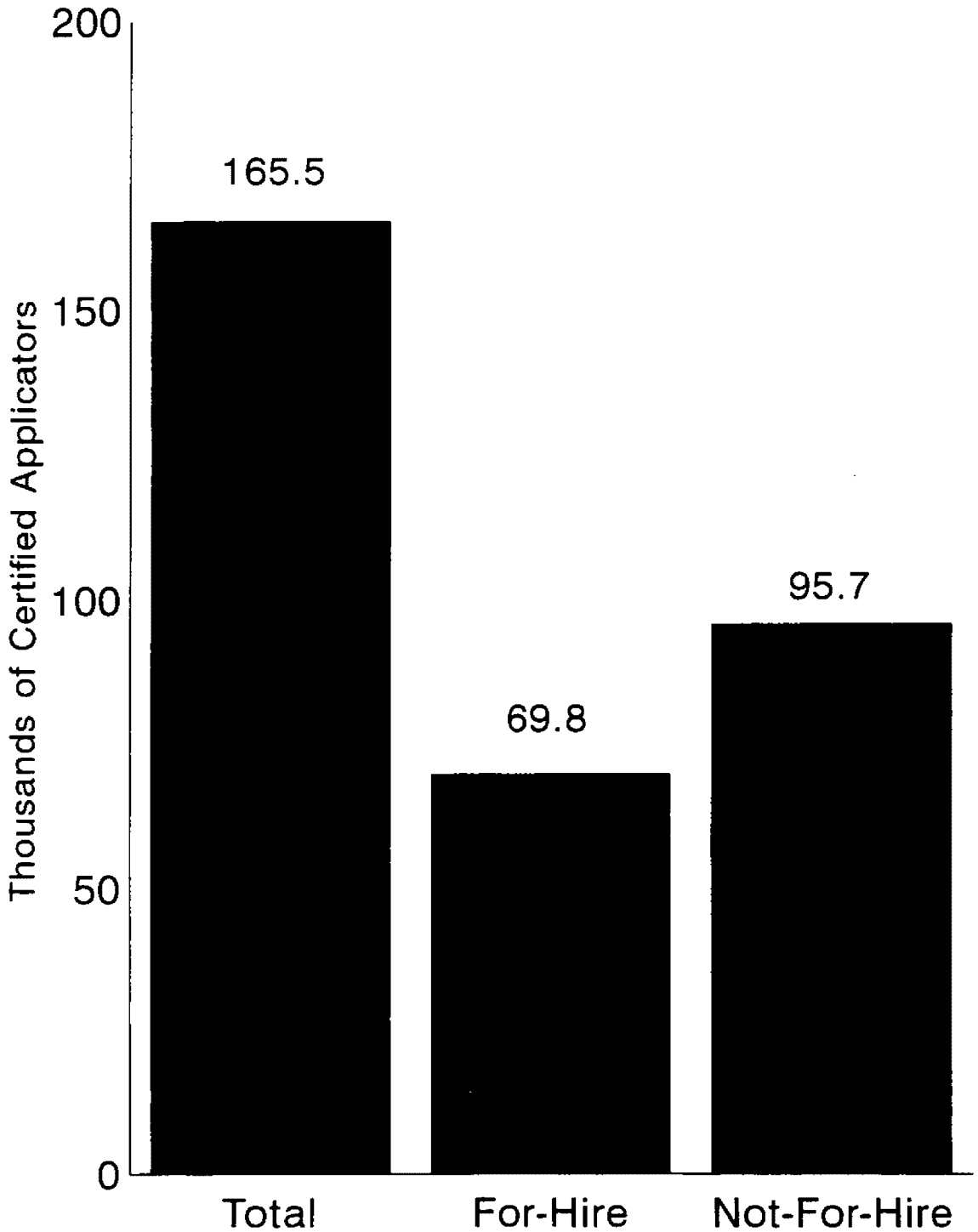
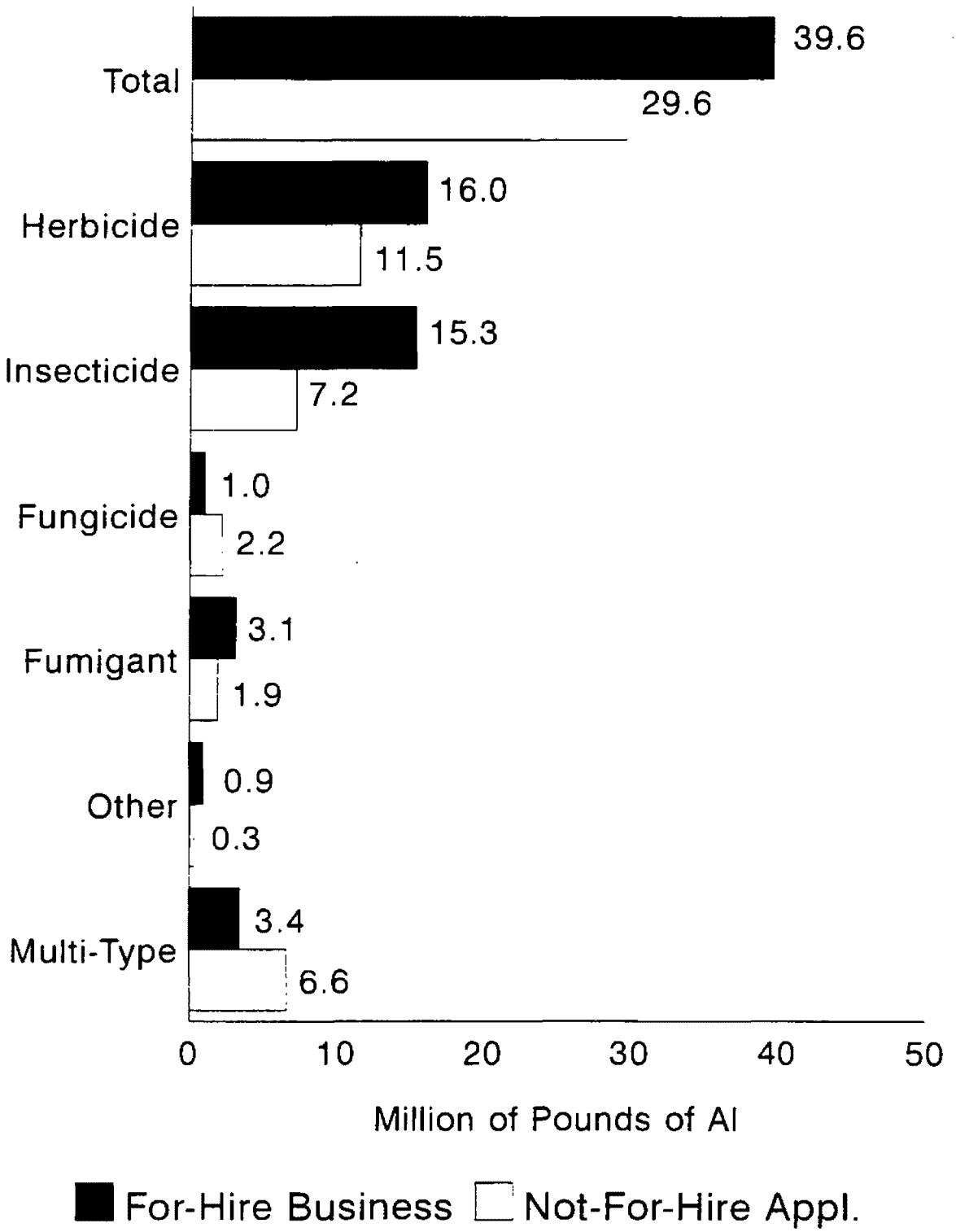


Exhibit 3. Non-agricultural Pesticide Active Ingredient Usage by Pesticide Type and Type of Respondent: 1993 C/CPAS



Highlights of the 1993 Certified/Commercial Pesticide Applicator Survey

1. Background

In compliance with P.L. 101-624 of the 1990 Food, Agriculture, Conservation and Trade Act, the U.S. Environmental Protection Agency (EPA) is responsible for submitting a report to the U.S. Congress describing annual, non-agricultural pesticide usage levels nationwide. To obtain data for this report, the Research Triangle Institute (RTI), under contract to the EPA, designed and conducted the 1993 Certified/Commercial Pesticide Applicator Survey (C/CPAS). The C/CPAS covers a target population of all applicators certified to apply restricted use products under five certification categories defined by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA):

- turf and ornamental
- right-of-way
- aquatic
- industrial, institutional, structural and health-related
- public health.

This report, the first volume in a series of three, begins with a brief overview of C/CPAS survey design, followed by estimates of the characteristics of the target population and of pesticide usage levels. The tables (and exhibits) in this report, which appear sequentially after the text, illustrate tabulations that can be conducted on the C/CPAS database. These tables highlight the 1993 C/CPAS results—we do not purport that they exploit the richness of this database. Finally, the second and third volumes of this report will provide details about the survey design and document the analysis files, respectively.

2. Overview of the Survey Design

The C/CPAS design focused on restricted use product/non-agricultural usage. Restricted use products (RUPs) can be legally applied only by or under the supervision of a certified applicator and almost entirely under state certification programs approved by the Administrator of EPA. The five certification categories selected for coverage by the survey are the major non-agricultural categories of certification outlined in FIFRA. Therefore, non-agricultural RUP usage is well covered except for one component that was purposely

excluded — industrial use of wood preservatives because that portion of usage is covered by an accepted secondary source of data.

In this section, we summarize the important features of the 1993 C/CPAS design. We discuss the target population, sample design, instrument development, data collection, data processing, and sampling weights.

2.1 Target Population

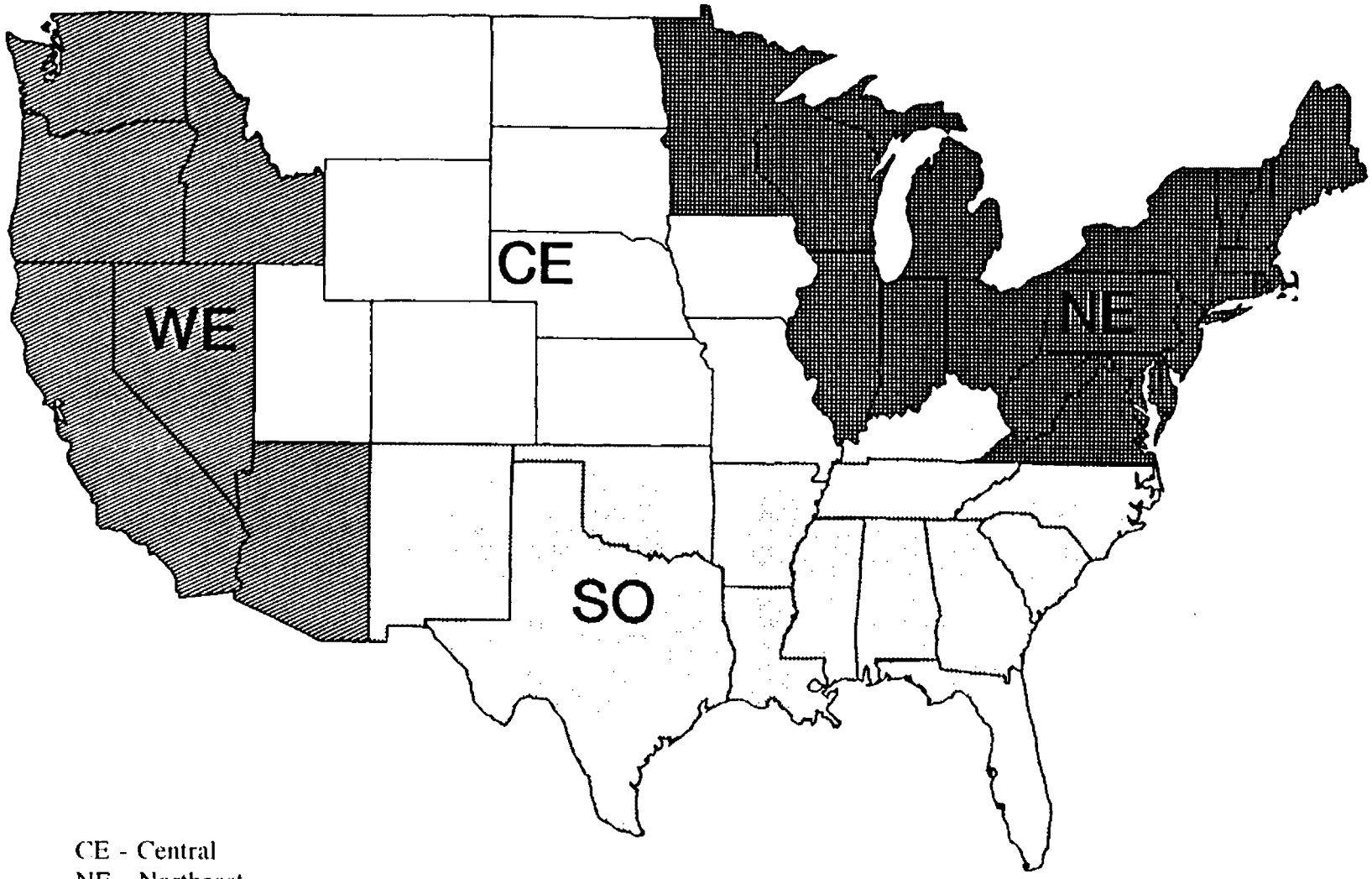
The target population for the 1993 C/CPAS included all pesticide applicators certified during 1993 in at least one of the five non-agricultural pest control categories listed above. This survey did not cover all non-agricultural pesticide usage. Because the target population included certified applicators (that is, applicators who can legally apply restricted use products), the C/CPAS covers usage of restricted use products. However, pesticide applicators who only apply non-agricultural general use products were not part of the 1993 C/CPAS target population. Consequently, their usage of non-agricultural general use products was not reflected in the 1993 C/CPAS estimates. The 1993 C/CPAS also excluded pesticide usage by commercial, wood-preserving plants and home owners or renters. Finally, geographic coverage for the survey was the 48 contiguous states and the District of Columbia.

2.2 Sample Design

The sampling units for the 1993 C/CPAS were commercial pesticide application businesses and not-for-hire certified applicators, which were selected in two stages. The C/CPAS primary sampling units consisted of a county or a group of contiguous counties for counties with small residential population counts in 1990. The selected 159 primary sampling units were located in 46 states. This first-stage sample was allocated over four geographic inference regions that were formed by combining the 10 EPA regions (see Exhibit 4). (Many of the subsequent tables present estimates by these four regions.)

We contacted state agencies in these 46 states to obtain the second-stage sampling frame source materials—that is, lists of certified applicators and, when possible, of for-hire

Exhibit 4. 1993 C/CPAS Inference Regions



CE - Central
NE - Northeast
SO - South
WE - West

pesticide application businesses. Telephone screening of certified applicators was required in several states where a list of for-hire pesticide application businesses was not available. For these states, we developed indirectly a list of these businesses by querying a sample of certified applicators about the businesses for which they worked.

To improve the efficiency of our design, we constructed dual frames: (1) for-hire pesticide application businesses and (2) not-for-hire certified applicators (that is, certified applicators not affiliated with a for-hire pesticide application business). We stratified the frames using a hierarchical definition of pest control certification category that prioritized the rarely occurring categories. We then selected our second-stage samples of about 3,000 for-hire pesticide application businesses and about 2,500 not-for-hire certified applicators.

2.3 Instrument Development

In addition to the telephone screening form, we developed a lead letter tailored to either a for-hire pesticide application business or a not-for-hire certified applicator, a pesticide product form, a questionnaire, and a record abstraction form. EPA staff reviewed these instruments, and we pretested them on multiple occasions to minimize respondent burden.

2.4 Data Collection

The C/CPAS questionnaire contained items to determine the:

- eligibility of the respondent
- other locations, other names, mergers or splits of commercial pesticide application businesses
- pesticide product usage
- number of year-round and seasonal employees in businesses and their certification status.

Appendix A contains a modified version of the 1993 C/CPAS questionnaire with only one pesticide table instead of 20 and a site code card.

RTI staff developed training materials and conducted five C/CPAS training sessions in January 1993 that were attended by 140 field interviewers and 14 field supervisors. Depending on their experience, the field interviewers attended up to a five-day session. The training sessions were standardized to include classroom instruction, simulated practice sessions, and exercises. An EPA representative observed two of the training sessions.

To minimize respondent burden, data collection occurred during a 10-week period in late winter 1994, the off-season for many pest control applicators. Approximately one week after mailing a lead letter and pesticide product form, the field interviewer telephoned the selected business or individual to schedule an interview. When the field interviewer visited the business or the applicator at his or her place of business, the interviewer requested the pesticide product form to facilitate completing the questionnaire. If the business or individual was designated for record abstraction, the field interviewer then explained the record abstraction process and requested access to the pesticide usage records. The field interviewer randomly selected approximately 25 records to complete the record abstraction form.

Frequently, a reporting unit for the C/CPAS was a "cluster" of for-hire pesticide application businesses or a "cluster" of not-for-hire certified applicators. This situation occurred when a for-hire pesticide application business (or a not-for-hire certified applicator) was unable to provide pesticide usage information for the selected business location (or applicator) only. In addition to collecting the available pesticide usage data for multiple businesses (or applicators), field staff also recorded the number of business (or applicators) associated with the recorded pesticide usage data to be able to make multiplicity adjustments to the weights.

2.5 Data Processing

After receipt at RTI, the questionnaires and record abstraction forms were batched, manually edited, and keyed. Numeric data were 100 percent key-verified to minimize data entry errors. Computer edits included checks on ranges and skip patterns as well as

consistency checks. A few respondents were recontacted to confirm or clarify some of their responses.

The reported pesticide usage amounts were standardized to units of pounds of active ingredient in a series of steps. The reported amounts were first converted to pounds or gallons, based on whether there were solid or liquid formulations, respectively. Gallons were then converted to pounds using the density of water. The pounds of formulated product were then merged by EPA registration number with the pesticide product files maintained by the EPA at their National Computer Center in Research Triangle Park, NC, to ascertain levels of active ingredient per product. The concentrations of each active ingredient in the product were used to calculate the pounds active ingredient. These files then were merged with the sampling weights file.

2.6 Sampling Weights

The 1993 C/CPAS sample was a probability-based sample of the target population defined above. RTI used analysis weights to properly expand the sample data to describe the target population and its usage of pesticides.

The sampling weights were the inverse of the probabilities of selection. The sampling weights were adjusted to reflect multiplicities identified on the frame and through data collection. Examples of these latter multiplicities include other locations, other names, and mergers or splits identified via questionnaire items Q8 through Q11 (see Appendix A). The resulting analysis weights also reflect additional adjustments for unknown eligibility status (for example, when the interviewer encountered a language barrier) and for reporting unit non-response. Finally, we used our proprietary software to produce unbiased estimates of parameters and their standard errors properly accounting for the complex design features.

3. Characteristics of the Target Population

Our investigation of the characteristics of the target population for the 1993 C/CPAS includes a description of certified applicators, for-hire applicators, not-for-hire certified applicators, and for-hire pesticide application businesses. We conclude this section with a discussion of pesticide usage among applicators.

3.1 Certified Applicators

Our initial discussion of the 1993 C/CPAS results focuses on the estimated number of certified pesticide applicators in the U.S in 1993. We look at the distribution of certified applicators by for-hire status and C/CPAS region in Table 1. In addition, the number of observations used to make these estimates and their standard errors also appear in this table. (In most of the subsequent tables, we present at a minimum these three data items.) Table 1 also contains the estimated 1993 U.S. population count used to calculate the number of certified pesticide applicator per million population. Two figures immediately follow Table 1 illustrating estimates included in the table. Tables are presented sequentially after the text. Many tables are immediately followed by a figure illustrating the table's information.

From the C/CPAS, we estimate that there were 165,478 non-agricultural certified pesticide applicators in the U.S. during 1993. Among these, 42.2 percent were for-hire applicators and 57.8 percent were not-for-hire applicators (that is, 69,802 versus 95,676 certified applicators, respectively). The Northeast had the greatest number of applicators and the Central had the least number among the four regions. However, the Central region had the largest number of non-agricultural certified pesticide applicators per million population, 797; see Table 1.

Like Table 1, Table 2 describes the non-agricultural certified applicators in the U.S. during 1993 but focusses on for-hire status and pest control certification status. Because many pesticide applicators hold multiple certifications, combinations of certification categories are presented in this table. For producing this table, we assumed that all certified applicators who worked for a commercial pesticide application business were certified in the categories assigned to that business. Many states do not register or license commercial pesticide application businesses in a particular pest control category; rather, they require at least one employee to be certified in at least one category. For these states, we assigned certification categories by matching addresses of the businesses and addresses of the applicators. The business was then assigned the certification categories of any and all applicators that matched to it. Frequently, there were not any matches of the business addresses with at least one applicator's address. We assumed this situation occurred because the applicator's home address, not employer's address, was on the state file. In the case of "no matches" for a business, the certification categories for the applicator's employed by that business were unknown.

The two most common pest control certification categories among non-agricultural pesticide applicators were industrial, institutional, structural, and health-related and turf and ornamental. There were relatively more not-for-hire pesticide applicators certified solely in aquatic, right-of-way and public health pest control (4.4 percent, 13.8 percent, and 7.2 percent, respectively) than there were for-hire pesticide applicators certified in these categories (0.8 percent, 5.7 percent, and 0.2 percent, respectively). This difference may be explained by the many state and municipal (not-for-hire) pesticide applicators that were solely certified in these categories. On the other hand, relatively more for-hire than not-for-hire certified applicators held multiple certifications (24.9 percent versus 16.3 percent, respectively). The diversity in job opportunities afforded by multiple certifications might be necessary for a commercial pesticide application business to remain viable.

As discussed above, many applicators were certified in more than one pest control category. Thus, in addition to the number of non-agricultural certified pesticide applicators, we also estimated from the C/CPAS the number of certifications held by these individuals during 1993: 208,592 (see Table 3). The most frequently occurring pest control certification category was turf and ornamental followed by structural, right-of-way, aquatic, and then public health.

We also can compare C/CPAS estimates of the number of non-agricultural certifications held in 1993 to estimates culled from reports submitted quarterly by states (Form 5700-33H) to the EPA. We present the estimates from state reports for 1992 and 1993 in the last two columns of Table 3. We have included results for 1992 and 1993 because, during our list acquisition process, some states only could send files of certified pesticide applicators and commercial pesticide application businesses that were active in 1992. These lists were used for constructing the second-stage frame for the 1993 C/CPAS.

The estimates from the 1993 C/CPAS and from the state reports are comparable for all pest control certification categories except (1) industrial, institutional, structural and health-related, and (2) turf and ornamental. For these two categories, the estimated number of non-agricultural certifications from C/CPAS is substantially less than that reported by states to the EPA. At this time, we do not know why our estimates for these two categories differ from the state reports. One possible explanation is that when we processed the state lists, we deleted applicators whose certifications had expired.

We report in Table 4 the number of non-agricultural certifications held, the number of applicators holding these certifications, and the ratio of these two estimates — that is, the average number of non-agricultural certifications per applicator. These estimates of the certifications held are for the U.S. during 1993. The sum of the number of certifications held and of the number of applicators over pest control certification category does not equal the total because of multiple counting (that is, a certified pesticide applicator may have more than one certification).

Non-agricultural certified applicators in the U.S. during 1993 held, on an average, 1.26 certifications. The number of certifications per for-hire certified applicator was higher than that per not-for-hire certified applicator: 1.32 versus 1.22, respectively. With the exception of the industrial, institutional, structural, and health-related pest control category, this relationship remained when we look at specific non-agricultural pest control certification categories. As discussed previously, this difference may be explained, in part, by the fact that for-hire certified applicators may need versatility in the number of products used to satisfy their customers need and therefore seek to be certified in more than one category (that is, multiple certifications) to maintain a business. For both the aquatic and public health pest control categories, such marketplace factors may explain the substantial difference between the average number of certifications per for-hire applicators and not-for-hire applicators (2.43 versus 1.93, respectively, for aquatic and 2.72 versus 1.43, respectively, for public health). Pesticide applicators certified in structural pest control or in turf and ornamental pest control had the fewest number of certifications per applicator (1.44 and 1.47, respectively).

3.2 For-hire Applicators

For-hire applicators are employed by a commercial pesticide application business — that is, a business licensed or registered by a state to apply pesticides on the property of others for a fee. For-hire applicators may or may not be certified. Some of the for-hire-business may be single-person firms where the owner also does all pesticide applications. In some states, applicators who are not certified may apply restricted use products under the supervision of a certified applicator. Table 5 contains the distribution of the estimated number of for-hire pesticide applicators in the U.S. during 1993 by certification status and region. The number of applicators per million U.S. 1993 population appears in the final column of this table.

More than 70 percent of the estimated 99,330 for-hire applicators in the U.S. in 1993 were certified. The number of for-hire applicators per million population ranged from 263 in the West to over twice that number in the South (568). Among for-hire applicators, the number of certified applicators per million population was greater than the number of not certified applicators per million population in each C/CPAS region. There were fewer for-hire, not certified applicators per million population in the Northeast and West (52 and 63, respectively) than in the South or Central (228 and 166, respectively) regions.

Table 6 presents the number of for-hire applicators by pest control certification category and combinations thereof. Because for-hire pesticide application businesses may also employ applicators that are not certified, we present the number of for-hire applicators by their certification status as well. For the not-certified applicators, we grouped them into certification categories based on the certification category of their employer (or the certification category of the certified applicators who worked at the same location).

3.3 Not-for-hire, Certified Applicators

Table 7 contains the estimated distribution of 95,676 non-agricultural not-for-hire certified applicators in the U.S. during 1993 by their employers' business type and C/CPAS region. The type of business includes golf course; nursery; public/governmental agency; utility; transportation, industrial, and other commercial; other, refused or unknown; and no application. Over 34 percent of these applicators had an active certification but did not apply pesticides in 1993. (The large percent of "inactive" applicators was unexpected and the questionnaire was not designed to capture the type of business of their employer.) Some examples of such an individual are a state inspector, pesticide salesman, or a supervisor in a state department of transportation who manages a crew of pesticide applicators of right-of-ways. Over 33 percent of the not-for-hire certified applicators were employed by federal, state or local governments or other public agencies. The 11,123 certified applicators working at golf courses represent 11.6 percent of this group.

3.4 For-hire Pesticide Application Businesses

There were an estimated 33,096 for-hire pesticide application businesses in the U.S. during 1993; see Table 8. Forty-one percent of the businesses were located in the Northeast; 35 percent, in the South; 13 percent, in the West; and 11 percent in the Central region.

Table 9 presents the distribution of these businesses by pest control certification category. For-hire pesticide applicator businesses were assigned pest control certification categories in one of two ways. The first case is straightforward: some states license or register businesses by category. In the other states, we classified the businesses according to the pest control certification categories of the certified applicators employed by that business. About 34 and 31 percent of for-hire pesticide application businesses were "licensed" in turf and ornamental pest control only and structural pest control only, respectively. Relatively few businesses were just "licensed" in aquatic, right-of-way, or public health pest control (0.7 percent, 1.8 percent, and 0.3 percent, respectively). As before, this pattern of "licensing" among for-hire pesticide application businesses may reflect their need to offer versatile pest control services.

3.5 Pesticide Usage Among Certified Applicators

During 1993, U.S. certified applicators used over 69 million pounds active ingredients in non-agricultural applications (see Table 10). For-hire applicators used the majority of these pounds active ingredients, that is, over 57 percent. The remaining 30 million pounds active ingredients were applied by not-for-hire certified applicators. There were regional differences in non-agricultural pesticide usage. Fifty-two percent of the non-agricultural pesticides used by for-hire applicators was applied in the South while the least amount (6.3 percent) was applied in the Central region.

Table 11 provides additional information on the pesticide usage by the not-for-hire certified applicators — specifically, the usage within region by employer's type of business. Overall, 45.4 percent of pounds active ingredient applied by not-for-hire certified applicators in the U.S. during 1993 was used by employees of public or governmental agencies. These agencies include federal, state, and municipal governments. Not-for-hire certified applicators employed at golf courses used an estimated 4,502 million pounds active ingredients in 1993.

Table 12 provides estimates of non-agricultural pesticide usage in the U.S. during 1993 by for-hire applicators and not-for-hire certified applicators specific to type of business and pesticide type. Note that multi-type products are used to control more than one type of pest (for example, insects and plants).

Almost 80 percent of the pesticides used by for-hire applicators was either an herbicide or an insecticide. Similarly, the two most prevalent pesticides used by not-for-hire certified applicators were herbicides and insecticides, accounting for more than 63 percent of their usage. Not-for-hire certified applicators applied relatively more multi-type products than for-hire applicators (22.2 percent versus 8.7 percent, respectively). Appendix B contains two expanded versions of Table 12 listing active ingredients.

4. Pesticide Usage Estimates

In this section, we provide estimates of pesticide usage by the C/CPAS eligible population in the U.S. during 1993.

Tables 13 through 29 present estimates of non-agricultural pesticides usage by the C/CPAS eligible population during 1993. The tabulations follow a general pattern, beginning with national level estimates of active ingredient usage and proceeding to estimates of active ingredient usage for a very specific situation.

National level estimates are given in Tables 13 through 15. More detailed estimates are then provided: C/CPAS regional usage estimates in Tables 16 and 17, indoor and outdoor usage estimates in Tables 18 through 21, and usage estimates by target pests in Tables 22 through 29.

The national and regional tables also include usage estimates by active ingredient contained in restricted use products versus general usage products and by pesticide type. The indoor and outdoor tables describe pesticide usage by pesticide type, restricted versus general use, active ingredient, or site category.

The target pest tables are grouped by indoor usage (Tables 22 through 25) and outdoor usage (Tables 26 through 29). Each set of four tables follows the same pattern presenting usage estimates by pest type, principal indoor (or outdoor) pest, site category, or active ingredient.

4.1 General Estimates of Pesticide Usage

We present in Tables 13 and 14 estimates of non-agricultural pesticide usage in the U.S. during 1993. Table 13 lists active ingredients is descending order of usage while Table 14 lists active ingredients in descending order of usage within pesticide type. Chlorpyrifos, an insecticide, was the most-used pesticide in the U.S. during 1993, followed by: malathion, another insecticide; glyphosate salt, a herbicide; 2,4-D, another herbicide; and methyl bromide, a fumigant. We examine pesticide usage by pesticide type. Herbicides accounted for 40 percent of non-agricultural pesticide usage; insecticides, 33 percent; multi-type products, 14 percent; fumigants, 7 percent; and fungicides, 5 percent.

Note that 2-4-D and picloram salt appear twice in both tables, once representing the amount of active ingredient in general use products and once representing the amount of active ingredient in restricted use products. This double listing of active ingredients is required because products, not active ingredients, are restricted. For example, the total usage for 2-4-D is 3,814,000 pounds with only 11 percent in restricted use products. The total usage for picloram is 276,000 pounds with 90 percent in restricted use products.

A few of the active ingredient names are very long and were truncated to their first 40 characters when producing the tables. Appendix C contains the complete active ingredient name, sorted by active ingredient code. The interested reader can look up the complete active ingredient name in Appendix C, by the active ingredient code.

Appendix D contains three expanded versions of Table 13 that list all active ingredients, one ordered by pounds usage of active ingredient, the second ordered numerically by active ingredient code, and the third ordered alphabetically by active ingredient name.

Appendix E contains an expanded version of Table 14, which lists all active ingredients by type of pesticide.

Because of the suppression rule (see footnote 11 in both tables) to exclude unreliable individual active ingredient estimates, several active ingredients with very large amounts were not listed individually in these tables. Four active ingredients (MSMA, acrolein, endothall, and copper sulfate) accounted for 18.0 million pounds (76 percent) of the

estimated 23.6 million pounds included in the "Other RUPs" or "Other GUPs" categories in these two tables.

The estimated usage for acrolein was 5.1 million pounds. Because this estimate is based on only 6 observations, it is not considered reliable. Most of this estimate arises from two respondents that used very large amounts of acrolein to control moss in canals and laterals for irrigation districts in the west. Acrolein is a restricted use product as well as a multi-type product and accounted for 95 percent of the usage estimate for the "Other RUPs" category. We investigated reports for acrolein and confirmed their accuracy.

The estimated usage for the herbicide MSMA was 6.5 million pounds. Although this estimate is based on 170 observations, its standard error is large. Two respondents accounted for most of the total usage estimate. One, a for-hire pesticide application business, used very large amounts to control weeds and grasses in oil fields. The other was a state district highway department that used MSMA to control weeds and grasses on highway right-of-ways. As above, we investigated both of these respondents and confirmed the accuracy of their reports. Furthermore, there were 51 certified applicators associated with this latter observation; this information was incorporated into the analysis weights.

Another herbicide, endothall, also had a large usage estimate of 1.2 million pounds; however, this estimate was based on only 14 observations. One respondent, a large, multi-location, commercial pesticide application business, accounted for most of the estimate. This respondent specialized in waterway management and used the product to control aquatic vegetation.

Although the usage estimate for copper sulfate (4.2 million pounds) was based on 49 observations, this estimate had a large standard error. The respondent who dominated the usage estimate for copper sulfate used very large amounts of this pesticide to control algae in waterways. Copper sulfate is a general use, multi-type product used as both an algicide and a fungicide. Copper sulfate accounted for 99 percent of the usage estimate for the "Other GUPs" category under multi-type products in Table 14.

Together, MSMA and endothall accounted for 88 percent of the estimate for the "Other GUPs" category under herbicides in Table 14. MSMA, acrolein, and copper sulfate accounted for 68 percent of the estimate for the "Other GUPs" category in Table 13.

Even though the estimates for these specific active ingredients are not sufficiently reliable to report separately, it is appropriate and necessary to include their estimates in the total usage estimate. The large uncertainty associated with these active ingredients arises from sampling errors. The four products have one major characteristic in common: they are used only by a relatively small fraction of the population, ranging from less than 1 percent for acrolein to only about 7 percent for MSMA. Three of these products are special purpose products, and some users apply very large quantities. Consequently, the standard errors of their estimates are large and reflect the tremendous variation in their use in the population — most do not use products containing these active ingredients and a very few use very large amounts. In general, sample surveys do not provide precise estimates for rare or unusual characteristics.

Excluding these usage estimates from the totals would underestimate those totals. Most likely, other active ingredients have similar usage patterns — however, none of the few "high users" happened to be included in the survey. Active ingredients that are underestimated by chance are not noticed and do not appear to be problematic. Consequently, we expect that for every estimate that is "too big," there are estimates that are "too small," and, on the average, these biases cancel out.

We resume our discussion of the tables. The four products discussed above are included on most of the remaining tables.

Table 15 lists active ingredients contained in restricted use products applied in the U.S. during 1993. These active ingredients are ordered from highest to lowest in estimated usage. Only that portion of 2-4-D and picloram usage from restricted use products appears in Table 15. The portion of these two pesticides' usage from general use products is reported in Tables 13 and 14. Ninety-five percent of the usage in the "Other RUPs" category was the active ingredient acrolein, discussed above. Appendix F contains an expanded version of Table 15.

Table 16 provides estimates of total pesticide usage in the U.S. during 1993 by pesticide type and C/CPAS region. There was large variability in usage among the four C/CPAS regions. The relative amount of restricted usage product was similar for the four regions except for the West. The West estimate must be interpreted cautiously because it includes acrolein as discussed above. Another factor that affected the distribution among the

regions is that the regions vary substantially in their population. The differences in pesticide usage among the four regions were reduced when we examined usage on a per capita basis: the South region remained highest in per capita usage, but the Northeast region was the lowest, likely because of its climate and population density. Per capita usage in the West region was very close to that of the U.S. overall, while per capita usage in the Central region, which is the most sparsely populated region, was between that of the Northeast and West regions. Table 17 is organized similar to Table 16, but provides usage estimates by active ingredient.

4.2 Indoor Versus Outdoor Pesticide Usage

Tables 18 through 21 present estimates of pesticide usage in the U.S. during 1993 by site category and indoor versus outdoor use, in increasing level of detail. Table 18 provides estimates by the C/CPAS site categories. Within each site category, we present usage estimates by indoor or outdoor location in addition to the total.

The two accompanying exhibits illustrate key characteristics of the estimates given in Table 18. The first exhibit illustrates the difference in pesticide usage among the six site categories. (Note that in the exhibit we prorated the pesticide usage for the "commercial indeterminate" category in Table 18.) The commercial indeterminate category was included in anticipation that some respondents would not be able to allocate their commercial applications to one or the other of the two more specific commercial categories.) Residential applications represented the largest fraction of both indoor and outdoor usage. The second largest outdoor usage estimate was for the other category, which includes highway right-of-ways, wide-area application for mosquito control, and general weed control in oil fields.

The second exhibit illustrates that most pesticides (that is, 86 percent) were applied outdoors. The relative amounts of indoor versus outdoor usage differed substantially among the site categories as illustrated in the third exhibit. The commercial wholesale/manufacturing category has the highest percent of indoor pesticide usage (70 percent) while the sanitation/utility category has the highest percent of outdoor pesticide usage (99.9 percent).

The usage estimates in Table 19 are a partition by pesticide type of those in Table 18. The estimated 286,000 pounds of indoor usage of herbicides warrant some comments. Most

of this estimate, 95 percent, is for one active ingredient, disodium octaborate tetrahydrate. The respondents, however, reported various types of target pests: most reported insects; a few, plant disease/organisms such as funguses; and one, wood—destroying pests. Most likely this active ingredient protects wood in structures from various wood destroying pests. Other indoor uses of herbicides may be legitimate, while others may be due to reporting or coding errors.

Table 21 presents estimates of indoor and outdoor pesticide usage in the U.S. during 1993 by site category and restricted versus general use products. Table 21 supplements Table 20 by presenting estimates for specific active ingredients organized by the type of target pest. Sixty-one percent of the pesticides applied at commercial wholesale/manufacturing sites are restricted use products. On the other hand, only 2 percent of pesticides applied at recreational sites are restricted use products.

4.3 Pesticide Usage by Principal Target Pest

Tables 22 through 29 examine pesticide usage, both indoors and outdoors, by principal target pest. We encouraged the respondents to provide only one "principal" target pest realizing that many products can be used to control, often simultaneously, many different pests. The data collection protocol introduced some illogical association between the pesticide type and the type of pest. When a product contains two active ingredients and they are different pesticide types, and only one pest is reported, an inconsistency can result between pesticide type and pest type. For example, some products contain both 2-4-D, an herbicide, and chlorpyrifos, an insecticide. Some users of this product considered the insect as the primary target pest, resulting 2-4-D being reported to treat an insect. Other users considered weeds to be the principal target pest, resulting in chlorpyrifos being reported to treat weeds. The pesticide usage estimates associated with such inconsistencies are relatively small, and the resulting inconsistencies are only apparent in the active ingredient level tables.

Tables 22 through 25 examine indoor pesticide usage by principal indoor pest. Table 26 through 29 follow an identical pattern focusing, however, on outdoor usage and outdoor pests.

Table 22 presents estimates of total indoor pesticide usage in the U.S. during 1993 by type of pests. Table 23 provides details about the Table 22 results and shows estimates of restricted versus general use product usage for the major indoor pests reported in the C/CPAS. Over 90 percent of indoor applications are for the control of insects and other invertebrate pests. Furthermore, termites control is the most common activity, representing 46 percent of indoor usage. Cockroaches are second major pest, accounting for 27 percent of the total indoor applications.

Tables 24 and 25 provide more detail on indoor pesticide usage in the U.S. during 1993. Table 24 presents estimates of indoor pesticide usage by site category and principal indoor target pest organized by type of pest. Table 25 supplements Table 24 by listing the specific active ingredients used to control the major indoor pests.

The remaining tables focus on the analysis of outdoor pesticide usage and principal outdoor pests. Table 26 presents estimates of outdoor pesticide usage in the U.S. during 1993 by type of pest. Plants and weeds are by far the most commonly treated outdoor pest, representing 55 percent of the outdoor usage. Insects and other invertebrates are the second most common, representing 30 percent of outdoor usage. Vertebrates are the least common, representing only 1 percent of outdoor usage.

Table 27 provides details about the Table 26 results and shows estimates of restricted and general use product usage by major outdoor pests within each pest type. Forty-one percent of the total outdoor usage is to control broadleaf weeds. Other major outdoor pests in terms of total outdoor pesticide usage are insects and other invertebrates (30 percent), mosquitoes (10 percent), and termites (9 percent). The diversity of outdoor pests relative to indoor pests is illustrated by the fact that 22 percent of the outdoor usage is used to control other pests, while only 8 percent of the indoor usage is used to control other pests.

Tables 28 and 29 provide more detail on outdoor pesticide usage. Table 28 presents estimates of outdoor pesticide usage by site category and principal outdoor target pest organized by type of pest. Table 29 supplements Table 28 by listing the specific active ingredients used to control the major outdoor pests.

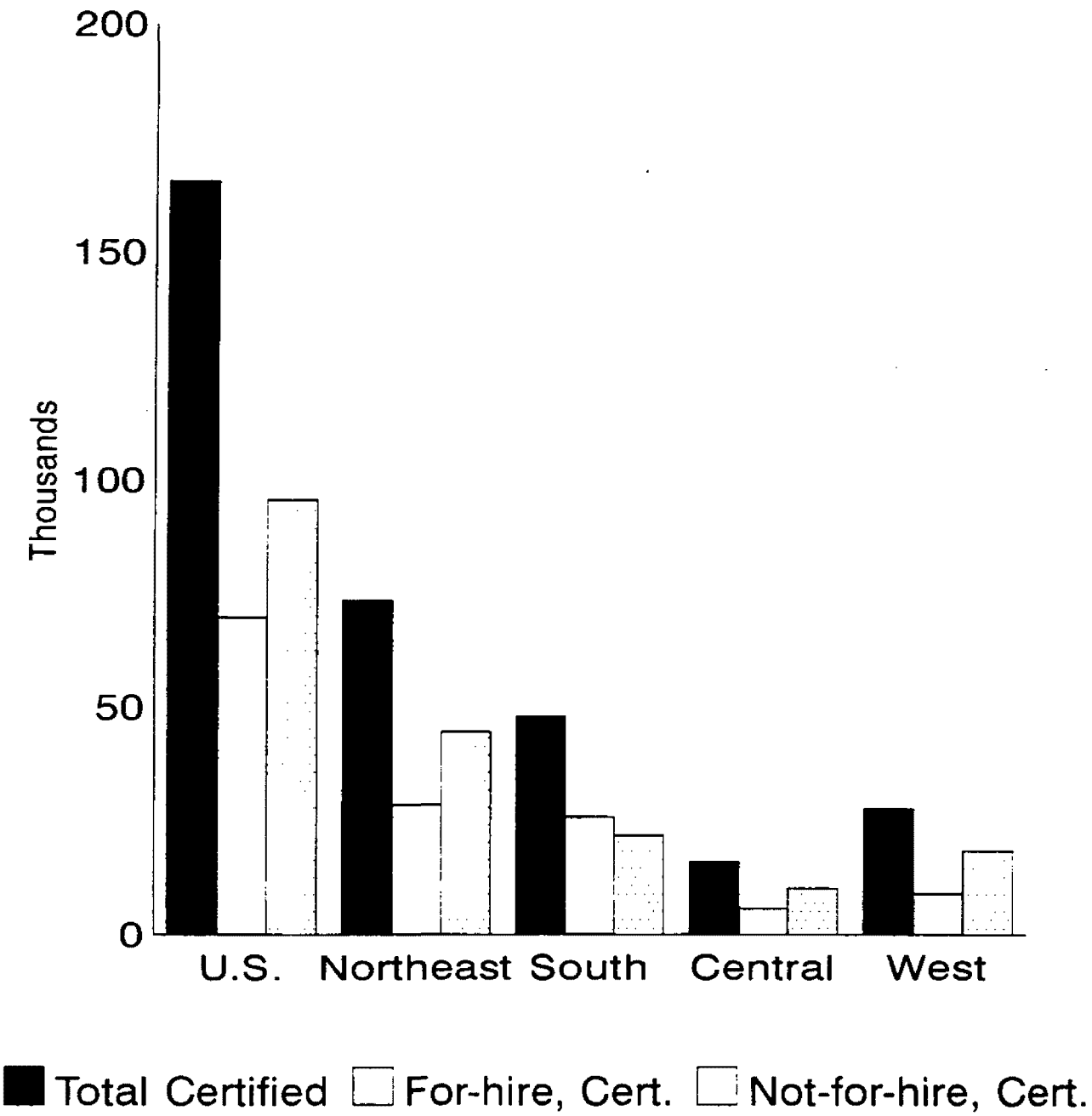
Table 1. Number of Certified Pesticide Applicators[1] and Number of Certified Pesticide Applicators per Million 1993 U.S. Residential Population[2] by For-hire Status and C/CPAS Region:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[3]

For-hire Status and C/CPAS Region	Number of Observations	Number of Applicators	Standard Error	1993 US Population (000,000)	Number of Applicators Per Million Persons
Total Certified					
Total	3,645	165,478[4]	8,357	256.14	646
Northeast	1,553	73,497	4,966	113.44	648
South	1,010	48,014	4,561	76.50	628
Central	517	16,161	1,983	20.27	797
West	565	27,805	4,523	45.92	605
For-hire, Certified					
Total	2,000	69,802	4,641	256.14	273
Northeast	842	28,776	3,012	113.44	254
South	548	26,034	3,136	76.50	340
Central	270	5,833	651	20.27	288
West	340	9,159	1,485	45.92	199
Not-for-hire, Certified					
Total	1,645	95,676	7,330	256.14	374
Northeast	711	44,721	3,967	113.44	394
South	462	21,981	2,357	76.50	287
Central	247	10,328	1,955	20.27	509
West	225	18,647	5,349	45.92	406

[1]Source questions: Q20, Q24 and Q25 (see Appendix A).
[2]U.S. Bureau of the Census Press Release # CB93-29, 29 December 1993.
[3]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[4]Total may differ from the sum of the entries because of rounding.

Distribution of Non-agricultural Certified Pesticide Applicators, U.S. 1993, by For-hire Status and C/CPAS Region: 1993 C/CPAS



Distribution of Non-agricultural Certified Pesticide Applicators per Million 1993 U.S. Residential Population by For-hire Status and C/CPAS Region: 1993 C/CPAS

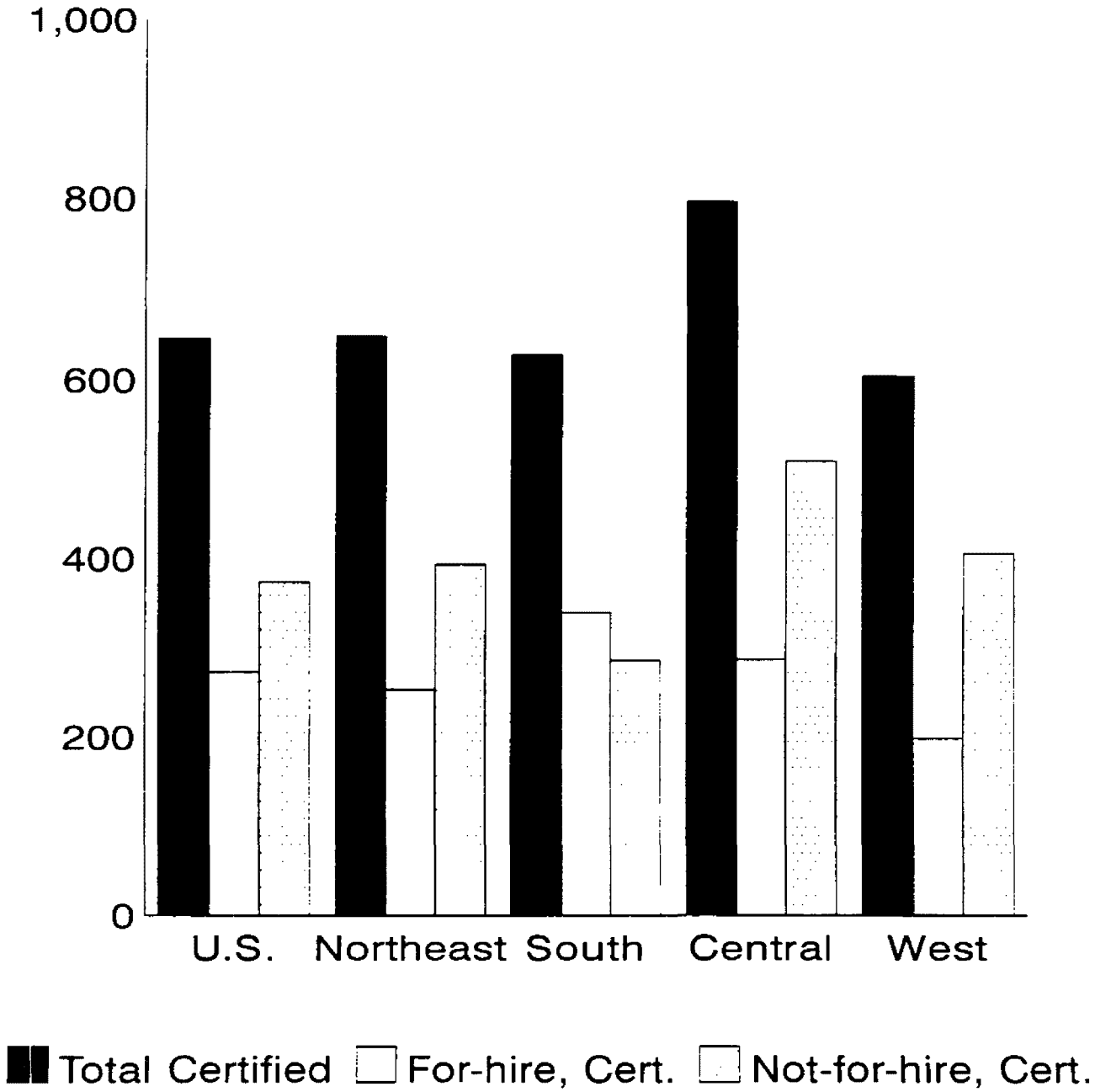


Table 2. Number of Certified Pesticide Applicators[1] by For-hire Status and Pest Control Certification Category:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

For-hire Status and Pest Control Certification Category	Number of Observations	Number of Applicators	Standard Error
Total Certified			
Total	3,645	165,478[3]	8,357
Turf and Ornamental only	1,039	58,794	4,816
Right-of-Way only	312	17,203	2,173
Aquatic only	162	4,700	1,043
Structural only[4]	760	37,108	2,454
Public Health only	163	7,084	1,856
Turf & Ornamental and Right-of-Way	209	8,058	1,506
Turf & Ornamental and Aquatic	102	3,129	685
Turf & Ornamental and Structural	170	9,255	1,001
Turf & Ornamental, Right-of-Way, and Structural	87	2,745	468
Other Combinations	397	9,802	983
Unknown	244	7,600	1,339
For-hire, Certified			
Total	2,000	69,802	4,641
Turf and Ornamental only	582	19,301	2,109
Right-of-Way only	46	3,954	1,383
Aquatic only	28	529	264
Structural only	556	21,946	2,208
Public Health only	14	161	31
Turf & Ornamental and Right-of-Way	127	3,827	1,338
Turf & Ornamental and Aquatic	31	611	237
Turf & Ornamental and Structural	137	7,104	867
Turf & Ornamental, Right-of-Way, and Structural	61	1,320	232
Other Combinations	195	4,510	781
Unknown	223	6,539	891

[1]Source questions: Q20, Q24 and Q25 (see Appendix A) and state list certification information.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Total may differ from the sum of the entries because of rounding.
[4]Structural includes industrial, institutional, structural and health-related.

Table 2. Number of Certified Pesticide Applicators[1] by For-hire Status and Pest Control Certification Category (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

For-hire Status and Pest Control Certification Category	Number of Observations	Number of Applicators	Standard Error
Not-for-hire, Certified			
Total	1,645	95,676	7,330
Turf and Ornamental only	457	39,493	4,831
Right-of-Way only	266	13,250	1,672
Aquatic only	134	4,171	983
Structural only	204	15,162	1,419
Public Health only	149	6,923	1,858
Turf & Ornamental and Right-of-Way	82	4,231	602
Turf & Ornamental and Aquatic	71	2,517	857
Turf & Ornamental and Structural	33	2,151	496
Turf & Ornamental, Right-of-Way, and Structural	26	1,425	366
Other Combinations	202	5,292	573
Unknown	21	1,061	912

[1]Source questions: Q20, Q24 and Q25 (see Appendix A) and state list certification information.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Total may differ from the sum of the entries because of rounding.
[4]Structural includes industrial, institutional, structural and health-related.

Relative Number of Non-agricultural Certified Pesticide Applicators, U.S. 1993, by For-hire Status and Pest Control Certification Category: 1993 C/CPAS

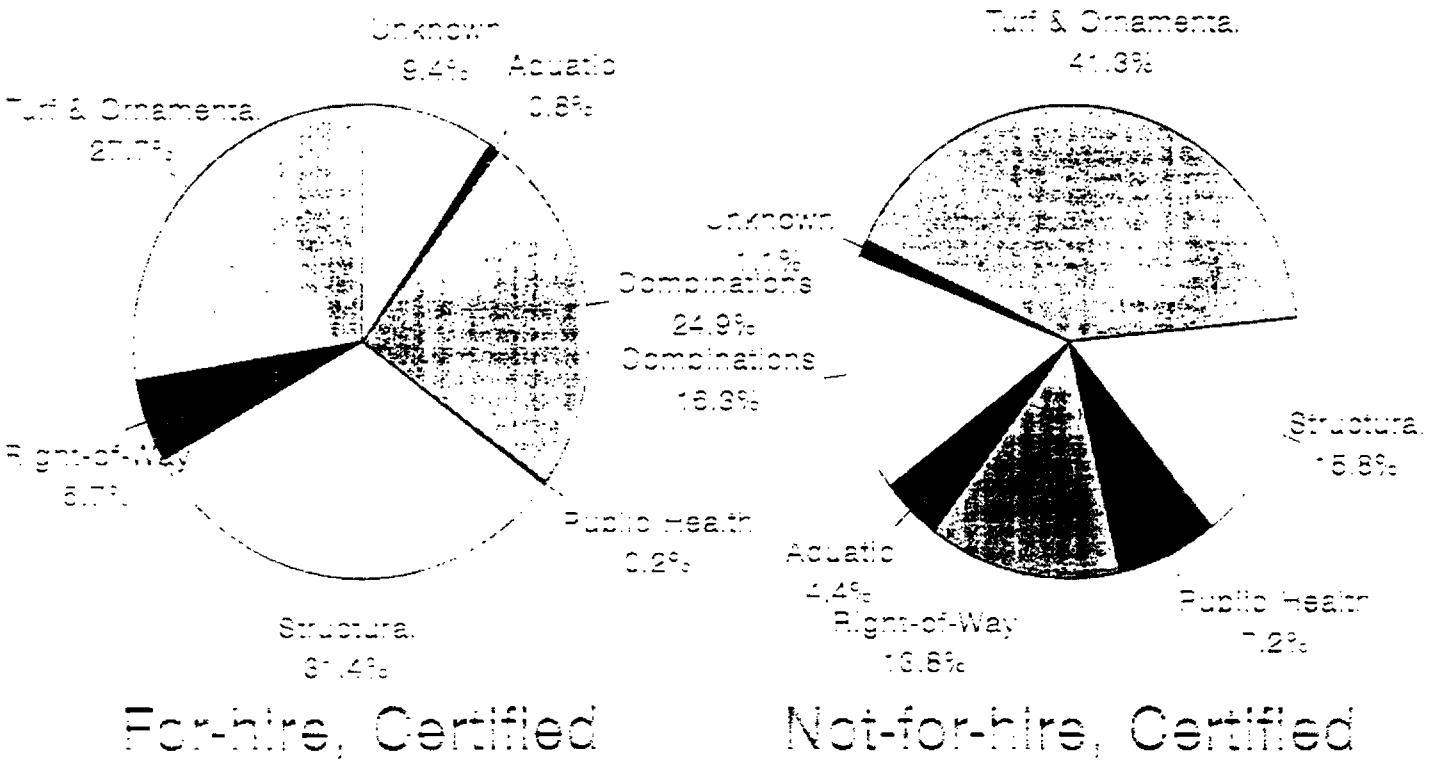


Table 3. Number of Non-agricultural Certifications[1] from 1993 C/CPAS and 1992/1993 EPA State Reports by Pest Control Certification Category:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pest Control Certification Category[4]	1993 C/CPAS	Standard Error	State Reports[3] 1992	State Reports[3] 1993
Total	208,592[5,6]	10,385	259,634	320,152
Turf and Ornamental	87,471	5,912	106,991	123,365
Right-of-way	34,228	2,758	39,276	45,816
Aquatic	12,351	1,499	10,202	14,563
Structural[7]	55,186	2,999	89,865	123,680
Public Health	11,757	1,936	13,300	12,728
Unknown[8]	7,600	1,339	NA[9]	NA[9]

[1]Source questions: Q20, Q24 and Q25 (see Appendix A) and state list certification information.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Source of state reports is EPA 5700-33H forms.
[4]The estimated number of certifications in any one pest control category is the number of applicators certified in that category.
[5]This is the estimated number of certifications which is greater than the estimated number of certified applicators reported in Table 1 because some applicators are certified in more than one category.
[6]Total may differ from the sum of the entries because of rounding.
[7]Structural includes industrial, institutional, structural and health-related.
[8]The unknowns are from businesses with unknown pest control certification categories, and we assumed one certification per person.
[9]Not applicable.

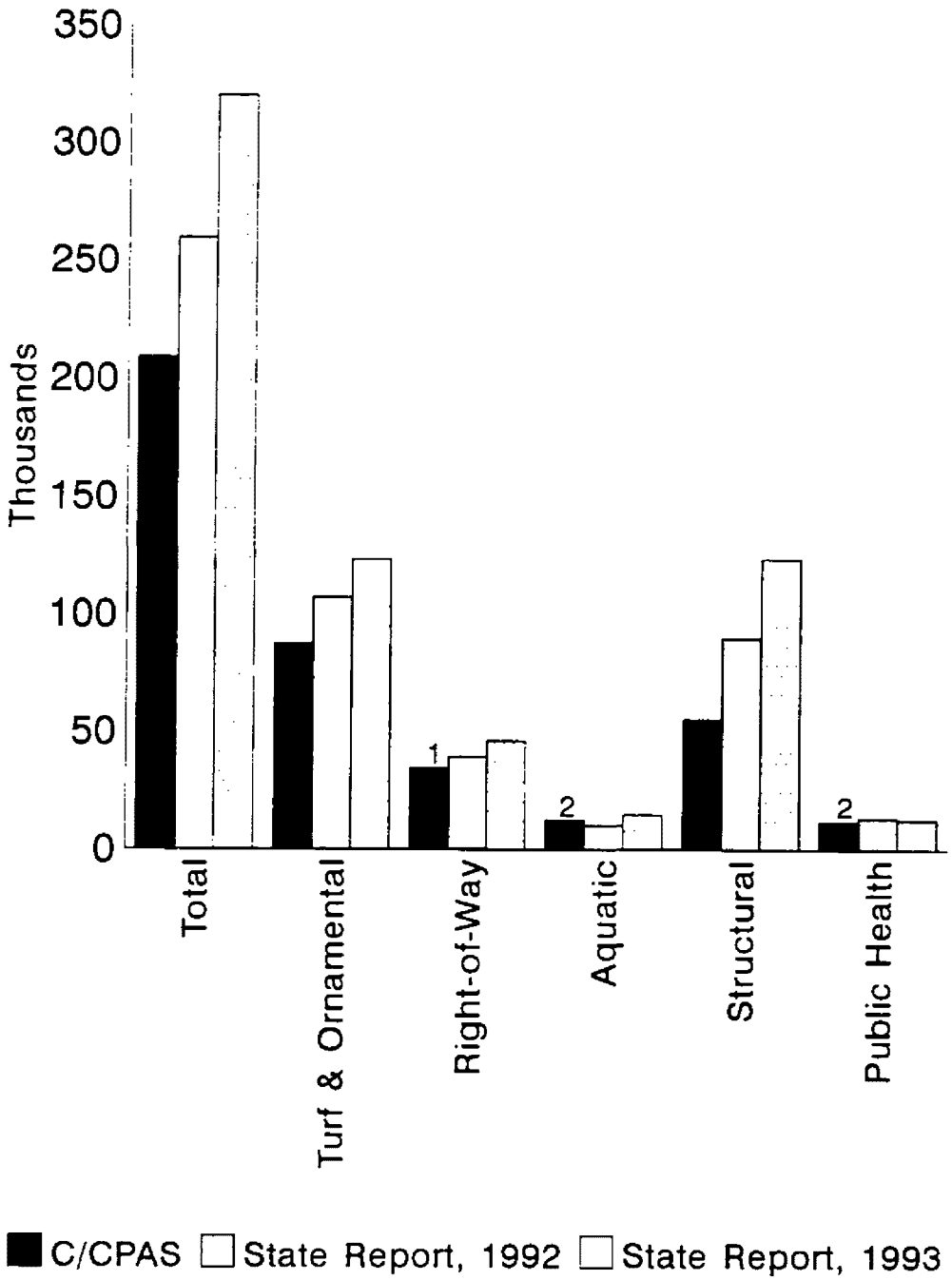
Table 4. Number of Non-agricultural Certifications and Number of Certifications per Certified Applicator[1] by For-hire Status and Pest Control Certification Category:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

For-hire Status and Pest Control Certification Status	Number of Observations	Number of Certifications Held	Number of Applicators	Number of Certifications per Applicator	Standard Error
Total Certified[3]	3,645	208,592	165,478	1.26	0.02
For-hire, Certified[3]	2,000	91,960	69,802	1.32	0.03
Not-for-hire, Certified[3]	1,645	116,632	95,676	1.22	0.02
Total					
Turf and Ornamental	1,837	125,842[4]	87,471[4]	1.44[4]	0.03
Right-of-Way	874	59,645	34,228	1.74	0.06
Aquatic	482	25,102	12,351	2.03	0.10
Structural[5]	1,263	81,350	55,186	1.47	0.04
Public Health	353	20,287	11,757	1.73	0.14
Unknown	244	7,600	7,600	1.00	-[6]
For-hire					
Turf and Ornamental	1,053	55,374	35,029	1.58	0.05
Right-of-Way	347	22,057	11,355	1.94	0.12
Aquatic	144	5,971	2,455	2.43	0.18
Structural	901	49,902	33,927	1.47	0.04
Public Health	113	7,229	2,655	2.72	0.12
Unknown	223	6,539	6,539	1.00	-[6]
Not-for-hire					
Turf and Ornamental	784	70,468	52,442	1.34	0.03
Right-of-Way	527	37,588	22,873	1.64	0.06
Aquatic	338	19,131	9,896	1.93	0.11
Structural	362	31,449	21,259	1.48	0.06
Public Health	240	13,058	9,102	1.43	0.10
Unknown	21	1,061	1,061	1.00	-[6]

[1]Source questions: Q20, Q24 and Q25 (see Appendix A) and state list certification information.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Sum of certifications held and applicators over the pest control certification categories does not equal the total because of multiple counting across these categories. See footnote 4 for additional information.
[4]There are 87,471 applicators that are certified in turf and ornamental pest control. Some of these applicators are certified in other pest control categories. Consequently, the 87,471 applicators hold a total of 125,842 certifications. The average number of certifications per applicator certified in turf and ornamental is 1.44.
[5]Structural includes industrial, institutional, structural and health-related.
[6]We assumed one certification per person.

Number of Non-agricultural Certifications, U.S. 1992 and 1993, by Pest Control Certification Category and Source: 1993 C/CPAS



1 The number of non-agricultural certifications estimated from the U.S. 1992 state reports falls within +/- 2 standard errors of the 1993 C/CPAS estimate.
2 The number of non-agricultural certifications estimated from either the 1992 or 1993 state reports falls within +/- 2 standard errors of the 1993 C/CPAS estimate.

Average Number of Certifications per Certified Applicator
U.S. 1993, by For-hire Status and Pest Control
Certification Category: 1993 C/CPAS

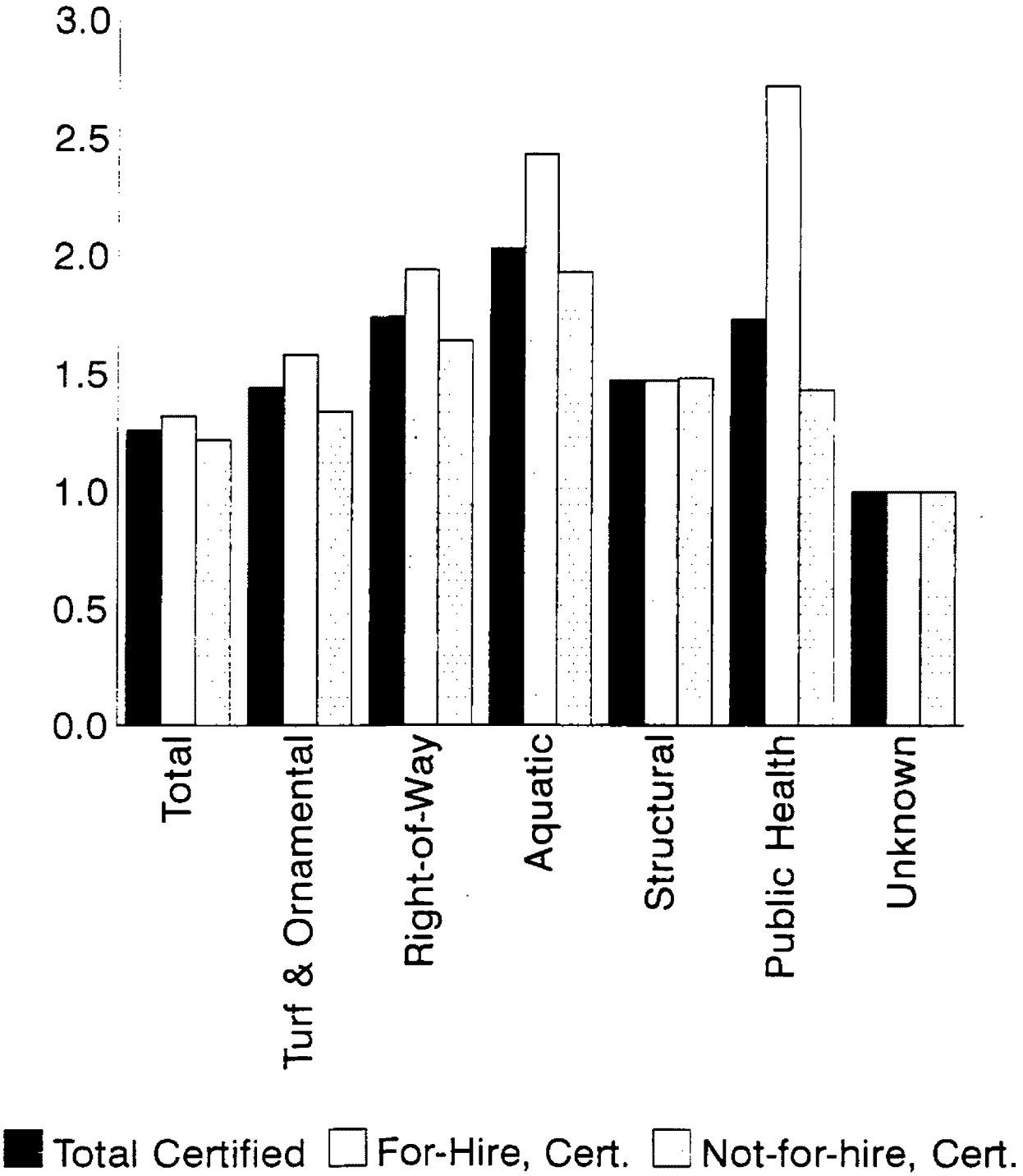


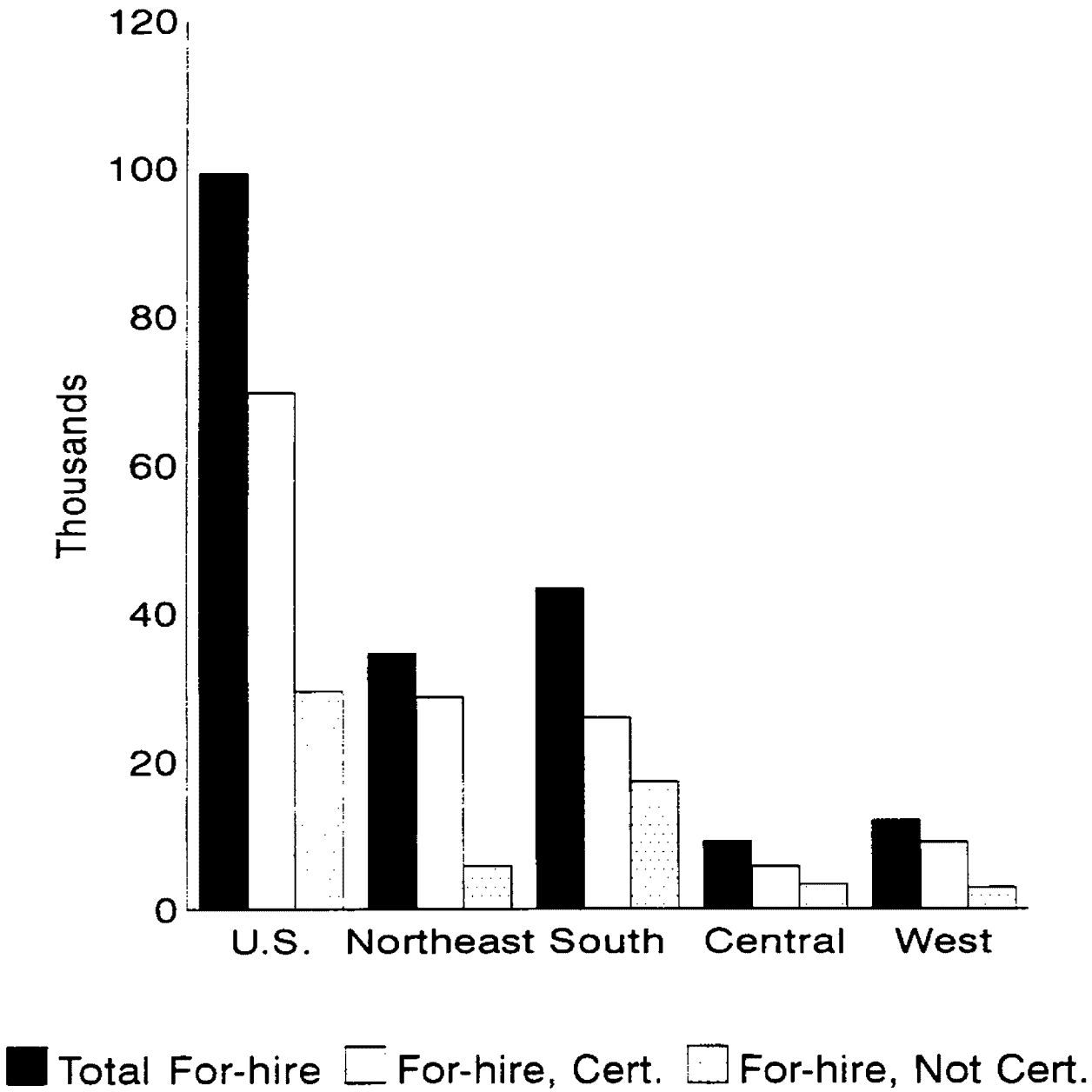
Table 5. Number of For-hire Pesticide Applicators[1] and Number of For-hire Pesticide Applicators per Million 1993 U.S. Residential Population[2] by Certification Status and C/CPAS Region:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[3]

Certification Status and C/CPAS Region	Number of Observations	Number of Applicators	Standard Error	1993 US Population (000,000)	Number of Applicators Per Million Persons
Total For-hire					
Total	2,000[4]	99,330[5]	7,578	256.14	388
Northeast	842	34,626	3,444	113.44	305
South	548	43,440	5,945	76.50	568
Central	270	9,195	2,300	20.27	454
West	340	12,069	2,219	45.92	263
For-hire, Certified					
Total	2,000[4]	69,802	4,641	256.14	273
Northeast	842	28,776	3,012	113.44	254
South	548	26,034	3,136	76.50	340
Central	270	5,833	651	20.27	288
West	340	9,159	1,485	45.92	199
For-hire, Not Certified					
Total	366[6]	29,528	4,988	256.14	115
Northeast	124	5,850	816	113.44	52
South	145	17,407	4,409	76.50	228
Central	42	3,361	1,869	20.27	166
West	55	2,910	1,131	45.92	63

[1]Source questions: Q18 and Q20 (see Appendix A).
[2]U.S. Bureau of the Census Press Release # CB93-29, 29 December 1993.
[3]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[4]The number of observations contributing to the estimates for for-hire, certified applicators is the same as that for all for-hire applicators because for-hire businesses must employ at least one certified applicator.
[5]Total may differ from the sum of the entries because of rounding.
[6]Includes only businesses that employ at least one not certified applicator.

Distribution of Non-agricultural For-hire Pesticide Applicators, U.S. 1993, by Certification Status and C/CPAS Region: 1993 C/CPAS



Distribution of Non-agricultural For-hire Pesticide Applicators per Million 1993 U.S. Residential Population by Certification Status and C/CPAS Region: 1993 C/CPAS

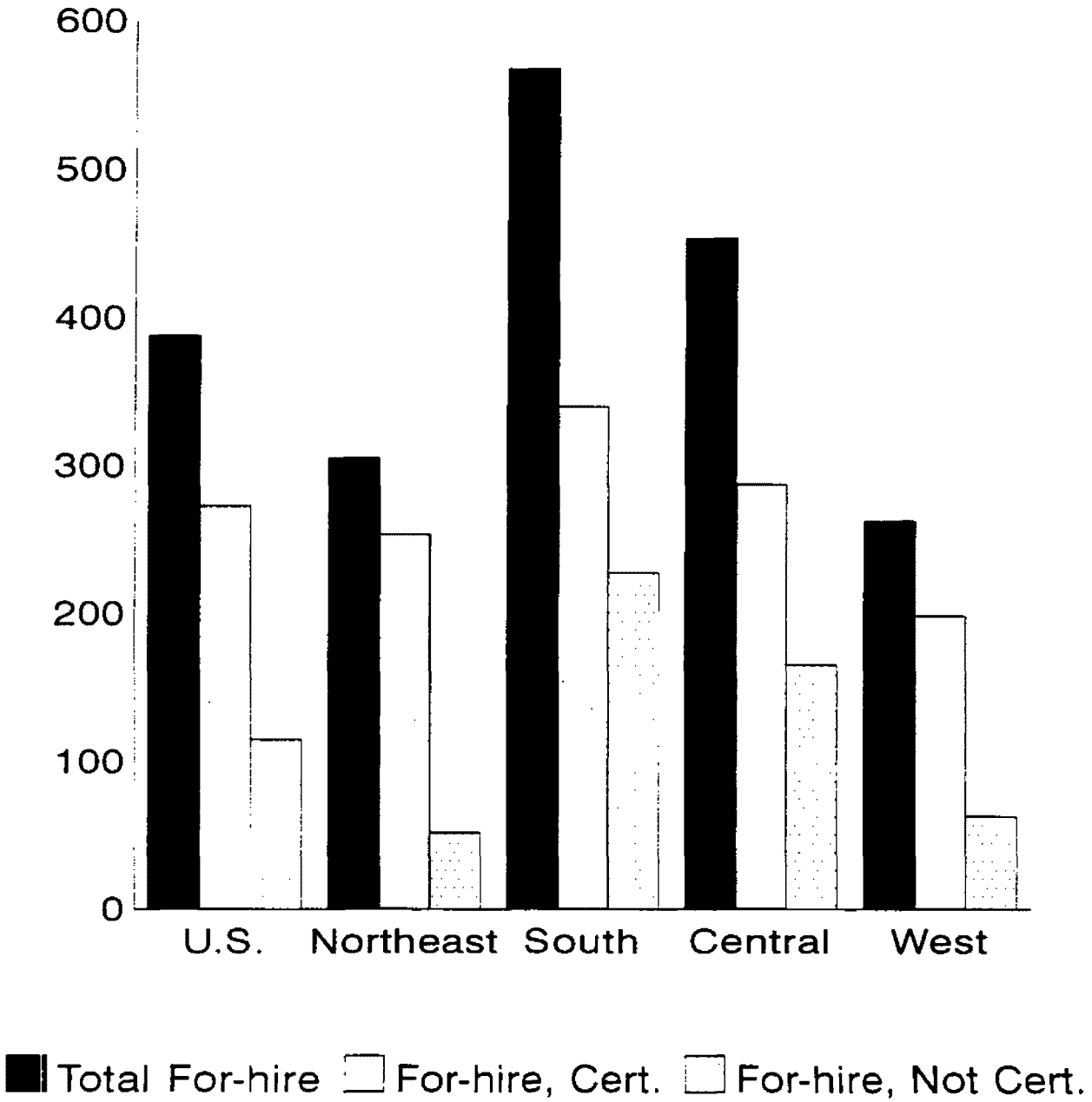


Table 6. Number of For-hire Pesticide Applicators[1] by Certification Status and Employer's Pest Control Certification Category:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Certification Status and Pest Control Certification Category	Number of Observations	Number of Applicators	Standard Error
Total For-hire			
Total	2,000[3]	99,330[4]	7,578
Turf and Ornamental only	582	24,735	2,702
Right-of-Way only	46	8,728	3,007
Aquatic only	28	790	456
Structural only[5]	556	27,097	2,845
Public Health only	14	258	32
Turf & Ornamental and Right-of-Way	127	4,267	1,373
Turf & Ornamental and Aquatic	31	691	246
Turf & Ornamental and Structural	137	16,235	4,119
Turf & Ornamental, Right-of-Way, and Structural	61	1,701	326
Other Combinations	195	5,594	909
Unknown	223	9,234	1,489
For-hire, Certified			
Total	2,000[3]	69,802	4,641
Turf and Ornamental only	582	19,301	2,109
Right-of-Way only	46	3,954	1,383
Aquatic only	28	529	264
Structural only	556	21,946	2,208
Public Health only	14	161	31
Turf & Ornamental and Right-of-Way	127	3,827	1,338
Turf & Ornamental and Aquatic	31	611	237
Turf & Ornamental and Structural	137	7,104	867
Turf & Ornamental, Right-of-Way, and Structural	61	1,320	232
Other Combinations	195	4,510	781
Unknown	223	6,539	891

[1]Source questions: Q18 and Q20 (see Appendix A) and state list certification information.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]The number of observations contributing to the estimates for for-hire, certified applicators is the same as that for all for-hire applicators because for-hire businesses must employ at least one certified applicator.
[4]Total may differ from the sum of the entries because of rounding.
[5]Structural includes industrial, institutional, structural and health-related.
[6]Includes only businesses that employ at least one not certified applicator.

Table 6. Number of For-hire Pesticide Applicators[1] by Certification Status and Employer's Pest Control Certification Category (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Certification Status and Pest Control Certification Category	Number of Observations	Number of Applicators	Standard Error
For-hire, Not Certified			
Total	366[6]	29,528	4,988
Turf and Ornamental only	91	5,434	1,235
Right-of-Way only	13	4,775	2,329
Aquatic only	4	261	195
Structural only	85	5,151	1,123
Public Health only	3	98	5
Turf & Ornamental and Right-of-Way	23	440	130
Turf & Ornamental and Aquatic	4	80	46
Turf & Ornamental and Structural	38	9,131	4,052
Turf & Ornamental, Right-of-Way, and Structural	13	381	125
Other Combinations	39	1,084	262
Unknown	53	2,695	758

Source questions: Q18 and Q20 (see Appendix A) and state list certification information.
[1]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[2]The number of observations contributing to the estimates for for-hire, certified applicators is the same as that for all for-hire applicators because for-hire businesses must employ at least one certified applicator.
[3]Total may differ from the sum of the entries because of rounding.
[4]Structural includes industrial, institutional, structural and health-related.
[6]Includes only businesses that employ at least one not certified applicator.

Relative Number of Non-agricultural For-hire Pesticide Applicators, U.S. 1993, by Certification Status and Employers' Pest Control Certification Category: 1993 C/CPAS

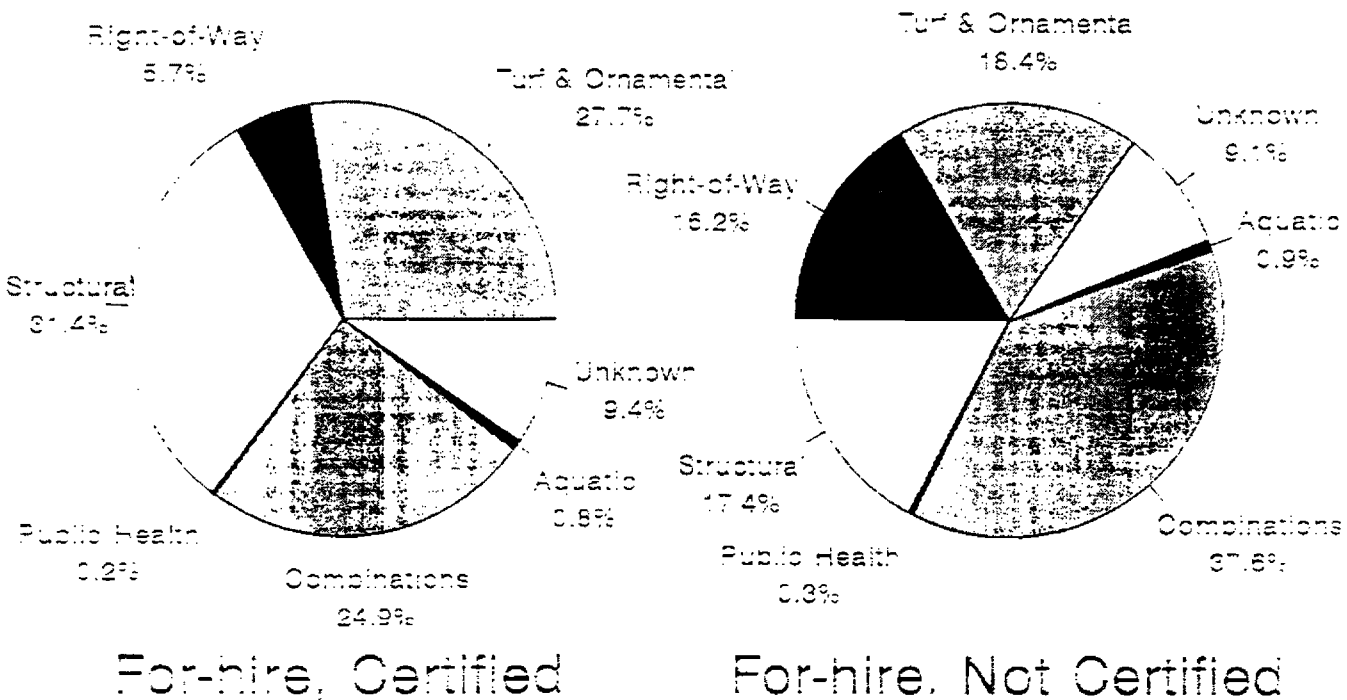


Table 7. Number of Not-for-hire Certified Applicators[1] by Employer's Type of Business and C/CPAS Region:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Employer's Type of Business and C/CPAS Region	Number of Observations	Number of Applicators	Standard Error
Total			
Total	1,645	95,676[3]	7,330
Northeast	711	44,721	3,967
South	462	21,981	2,357
Central	247	10,328	1,955
West	225	18,647	5,349
Golf Course			
Total	189	11,123	1,000
Northeast	109	6,309	741
South	47	3,128	461
Central	17	549	180
West	16	1,137	454
Nursery			
Total	49	3,442	648
Northeast	19	1,245	304
South	16	1,155	342
Central	5	154	72
West	9	888	453
Public/Government			
Total	552	31,723	3,742
Northeast	222	13,884	2,419
South	138	6,584	981
Central	106	4,483	977
West	86	6,772	2,497
Utility			
Total	44	2,496	665
Northeast	19	1,211	355
South	14	532	145
Central	4	222	131
West	7	531	527

[1]Source questions: Q5, Q24 and Q25 (see Appendix A).
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Total may differ from the sum of the entries because of rounding.
[4]Includes applicators with an active certification who did not apply pesticides in 1993.

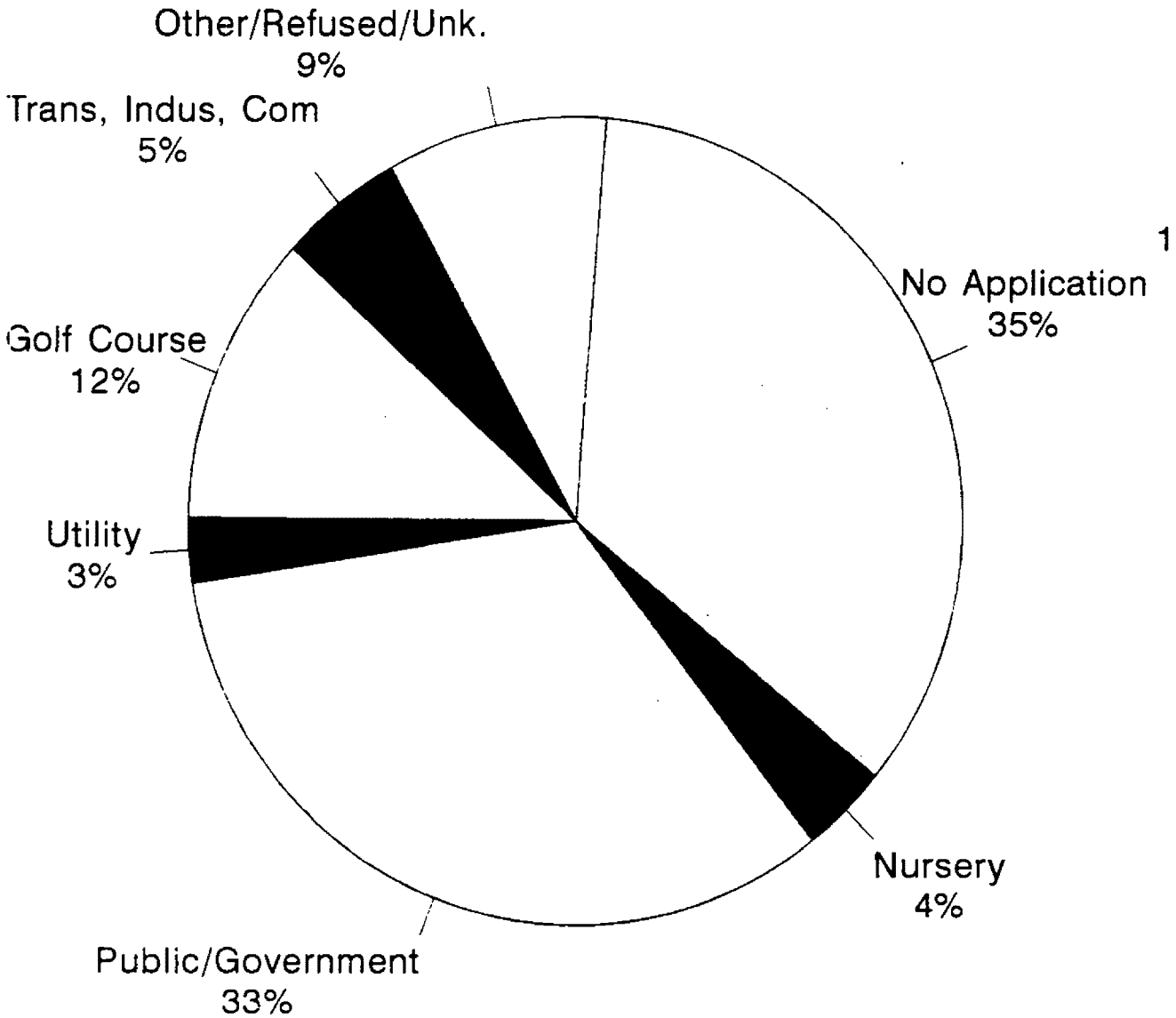
Table 7. Number of Not-for-hire Certified Applicators[1] by Employer's Type of Business and C/CPAS Region (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Employer's Type of Business and C/CPAS Region	Number of Observations	Number of Applicators	Standard Error
Transportation, Industrial, and Other Commercial			
Total	71	4,933	966
Northeast	35	2,787	815
South	16	756	293
Central	11	655	397
West	9	734	157
Other, Refused or Unknown			
Total	131	8,869	1,211
Northeast	71	4,869	751
South	22	975	395
Central	20	1,135	559
West	18	1,890	658
No Application[4]			
Total	609	33,089	3,362
Northeast	236	14,417	1,357
South	209	8,849	1,243
Central	84	3,130	887
West	80	6,694	2,670

[1]Source questions: Q5, Q24 and Q25 (see Appendix A).
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Total may differ from the sum of the entries because of rounding.
[4]Includes applicators with an active certification who did not apply pesticides in 1993.

Relative Number of Non-agricultural Not-for-hire Certified Applicators, U.S. 1993, by Their Employers' Business Type: 1993 C/CPAS



1 Includes applicators with an active certification but who did not apply pesticides in 1993.

Table 8. Number of Commercial Pesticide Application Businesses[1] by C/CPAS Region:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

C/CPAS Region	Number of Observations	Number of Businesses[3]	Standard Error
Total	2,000	33,096[4]	1,328
Northeast	842	13,594	901
South	548	11,553	688
Central	270	3,709	450
West	340	4,240	525

[1]Source questions: Q1 and Q2 (see Appendix A).
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Commercial pesticide application businesses are licensed by states to apply pesticides on the property of others for a fee.
[4]Total may differ from the sum of the entries because of rounding.

Relative Number of Non-agricultural Commercial Pesticide Application Businesses, U.S. 1993, by C/CPAS Region: 1993 C/CPAS

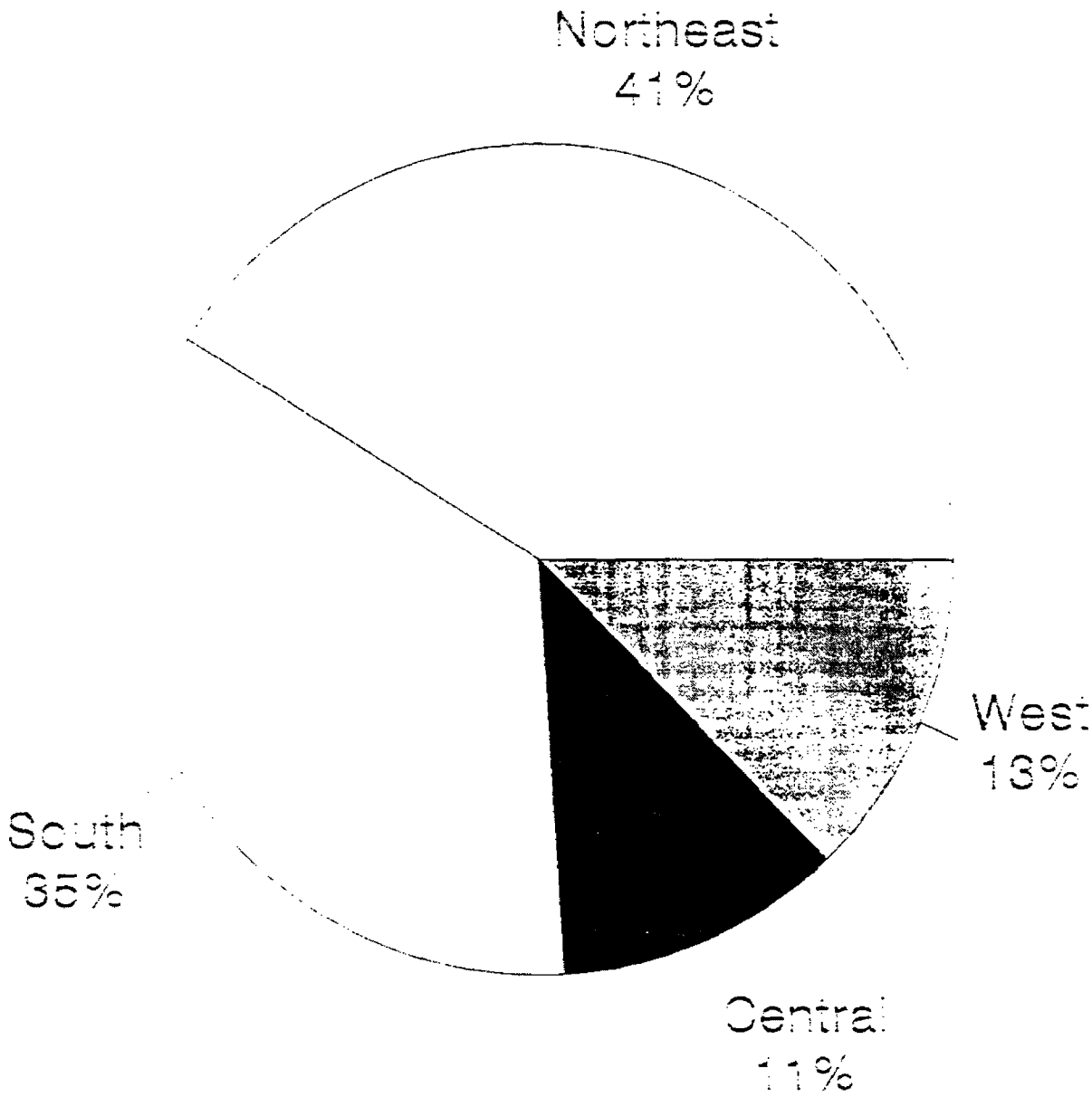


Table 9. Number of Commercial Pesticide Application Businesses[1] by Pest Control Certification Category:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pest Control Certification Category[3]	Number of Observations	Number of Businesses[4]	Standard Error
Total	2,000	33,096[5]	1,328
Turf and Ornamental only	582	11,225	810
Right-of-Way only	46	612	158
Aquatic only	28	242	68
Structural only[6]	556	10,170	579
Public Health only	14	110	33
Turf & Ornamental and Right-of-Way	127	1,328	231
Turf & Ornamental and Aquatic	31	164	35
Turf & Ornamental and Structural	137	3,141	275
Turf & Ornamental, Right-of-Way, and Structural	61	706	126
Other Combinations	195	1,408	161
Unknown	223	3,989	474

[1]Source questions: Q1 and Q2 (see Appendix A) and state list certification information.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Commercial pesticide applicator businesses were assigned pest control certification categories in one of two ways. The first case is straightforward: some states license businesses by category. In other states, we classified the businesses according to the pest control certification categories of the certified applicators employed by that business.
[4]Commercial pesticide application businesses are licensed to apply pesticides on the property of others for a fee.
[5]Total may differ from the sum of the entries because of rounding.
[6]Structural includes industrial, institutional, structural and health-related.

Relative Number of Non-agricultural Commercial Pesticide Application Businesses, U.S. 1993, by Pest Control Certification Category: 1993 C/CPAS

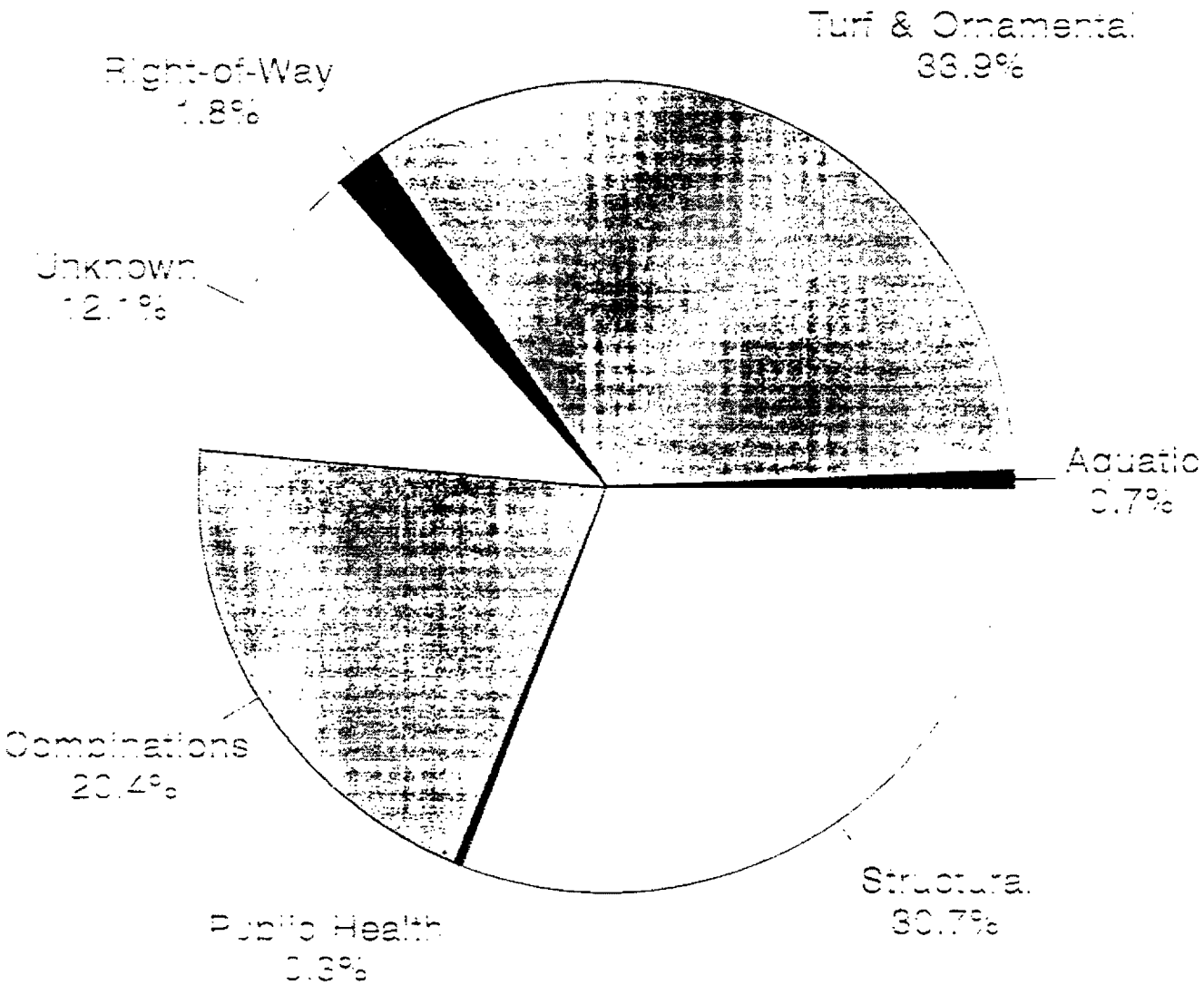


Table 10. Pesticide Usage[1] by For-hire and Not-for-hire Certified Applicators and C/CPAS Region:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Region	Pounds AI (000)	Standard Error (000)
Total		
Total	69,196[3]	9,062
Northeast	19,597	2,331
South	32,697	7,317
Central	4,325	1,074
West	12,577	4,690
For-hire Applicators		
Total	39,618	5,345
Northeast	11,875	1,768
South	20,668	4,885
Central	3,079	952
West	3,996	817
Not-for-hire, Certified Applicators		
Total	29,578	6,803
Northeast	7,722	1,977
South	12,029	4,387
Central	1,246	443
West	8,581	4,788

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Total may differ from the sum of the entries because of rounding.

Distribution of Non-agricultural Pesticide Usage in Pounds (000), U.S. 1993, by For-Hire Applicators and Not-for-hire by C/CPAS Region: 1993 C/CPAS

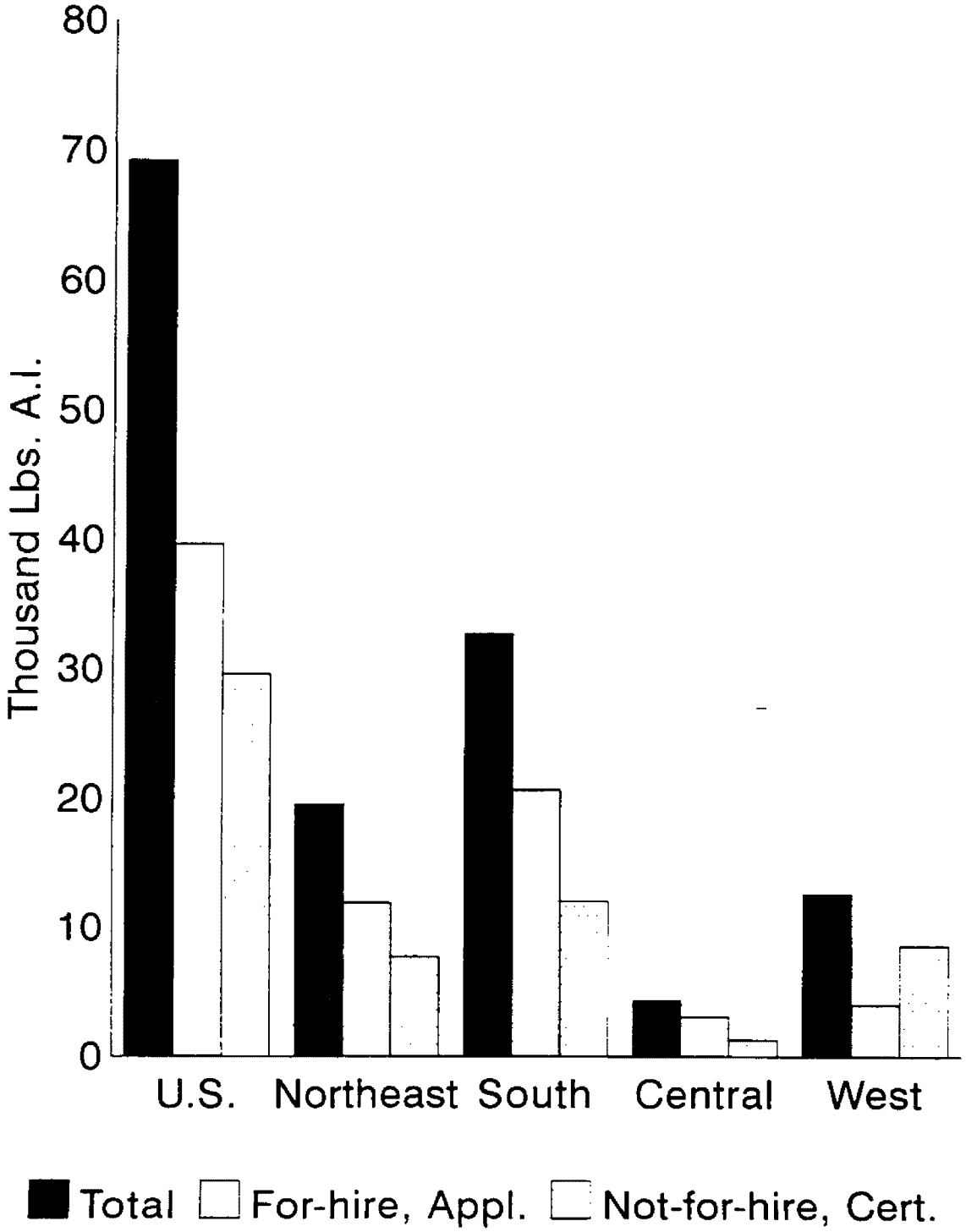


Table 11. Not-for-hire Certified Applicator Pesticide Usage[1] by C/CPAS Region and Employer's Type of Business:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Region and Employer's Type of Business	Number of Observations	Pounds AI (000)	Standard Error (000)
Total			
Total	866[3]	29,578[4]	6,803
Golf Course	179	4,502	917
Nursery	38	240	100
Public/Government	457	13,419	4,292
Utility	39	3,701	2,978
Food, Transportation, Other Commercial/Industrial	59	1,867	1,120
Other, Refused, Unknown	94	5,850	3,965
Northeast			
Total	393	7,722	1,977
Golf Course	105	2,582	483
Nursery	14	92	53
Public/Government	178	2,603	1,577
Utility	16	147	55
Food, Transportation, Other Commercial/Industrial	29	1,148	1,072
Other, Refused, Unknown	51	1,150	598
South			
Total	226	12,029	4,387
Golf Course	45	1,614	772
Nursery	13	39	27
Public/Government	124	5,300	1,481
Utility	12	529	349
Food, Transportation, Other Commercial/Industrial	14	278	167
Other, Refused, Unknown	18	4,270	3,908

[1]Source questions Q5, Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]A total of 1,036 (= 1,645 - 609) observations are presented in Table 5 as not-for-hire certified applicators who applied pesticides in 1993. Pesticide usage estimates in Table 11 are based on 866 not-for-hire certified applicators. Thus, 170 (= 1,036 - 866) of these applicators did not supply sufficient information to calculate pounds AI.

[4]Total may differ from the sum of the entries because of rounding.

Table 11. Not-for-hire Certified Applicator Pesticide Usage[1] by C/CPAS Region and Employer's Type of Business (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Region and Employer's Type of Business	Number of Observations	Pounds AI (000)	Standard Error (000)
Central			
Total	126	1,246	443
Golf Course	15	43	13
Nursery	4	13	13
Public/Government	82	847	322
Utility	4	67	64
Food, Transportation, Other Commercial/Industrial	7	216	187
Other, Refused, Unknown	14	60	37
West			
Total	121	8,581	4,788
Golf Course	14	264	107
Nursery	7	95	79
Public/Government	73	4,669	3,693
Utility	7	2,958	2,956
Food, Transportation, Other Commercial/Industrial	9	225	203
Other, Refused, Unknown	11	370	297

[1]Source questions Q5, Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]A total of 1,036 (= 1,645 - 609) observations are presented in Table 5 as not-for-hire certified applicators who applied pesticides in 1993. Pesticide usage estimates in Table 11 are based on 866 not-for-hire certified applicators. Thus, 170 (= 1,036 - 866) of these applicators did not supply sufficient information to calculate pounds AI.

[4]Total may differ from the sum of the entries because of rounding.

Relative Number of Non-agricultural Pesticide Usage by Not-for-hire Certified Applicators, U.S. 1993, by Employer's Type of Business: 1993 C/CPAS

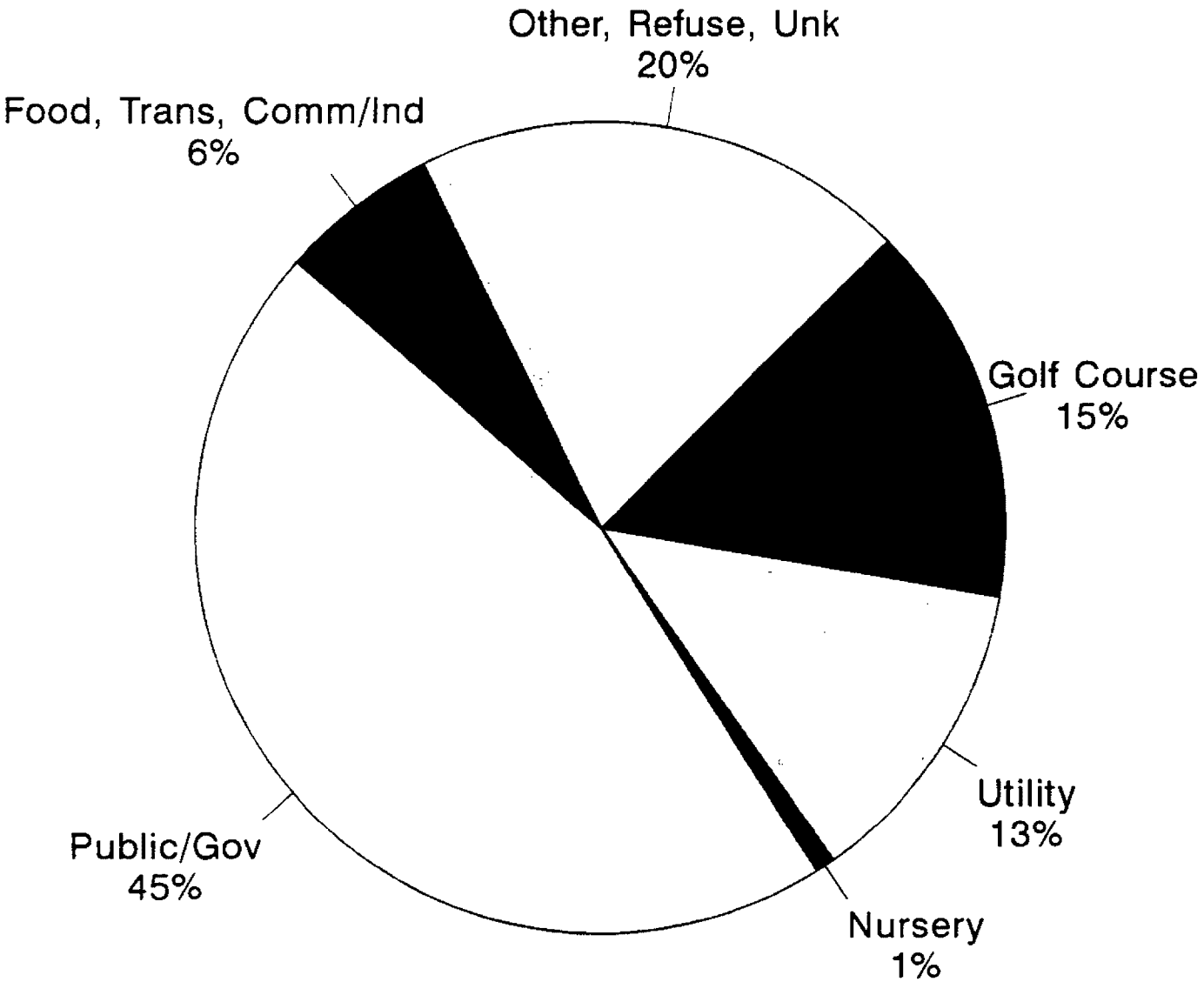


Table 12. Pesticide Usage[1] by For-Hire Status, Employer's Type of Business and Pesticide Type:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

For-Hire Status	Type of Business	Pesticide Type	Pounds AI (000)	Standard Error (000)
For-Hire Applicators	Commercial Pesticide Applications Businesses	All Types	39.618[3]	5.345
		Herbicide	15.993	4.150
		Insecticide	15.325	1.623
		Fungicide	960	557
		Fumigant	3.061	763
		Other	850	477
		Multi-Type	3.428	2.803
Not-for-Hire Certified Applicators	All Types of Businesses that are not Commercial Pesticide Applications Businesses	All Types	29.578	6.803
		Herbicide	11.468	4.328
		Insecticide	7.204	1.722
		Fungicide	2.240	359
		Fumigant	1.851	1.213
		Other	255	66
		Multi-Type	6.561	3.775
	Golf Course	All Types	4.502	917
		Herbicide	1.097	197
		Insecticide	607	142
		Fungicide	1.988	344
		Fumigant	-[4]	-
		Other	106	34

[1]Source questions Q1, Q5, Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage greater than zero but less than 500 pounds

Table 12. Pesticide Usage[1] by For-Hire Status, Employer's Type of Business and Pesticide Type (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

For-Hire Status	Type of Business	Pesticide Type	Pounds AI (000)	Standard Error (000)
		Multi-Type	703	696
Not-for-Hire Certified Applicators	Nursery	All Types	240	100
		Herbicide	152	82
		Insecticide	75	62
		Fungicide	12	6
		Other	1	-
		Multi-Type	-	-
	Public/Government	All Types	13,419	4,292
		Herbicide	4,815	1,659
		Insecticide	5,475	1,644
		Fungicide	56	20
		Fumigant	11	9
		Other	66	28
		Multi-Type	2,996	2,451
	Utility	All Types	3,701	2,978
		Herbicide	532	246
		Insecticide	342	308
		Fungicide	30	30
		Other	-	-
		Multi-Type	2,798	2,775

[1]Source questions Q1, Q5, Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage greater than zero but less than 500 pounds

Table 12. Pesticide Usage[1] by For-Hire Status, Employer's Type of Business and Pesticide Type (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

For-Hire Status	Type of Business	Pesticide Type	Pounds AI (000)	Standard Error (000)
Not-for-Hire Certified Applicators (Continued)	Food,Transportation,Other Commercial/Industrial	All Types	1,867	1,120
		Herbicide	335	204
		Insecticide	154	108
		Fungicide	16	8
		Fumigant	1,301	1,086
		Other	21	12
		Multi-Type	41	25
	Other,Refused,Unknown	All Types	5,850	3,965
		Herbicide	4,537	3,902
		Insecticide	551	307
		Fungicide	138	65
		Fumigant	539	539
		Other	61	49
		Multi-Type	23	15

[1]Source questions Q1, Q5, Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage greater than zero but less than 500 pounds.

Table 13. Pesticide Usage[1] by Active Ingredient:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Total[3]				69,196	9,062	100.0	24,560
CHLORPYRIFOS		059101	Insecticide	7,779	999	11.2	2,140
MALATHION		057701	Insecticide	4,315	1,363	6.2	264
GLYPHOSATE, SALT	4	103601	Herbicide	3,412	677	4.9	1,220
2,4-D	5	030019	Herbicide	3,403	635	4.9	978
METHYL BROMIDE	*	053201	Fumigant	2,711	1,156	3.9	51
PERMETHRIN, MIXED CIS,TRANS		109701	Insecticide	2,389	797	3.5	235
DIURON		035505	Herbicide	2,339	1,331	3.4	114
PENDIMETHALIN		108501	Herbicide	1,834	532	2.7	193
SULFURYL FLUORIDE	*	078003	Fumigant	1,513	579	2.2	33
PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN		031519	Herbicide	1,409	397	2.0	650
CYPERMETHRIN		109702	Insecticide	1,293	554	1.9	542
TRICLOPYR	6	116004	Herbicide	1,140	342	1.6	269
DIAZINON	1	057801	Insecticide	1,038	191	1.5	695
CHLOROTHALONIL		081901	Fungicide	1,017	182	1.5	323

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of Codes 103601, 103604
[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of Codes 116002, 116004
[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[8]Consists of Codes 005102, 005104 (RUP)
[9]Consists of Codes 005102, 005104 (GUP)
[10]Usage or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 13. Pesticide Usage[1] by Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
SIMAZINE		080807	Herbicide	887	534	1.3	112
PIPERONYL BUTOXIDE		067501	Multi-Type	630	342	0.9	1,383
MCPA, DIMETHYLAMINE SALT		030516	Herbicide	480	153	0.7	37
BORIC ACID		011001	Insecticide	437	197	0.6	266
ACEPHATE		103301	Insecticide	426	160	0.6	431
BENDIOCARB		105201	Insecticide	425	167	0.6	404
2,4-D	7 *	030019	Herbicide	411	150	0.6	32
CARBARYL		056801	Insecticide	406	132	0.6	313
TRICHLORFON		057901	Insecticide	374	113	0.5	144
MANCOZEB		014504	Fungicide	369	93	0.5	144
DISODIUM OCTABORATE TETRAHYDRATE		011103	Herbicide	364	142	0.5	111
ORYZALIN		104201	Herbicide	354	80	0.5	351
DICAMBA, DIMETHYLAMINE SALT		029802	Herbicide	343	70	0.5	676
FOSAMINE AMMONIUM		106701	Herbicide	253	107	0.4	29
PICLORAM, SALT	8 *	005102	Herbicide	248	81	0.4	69
PENTACHLORONITROBENZENE		056502	Fungicide	175	31	0.3	66

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding

[4]Consists of Codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of Codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of Codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>60).

Table 13. Pesticide Usage[1] by Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Active Ingredient (AI) Name	AI Code	Pesticide Type	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
PRODIAMINE	110201	Herbicide	145	67	0.2	49
ACETIC ACID, (2,4-DICHLOROPHENOXY) , 2-B	030053	Herbicide	145	56	0.2	90
THIRAM	079801	Fungicide	143	69	0.2	43
ATRAZINE	032201	Herbicide	142	79	0.2	100
IPRODIONE	109801	Fungicide	139	24	0.2	168
FONOFOS	041701	Insecticide	137	80	0.2	33
ISOFENPHOS	109401	Insecticide	136	39	0.2	129
IMAZAPYR, ISOPROPYLAMINE SALT	128829	Herbicide	128	56	0.2	58
ENDOTHALL, DIPOTASSIUM SALT	038904	Herbicide	120	63	0.2	34
BENEFLURALIN	084301	Herbicide	112	35	0.2	179
POTASSIUM SOAPS OF FATTY ACIDS	079021	Insecticide	102	33	0.1	76
PROPETAMPHOS *	113601	Insecticide	89	15	0.1	222
PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-	031453	Herbicide	89	46	0.1	45
TEBUTHIURON	105501	Herbicide	89	33	0.1	37
THIOPHANATE-METHYL	102001	Fungicide	88	16	0.1	171
FOSETYL-AL	123301	Fungicide	77	27	0.1	41

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of Codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of Codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of Codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents or with large standard errors (>.60).

Table 13. Pesticide Usage[1] by Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
SULFOMETURON METHYL		122001	Herbicide	73	28	0.1	66
METALAXYL		113501	Fungicide	71	11	0.1	179
VINCLOZOLIN		113201	Fungicide	66	19	0.1	64
TRIADIMEFON		109901	Fungicide	63	16	0.1	170
2-ETHYL-4-METHYLPENTYL 2,4-DICHLOROPHENO		030064	Herbicide	61	20	0.1	65
PROPAMOCARB HYDROCHLORIDE		119302	Fungicide	60	19	0.1	43
TRIFLURALIN		036101	Herbicide	57	16	0.1	182
CHLORONEB		027301	Fungicide	52	23	0.1	34
N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	Synergist	52	14	0.1	744
ALUMINUM PHOSPHIDE	*	066501	Fumigant	50	23	0.1	39
SODIUM BENTAZON		103901	Herbicide	49	12	0.1	64
COPPER TRIETHANOLAMINE COMPLEX		024403	Algaecide	47	21	0.1	69
PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031463	Herbicide	47	21	0.1	46
PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031419	Herbicide	45	17	0.1	49
LAMBDA-CYHALOTHRIN		128897	Insecticide	44	24	0.1	81
ISAZOFOS	*	126901	Insecticide	42	11	0.1	71

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of Codes 103601, 103604
[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of Codes 116002, 116004
[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[8]Consists of Codes 005102, 005104 (RUP)
[9]Consists of Codes 005102, 005104 (GUP)
[10]Usage or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>60).

Table 13. Pesticide Usage[1] by Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
ATRAZINE	*	080803	Herbicide	41	15	0.1	33
DICOFOL		010501	Insecticide	41	19	0.1	51
ANILAZINE		080811	Fungicide	38	12	0.1	30
PROMETON		080804	Herbicide	35	13	0.1	62
MECOPROP		031501	Herbicide	35	17	0.1	45
BENSULIDE		009801	Herbicide	34	13	.[10]	33
SILICA GEL		072602	Insecticide	32	8	-	184
PYRETHRINS		069001	Insecticide	32	10	-	1,251
SIDURON		035509	Herbicide	30	18	-	23
DITHIOPYR		128994	Herbicide	29	10	-	60
PROPICONAZOLE		122101	Fungicide	28	6	-	85
PICLORAM, SALT	9	005102	Herbicide	28	12	-	37
COPPER HYDROXIDE		023401	Fungicide	26	15	-	24
SULFUR		077501	Fungicide	26	12	-	25
OXADIAZON		109001	Herbicide	25	9	-	88
BROMACIL, LITHIUM SALT		012302	Herbicide	22	8	-	30

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of Codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of Codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of Codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>60).

Table 13. Pesticide Usage[1] by Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
DICHLOBENIL		027401	Herbicide	18	9	-	41
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, COM		030016	Herbicide	17	5	-	35
DICHLORVOS		084001	Insecticide	17	5	-	57
BENOMYL		099101	Fungicide	16	6	-	69
PROPOXUR		047802	Insecticide	16	6	-	197
MERCUROUS CHLORIDE		052201	Other	15	4	-	33
ISOXABEN		125851	Herbicide	13	5	-	60
METALDEHYDE		053001	Molluscicide	13	7	-	53
FLUVALINATE		109302	Insecticide	13	6	-	100
OXYDEMETON-METHYL	*	058702	Insecticide	12	7	-	25
ESFENVALERATE		109303	Insecticide	11	6	-	67
FENARIMOL		206600	Fungicide	11	3	-	89
Other RUPs[11]	*			5,966	3,624	8.6	492
Other GUPs[11]				17,624	5,726	25.5	5,465

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental, right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of Codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of Codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of Codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 14. Pesticide Usage[1] by Pesticide Type and Active Ingredient:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
All Types	Total[3]			69,196	9,062	100.0	24,560
Herbicide	Total[3]			27,461	6,227	100.0	7,550
	GLYPHOSATE, SALT	4	103601	3,412	677	12.4	1,220
	2,4-D	5	030019	3,403	635	12.4	978
	DIURON		035505	2,339	1,331	8.5	114
	PENDIMETHALIN		108501	1,834	532	6.7	193
	PROPANOIC ACID, 2 (4-CHLORO-2-METHYLPHEN		031519	1,409	397	5.1	650
	TRICLOPYR	6	116004	1,140	342	4.2	269
	SIMAZINE		080807	887	534	3.2	112
	MCPA, DIMETHYLAMINE SALT		030516	480	153	1.7	37
	2,4-D	7 *	030019	411	150	1.5	32
	DISODIUM OCTABORATE TETRAHYDRATE		011103	364	142	1.3	111
	ORYZALIN		104201	354	80	1.3	351
	DICAMBA, DIMETHYLAMINE SALT		029802	343	70	1.3	676
	FOSAMINE AMMONIUM		106701	253	107	0.9	29
	PICLORAM, SALT	8 *	005102	248	81	0.9	69
	PRODIAMINE		110201	145	67	0.5	49
	ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 2-B		030053	145	56	0.5	90

*Restricted Use Pesticide (RUP). Note that some products are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of Codes 103604, 103601

[5]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[7]Consists of Codes 116002, 116004

[8]Consists of Codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]U[illegible]e amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[11] [illegible]s products that were of minor use (<10,000 pounds), used by fewer than 21 responde[illegible] with large standard errors (>.60).

Table 14. Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Herbicide (Continued)	ATRAZINE		032201	142	79	0.5	100
	IMAZAPYR, ISOPROPYLAMINE SALT		128829	128	56	0.5	58
	ENDOTHALL, DIPOTASSIUM SALT		038904	120	63	0.4	34
	BENFLURALIN		084301	112	35	0.4	179
	PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031453	89	46	0.3	45
	TEBUTHIURON		105501	89	33	0.3	37
	SULFOMETURON METHYL		122001	73	28	0.3	66
	2 ETHYL-4-METHYLPENTYL 2,4-DICHLOROPHENO		030064	61	20	0.2	65
	TRIFLURALIN		036101	57	16	0.2	182
	SODIUM BENTAZON		103901	49	12	0.2	64
	PROPANOIC ACID, 2-(2,4 DICHLOROPHENOXY)-		031463	47	21	0.2	46
	PROPANOIC ACID, 2-(2,4 DICHLOROPHENOXY)-		031419	45	17	0.2	49
	ATRAZINE	*	080803	41	15	0.2	33
	PROMETON		080804	35	13	0.1	62
	MECOPROP		031501	35	17	0.1	45
	BENSULIDE		009801	34	13	0.1	33
	SIDURON		035509	30	18	0.1	23
	DITHIOPYR		128994	29	10	0.1	60
	PICLORAM, SALT	9	005102	28	12	0.1	37

*Restricted Use Pesticide (RUP). Note that some products are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of Codes 103604, 103601

[5]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[7]Consists of Codes 005102, 005104 (RUP)

[8]Consists of Codes 005102, 005104 (GUP)

[9]Consists of Codes 116002, 116004

[10]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60)

Table 14. Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Herbicide (Continued)	OXADIAZON	109001	25	9	0.1	88
	BROMACIL, LITHIUM SALT	012302	22	8	0.1	30
	DICHLOBENIL	027401	18	9	0.1	41
	ACETIC ACID, (2,4 DICHLOROPHENOXY)-, COM	030016	17	5	0.1	35
	ISOXABEN	125851	13	5	.[10]	60
	Other RUPs[4]		142	68	0.5	63
	Other GUPs		8,812	4,248	32.1	1,035
Insecticide	Total[3]		22,529	1,956	100.0	11,008
	CHLORPYRIFOS	059101	7,779	999	34.5	2,140
	MALATHION	057701	4,315	1,363	19.2	264
	PERMETHRIN, MIXED CIS,TRANS	109701	2,389	797	10.6	235
	CYPERMETHRIN	109702	1,293	554	5.7	542
	DIAZINON	057801	1,038	191	4.6	695
	BORIC ACID	011001	437	197	1.9	266
	ACEPHATE	103301	426	160	1.9	431
	BENDIOCARB	105201	425	167	1.9	404
	CARBARYL	056801	406	132	1.8	313
	TRICHLORFON	057901	374	113	1.7	144
	FONOFOS	041701	137	80	0.6	33

[1]Restricted Use Pesticide (RUP). Note that some products are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[2]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[3]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[4]Totals may differ from the sum of the entries because of rounding.
[5]Consists of Codes 103604, 103601
[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[7]Consists of Codes 116002, 116004
[8]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[9]Consists of Codes 005102, 005104 (RUP)
[9]Consists of Codes 005102, 005104 (GUP)
[10]L[illegible]e amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[illegible]s products that were of minor use (<10,000 pounds), used by fewer than 21 respond[illegible] with large standard errors (> 60).

Table 14. Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Insecticide (Continued)	ISOFENPHOS		109401	136	39	0.6	129
	POTASSIUM SOAPS OF FATTY ACIDS		079021	102	33	0.5	76
	PROPETAMPHOS	*	113601	89	15	0.4	222
	LAMBDA-CYHALOTHRIN		128897	44	24	0.2	81
	ISAZOFOS	*	126901	42	11	0.2	71
	DICOFOL		010501	41	19	0.2	51
	SILICA GEL		072602	32	8	0.1	184
	PYRETHRINS		069001	32	10	0.1	1,251
	DICHLORVOS		084001	17	5	0.1	57
	PROPOXUR		047802	16	6	0.1	197
	FLUVALINATE		109302	13	6	0.1	100
	OXYDEMETON METHYL	*	058702	12	7	0.1	25
	ESFENVALERATE		109303	11	6	-[10]	67
	Other RUPs	*		535	195	2.4	180
	Other GUPs			2,389	653	10.6	2,850
Fungicide	Total[3]			3,200	522	100.0	1,973
	CHLOROTHALONIL		081901	1,017	182	31.8	323
	MANCOZEB		014504	369	93	11.5	144
	PENTACHLORONITROBENZENE		056502	175	31	5.5	66

*Restricted Use Pesticide (RUP). Note that some products are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of Codes 103604, 103601

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of Codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of Codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60).

Table 14. Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Fungicide (Continued)	THIRAM		079801	143	69	4.5	43
	IPRODIONE		109801	139	24	4.3	168
	THIOPHANATE METHYL		102001	88	16	2.7	171
	FOSETYL-AL		123301	77	27	2.4	41
	METALAXYL		113501	71	11	2.2	179
	VINCLOZOLIN		113201	66	19	2.1	64
	TRIADIMEFON		109901	63	16	2.0	170
	PROPAMOCARB HYDROCHLORIDE		119302	60	19	1.9	43
	CHLORONEB		027301	52	23	1.6	34
	ANILAZINE		080811	38	12	1.2	30
	PROPICONAZOLE		122101	28	6	0.9	85
	COPPER HYDROXIDE		023401	26	15	0.8	24
	SULFUR		077501	26	12	0.8	25
	BENOMYL		099101	16	6	0.5	69
	FENARIMOL		206600	11	3	0.3	89
	Other RUPs[11]	*		10	6	0.3	15
	Other GUPs[11]			726	556	22.7	190
Fumigant	Total[3]			4,912	1,447	100.0	140
	METHYL BROMIDE	*	053201	2,711	1,156	55.2	51

*Restricted Use Pesticide (RUP). Note that some products are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of Codes 103604, 103601

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of Codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of Codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10] * amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[11] [illegible]s products that were of minor use (<10,000 pounds), used by fewer than 21 respondents with large standard errors (>60).

Table 14. Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Fumigant (Continued)	SULFURYL FLUORIDE	*	078003	1,513	579	30.8	33
	ALUMINUM PHOSPHIDE	*	066501	50	23	1.0	39
	Other RUPs[11]	*		-[10]		-	4
	Other GUPs[11]			637	541	13.0	13
Other	Total[3]			1,105	469	100.0	2,421
	N OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	52	14	4.7	744
	COPPER TRIETHANOLAMINE COMPLEX		024403	47	21	4.3	69
	MERCUROUS CHLORIDE		052201	15	4	1.3	33
	METALDEHYDE		053001	13	7	1.2	53
	Other RUPs[11]	*		156	70	14.1	220
	Other GUPs[11]			821	463	74.3	1,302
Multi-Type	Total[3]			9,989	5,118	100.0	1,468
	PIPERONYL BUTOXIDE		067501	630	342	6.3	1,383
	Other RUPs[11]	*		5,121	3,612	51.3	10
	Other GUPs[11]			4,237	3,499	42.4	75

*Restricted Use Pesticide (RUP). Note that some products are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of Codes 103604, 103601

[5]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[7]Consists of Codes 005102, 005104 (RUP)

[8]Consists of Codes 116002, 116004

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>60).

Relative Distribution of Non-agricultural Pesticide Usage in Pounds, U.S. 1993, by Pesticide Type: 1993 C/CPAS

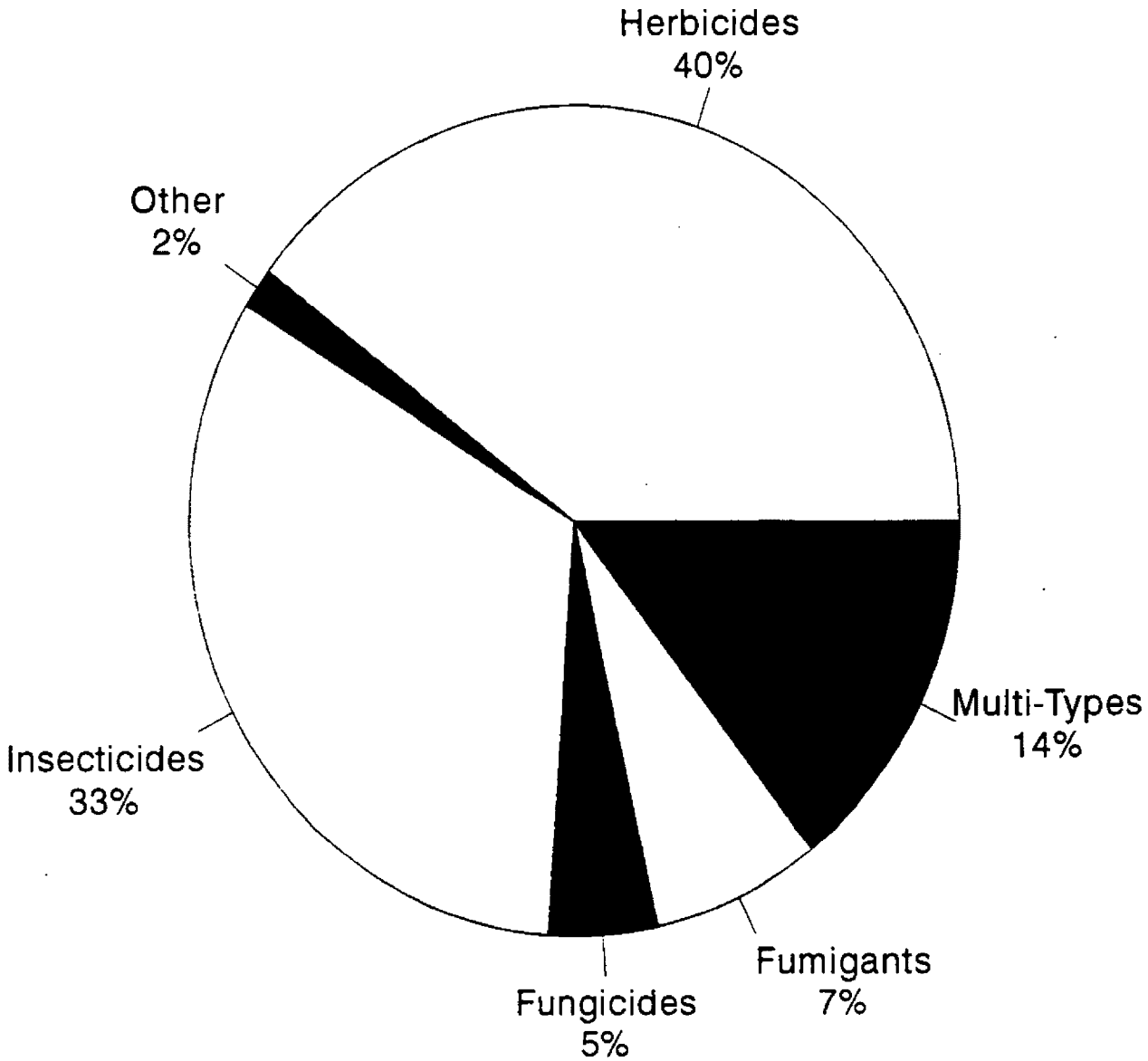


Table 15. Restricted Product Pesticide Usage[1] by Active Ingredient:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Total[3]				11,085	3,889	100.0	
METHYL BROMIDE		053201	Fumigant	2,711	1,156	24.5	51
SULFURYL FLUORIDE		078003	Fumigant	1,513	579	13.7	33
2,4-D	4	030019	Herbicide	411	150	3.7	32
PICLORAM, SALT	5	005102	Herbicide	248	81	2.2	69
PROPETAMPHOS		113601	Insecticide	89	15	0.8	222
ALUMINUM PHOSPHIDE		066501	Fumigant	50	23	0.5	39
ISAZOFOS		126901	Insecticide	42	11	0.4	71
ATRAZINE		080803	Herbicide	41	15	0.4	33
OXYDEMETON-METHYL		058702	Insecticide	12	7	0.1	25
Other RUPs[6]				5,966	3,624	53.8	492

[1]Source Questions Q12, Q14 and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Total may differ from the sum of the entries because of rounding.

[4]Consists of Codes 030001, 030019, 030035, 030063. The portion of the 2,4-D estimate arises from RUP that also contains picloram. Most 2,4-D usage is not restricted, see Tables 13 and 14.

[5]Consists of Codes 005102, 005104

[6]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

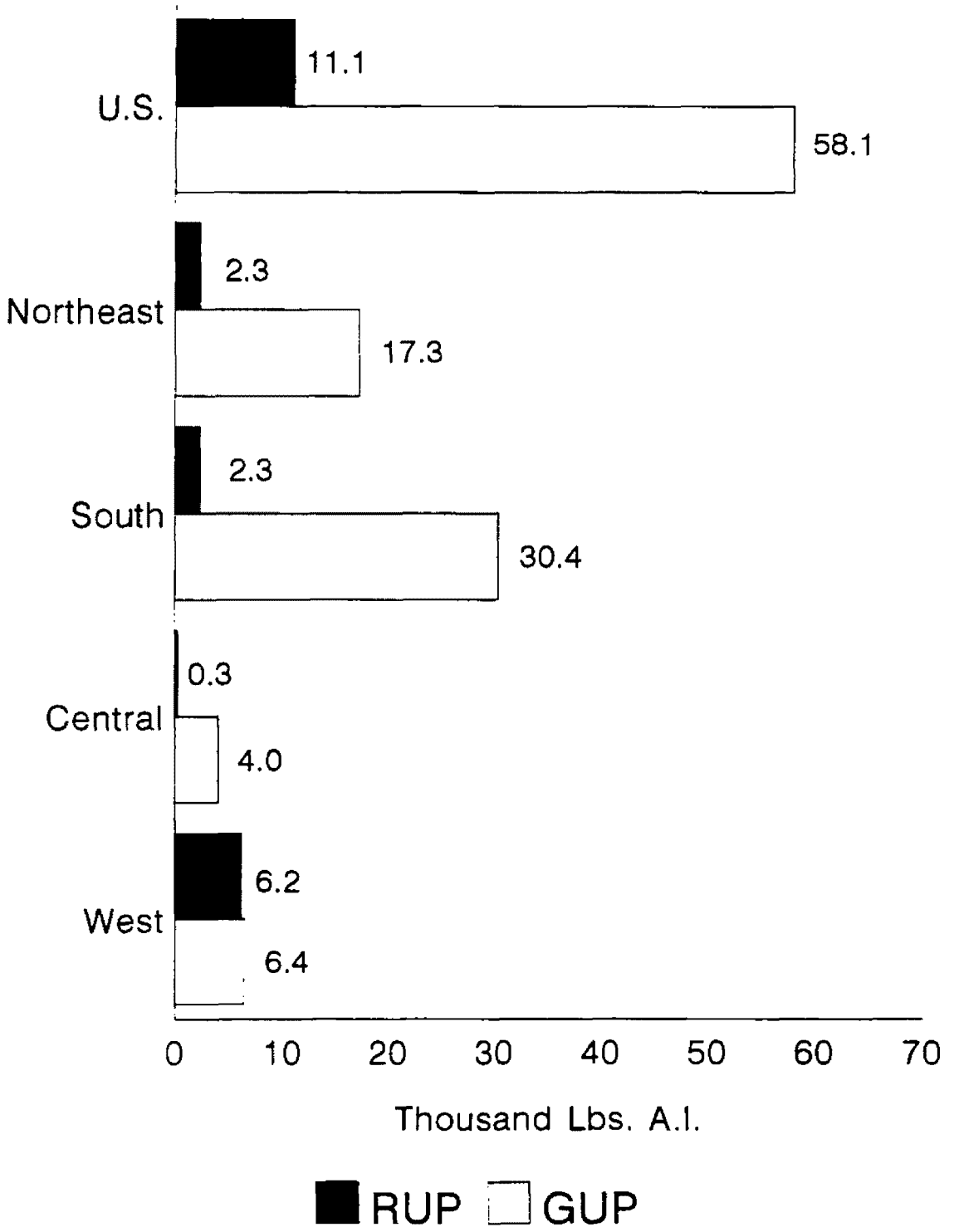
Table 16. C/CPAS Regional Pesticide Usage[1] by Pesticide Type and Restricted Versus General Use:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

		Total		Northeast		South		Central		West	
Pesticide Type	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
All Types	Total[3]	69,196	9,062	19,597	2,331	32,697	7,317	4,325	1,074	12,577	4,690
	Restricted Use	11,085	3,889	2,327	1,120	2,304	678	285	147	6,169	3,659
	General Use	58,112	7,894	17,270	1,927	30,393	7,436	4,040	1,021	6,408	1,505
Herbicide	Total	27,461	6,227	7,223	1,136	14,123	5,898	2,702	947	3,413	1,344
	Restricted Use	843	241	654	236	133	39	32	16	24	23
	General Use	26,618	6,212	6,569	1,060	13,990	5,899	2,670	937	3,389	1,340
Insecticide	Total	22,529	1,956	6,489	1,316	11,999	1,127	1,397	486	2,644	768
	Restricted Use	679	200	285	128	154	54	189	142	51	30
	General Use	21,850	1,908	6,204	1,299	11,845	1,104	1,208	356	2,593	779
Fungicide	Total	3,200	522	2,505	509	413	92	59	13	223	64
	Restricted Use	10	6	-[4]	-	4	4	2	2	4	3
	General Use	3,190	522	2,505	509	408	93	57	12	219	63
Fumigant	Total	4,912	1,447	1,855	1,199	2,014	679	47	33	996	439
	Restricted Use	4,275	1,335	1,288	1,071	1,976	664	47	33	963	438
	General Use	637	541	567	539	38	28	1	1	32	32
Other	Total	1,105	469	717	463	279	66	47	27	62	30
	Restricted Use	156	70	92	61	36	25	4	4	24	24
	General Use	949	464	625	458	243	66	43	25	38	15
Multi-Type	Total	9,989	5,118	809	398	3,869	3,530	72	39	5,239	3,684
	Restricted Use	5,121	3,612	8	8	0	0	12	11	5,102	3,612
	General Use	4,868	3,554	801	398	3,869	3,530	60	38	137	100

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located in the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way, aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Usage amounts of standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

Distribution of Non-agricultural Pesticide Usage in Pounds (000), U.S. 1993, by Restricted Versus General Use Products and C/CPAS Region: 1993 C/CPAS



Non-agricultural Pesticide Usage in Pounds per Capita
1993 U.S. Residential Population by C/CPAS Region: 1993 C/CPAS

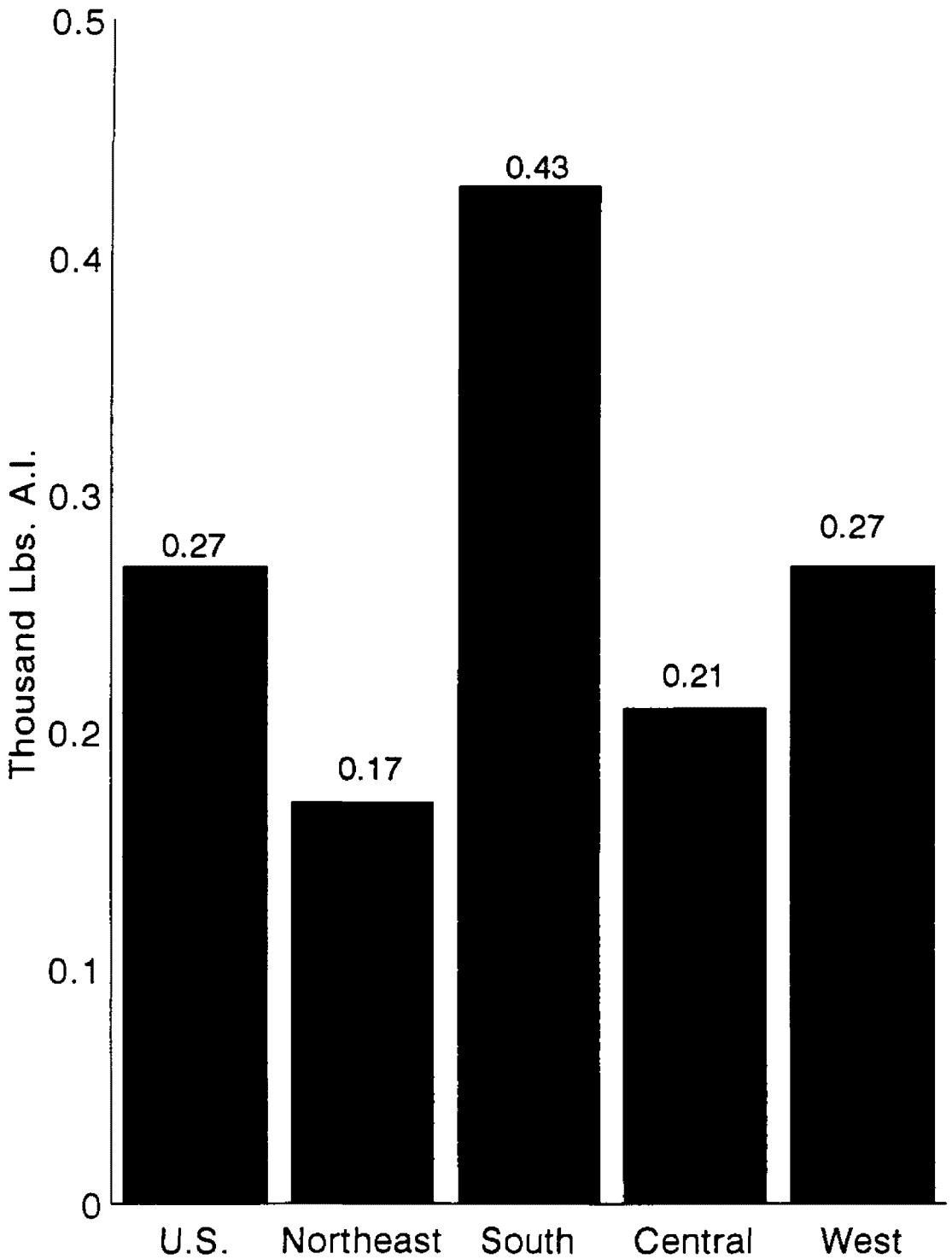


Table 17. C/CPAS Regional Pesticide Usage[1] by Pesticide Type and Active Ingredient:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Total[3]		Northeast		South		Central		West	
				Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Total	Total[4]			69,196	9,062	19,597	2,331	32,697	7,317	4,325	1,074	12,577	4,690
Herbicide	Total[4]			27,461	6,227	7,223	1,136	14,123	5,898	2,702	947	3,413	1,344
	GLYPHOSATE, SALT	5	103601	3,412	677	807	231	1,702	600	301	127	602	171
	2,4-D	6	030019	3,403	635	1,457	362	740	364	682	262	524	266
	DIURON		035505	2,339	1,331	174	52	1,415	1,252	490	431	261	132
	PENDIMETHALIN		108501	1,834	532	929	320	806	122	88	46	11	8
	PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN		031519	1,409	391	754	263	416	292	170	51	39	20
	TRICLOPYR	7	116004	1,140	342	297	325	137	76	102	57	104	48
	SIMAZINE		080807	887	534	51	28	799	532	2	1	35	26
	MCPA, DIMETHYLAMINE SALT		030516	480	153	293	119	16	13	160	95	12	10
	2,4-D	8 *	030019	411	150	358	147	30	22	5	5	18	18
	DISODIUM OCTABORATE TETRAHYDRATE		011103	364	142	162	57	53	20	2	*	148	128
	ORYZALIN		104201	354	80	51	13	129	59	69	40	104	34
	DICAMBA, DIMETHYLAMINE SALT		029802	343	70	140	47	68	33	74	26	62	29
	EPTAM, AMMONIUM		106701	253	107	31	8	50	37	160	99	11	11
	PICLORAM, SALT	9 *	005102	248	81	198	78	18	12	27	14	6	5
	PROPIAMINE		310201	145	67	60	40	27	12	5	3	53	52
	ACETIC ACID, (2,4-DICHLOROPHENOXY) , 2-B		030053	145	56	20	6	52	31	60	46	13	5
	ATRAZINE		032201	142	79	32	16	98	77			12	4
	IMAZAPYR, ISOPROPYLAMINE SALT		128829	128	56	45	32	29	15	12	10	42	42
	ENDOTHALL, DIPOTASSIUM SALT		038904	120	63	23	15	93	61	4	3	1	

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14 and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, NC.

[2]Includes turf and ornamental, right-of-way; aquatic, industrial, institutional, structural and health related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[5]Consists of Codes 103601, 103604.

[6]Consists of Codes 030001, 030019, 030035, 030063 (RUP).

[7]Consists of Codes 030001, 030019, 030035, 030063 (GUP).

[8]Consists of Codes 116002, 116004.

[9]Consists of Codes 005102, 005104 (RUP).

[10]Consists of Codes 005102, 005104 (GUP).

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>60).

Table 17. C/CPAS Regional Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

				Total[3]		Northeast		South		Central		West	
Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Herbicide (Continued)	BENEFLURALIN		081301	112	35	85	34	10	4	9	6	7	5
	PROPANOIC ACID, 2 (2,4 DICHLOROPHENOXY)		031453	89	46	15	5	30	16	44	33		
	TEBUTHIURON		105501	89	33	23	10	26	13	27	26	13	12
	SULFOMETURON METHYL		122001	73	28	7	4	25	20	7	5	34	18
	2 ETHYL 4 METHYLPENTYL 2,4 DICHLOROPHENO		030064	61	20	12	2	35	19	13	6	2	1
	TRIFLURALIN		036101	57	16	44	15	4	3	5	3	4	1
	SODIUM BENTAZON		103901	49	12	4	2	44	12	1	.		
	PROPANOIC ACID, 2 (2,4 DICHLOROPHENOXY)		031463	47	21	34	20	6	5	4	2	3	2
	PROPANOIC ACID, 2 (2,4 DICHLOROPHENOXY)		031419	45	17	36	16	5	5	4	2	0	0
	ATRAZINE	*	080803	41	15		.	41	15	0	0		
	PROMETON		080804	35	13	29	12	2	1	4	3	.	
	MECOPROP		031501	35	17	34	17			.		.	
	BENSULIDE		000801	34	13	16	9	12	9	4	2	1	1
	SIDURON		035509	30	18	30	18	0	0	0	0	.	
	DITHIOPYR		128994	29	10	18	6	9	8	3	1		
	PICLORAM, SALT	10	005102	28	12	15	8	4	3	8	8		
	OXADIAZON		109001	25	9	2	1	11	6			11	6
	BROMACIL LITHIUM SALT		012302	22	8	14	6	7	5	1	1	0	0
	DICHLOBENIL		027401	18	9	6	6	0	0	1		12	7
	ACETIC ACID, (2,4 DICHLOROPHENOXY) , COM		030016	17	5	11	5	1	1	3	2	2	2
	ISOXABEN		125851	13	5	3	2	9	5	.		1	
	Other RUPs[11]	*		142	68	97	67	44	9	.		.	

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, NC.
[2]Includes turf and ornamental; right of way; aquatic; industrial, institutional, structural and health related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[5]Consists of Codes 103601, 103604.
[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP).
[7]Consists of Codes 116002, 116004.
[8]Consists of Codes 03 0019, 030035, 030063 (RUP).
[9]Consists of Codes 005102, 005104 (RUP).
[10]Consists of Codes 005102, 005104 (GUP).
[11]Includes products th minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60).

Table 17. C/CPAS Regional Pesticide Usage[1] by Pesticide Type and Active Ingredient:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Total[3] Pounds AI (000)	Total[3] Standard Error (000)	Northeast Pounds AI (000)	Northeast Standard Error (000)	South Pounds AI (000)	South Standard Error (000)	Central Pounds AI (000)	Central Standard Error (000)	West Pounds AI (000)	West Standard Error (000)
Total	Total[4]			69,196	9,062	19,597	2,331	32,697	7,317	4,325	1,074	12,577	4,690
Herbicide	Total[4]			27,461	6,227	7,223	1,136	14,123	5,898	2,702	947	3,413	1,344
	GLYPHOSATE, SALT	5	103601	3,412	677	807	231	1,702	600	301	127	602	171
	2,4-D	6	030019	3,403	635	1,453	362	740	364	682	262	524	266
	DIURON		035505	2,339	1,331	174	52	1,415	1,252	490	431	261	132
	PENDIMETHALIN		108501	1,834	532	929	320	806	422	88	46	11	8
	PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN		031519	1,409	397	754	263	446	292	170	51	39	20
	TRICLOPYR	7	116004	1,130	342	293	325	137	76	102	57	104	48
	SIMAZINE		080807	887	544	51	28	799	532	2	1	35	26
	MCPA, DIMETHYLAMINE SALT		030516	480	153	293	119	16	13	160	95	12	10
	2,4-D	8 *	030019	411	150	358	147	30	22	5	5	18	18
	DISODIUM OCTABORATE TETRAHYDRATE		011103	364	142	162	57	53	20	2	*	148	128
	ORYZALIN		104201	354	80	51	13	129	59	69	40	104	34
	DICAMBA, DIMETHYLAMINE SALT		029802	343	70	140	47	68	33	74	26	62	29
	FOSAMINE AMMONIUM		106701	253	107	31	8	50	37	160	99	11	11
	PICLORAM, SALT	9 *	005102	248	81	198	78	18	12	27	14	6	5
	PRODIAMINE		110201	145	67	60	40	27	12	5	3	53	52
	ACETIC ACID, (2,4-DICHLOROPHENOXY) , 2-B		040053	145	56	20	6	52	31	60	46	13	5
	ATRAZINE		032201	142	79	32	16	98	77		.	12	4
	IMAZAPYR, ISOPROPYLAMINE SALT		128829	128	56	45	32	29	15	12	10	42	42
	ENDOTHALL, DIPOTASSIUM SALT		038904	120	63	23	15	93	61	4	3	1	.

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, NC.

[2]Includes turf and ornamental; right of way; aquatic; industrial, institutional, structural and health related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[5]Consists of Codes 103601, 103604.

[6]Consists of Codes 030001, 030019, 030035, 030063 (RUP).

[7]Consists of Codes 030004, 030019, 030035, 030063 (GUP).

[8]Consists of Codes 005102, 005104 (RUP).

[9]Consists of Codes 005102, 005104 (GUP).

[10]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>60).

Table 17. C/CPAS Regional Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name	AI Code	Total[3]		Northeast		South		Central		West	
			Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Insecticide (Continued)	DICHLORVOS	083001	17	5	7	4	6	3	3	3	.	
	PROPOXUR	047802	16	6	7	4	8	5	.		1	
	FLUVALINATE	109302	13	6	2	1	9	6	1	1	1	.
	OXYDEMETON METHYL *	058702	12	7	4	2	.			.	7	6
	FENVALERATE	109301	11	6	10	6	.		1	1		.
	Other RUPs[4] *		535	195	234	121	92	53	170	141	39	24
	Other GUPs[5]		2,389	653	535	119	1,316	566	135	68	403	297
Fungicide	Total[3]		3,200	522	2,505	509	413	92	59	13	223	64
	CHLOROTHALONIL	081901	1,017	182	788	174	144	35	20	5	65	15
	MANCOZEB	014504	369	93	237	85	107	35	4	2	21	10
	PENTACHLORONITROBENZENE	056502	175	31	148	28	5	3	3	1	19	11
	THIRAM	079801	143	69	141	69			1	1	0	0
	IPRODIONE	109801	139	24	101	20	25	11	1	1	12	7
	THIOPHANATE METHYL	102001	88	16	56	11	4	1	7	3	21	10
	FOSETYL-AL	123301	77	27	61	26	15	8	0	0	1 *	
	METALAXYL	113501	71	11	51	11	17	2	1		2	1
	VINCLOZOLIN	113201	66	19	56	18	8	7	1	1	1	1
	TRIADIMEFON	109901	63	16	55	16	5	2			2	2
	PROPAMOCARB HYDROCHLORIDE	119302	60	19	54	19	6	2	1		0	0
	CHLORONEB	027301	52	23	31	11			1	1	20	19
	ANILAZINE	080811	38	12	31	12	5	3	0	0	1	1

[4]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, NC

[2]Includes turf and ornamental; right of way; aquatic; industrial, institutional, structural and health related; and public health

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05

[5]Consists of Codes 103601, 103604

[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[7]Consists of Codes 116002, 116004

[8]Consists of Codes 030 019, 030035, 030063 (RUP)

[9]Consists of Codes 005102, 005104 (RUP)

[10]Consists of Codes 005102, 005104 (GUP)

[11]Includes products th minor use (< 10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60)

Table 17. C/CPAS Regional Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Total[3]		Northeast		South		Central		West	
				Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Fungicide (Continued)	PROPICONAZOLE		122101	28	6	26	6	1	.		.		.
	COPPER HYDROXIDE		023401	26	15	9	9	1	1			16	12
	SULFUR		077501	26	12	3	2	13	10	6	4	4	4
	BENOMYL		099101	16	6	14	6	2	1				
	FENARIMOL		206400	11	3	5	2	4	1			1	1
	Other RUPs[11]	*		10	6			4	4	2	2	4	3
	Other GUPs[11]			726	556	637	555	47	20	11	7	31	29
Fumigant	Total[3]			4,912	1,447	1,855	1,199	2,014	679	17	33	996	439
	METHYL BROMIDE	*	053201	2,711	1,156	1,254	1,055	863	366	40	30	554	296
	SULFURYL FLUORIDE	*	078003	1,513	579	6	4	1,099	518	0	0	408	258
	ALUMINUM PHOSPHIDE	*	066501	50	23	28	18	14	14	6	6	2	1
	Other RUPs[11]	*			.			0	0	0	0	0	0
	Other GUPs[11]			637	541	567	539	38	28	1	1	32	32
Other	Total[3]			1,105	469	717	463	279	66	47	27	62	30
	N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	52	14	18	5	32	14	1	1	1	
	COPPER TRIETHANOLAMINE COMPLEX		024403	47	21	11	5	29	20	2	1	5	3
	MERCUROUS CHLORIDE		052201	15	4	14	4					0	0
	METALDEHYDE		053001	13	7					0	0	13	7
	Other RUPs[11]	*		156	70	92	61	36	25	4	4	24	24
	Other GUPs[11]			821	463	581	459	181	59	39	26	19	9

*Restricted Use Pesticide (RUP). *Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.*
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]*Totals may differ from the sum of the entries because of rounding.*
[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[5]Consists of Codes 103601, 103604.
[6]Consists of Codes 030001, 030019, 030035, 030063 (RUP).
[7]Consists of Codes 030001, 030019, 030035, 030063 (GUP).
[8]Consists of Codes 005102, 005104 (RUP).
[9]Consists of Codes 116002, 116004.
[10]Consists of Codes 005102, 005104 (GUP).
[11]Includes products that were of minor use (< 10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 17. C/CPAS Regional Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

			Total[3]		Northeast		South		Central		West	
Pesticide Type	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Multi-Type	Total[3]		9,989	5,118	809	398	3,869	3,530	72	39	5,239	3,684
	PIPERONYL BUTOXIDE	067501	630	342	423	337	166	57	26	21	15	11
	Other RUPs[11]	*	5,121	3,612	8	8	0	0	12	11	5,102	3,612
	Other GUPs[11]		4,237	3,499	378	213	3,703	3,491	34	32	122	101

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, NC.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[5]Consists of Codes 103601, 103604
[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[7]Consists of Codes 116002, 116004
[8]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[9]Consists of Codes 005102, 005104 (RUP)
[10]Consists of Codes 005102, 005104 (GUP)
[11]Includes products that are minor use (< 10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60).

Table 18. Pesticide Usage[1] by Site Category and Indoors Versus Outdoors:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Indoors or Outdoors	Pounds AI Usage (000)	Standard Error (000)	Number of Observations
All Sites	Total[3]	69,188[4]	9,052	38,996
	Indoors	10,025	1,470	15,424
	Outdoors	59,164	8,970	23,572
Residential	Total	24,145	2,890	17,360
	Indoors	5,178	604	7,717
	Outdoors	18,967	2,698	9,643
Recreational	Total	10,649	3,559	4,200
	Indoors	219	204	169
	Outdoors	10,430	3,523	4,031
Sanitation/Utilities	Total	5,449	1,251	1,097
	Indoors	7	5	102
	Outdoors	5,442	1,251	995
Commercial Office/Retail	Total	10,099	3,844	11,955
	Indoors	1,978	621	5,698
	Outdoors	8,121	3,778	6,257
Commercial Wholesale/Manufacturing	Total	2,895	1,136	2,293
	Indoors	2,034	1,092	1,133
	Outdoors	861	210	1,160
Commercial Indeterminant[5]	Total	284	74	689
	Indoors	42	18	262
	Outdoors	243	66	427
Other[6]	Total	15,667	6,111	1,402
	Indoors	567	539	343
	Outdoors	15,100	6,088	1,059

Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[1] Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

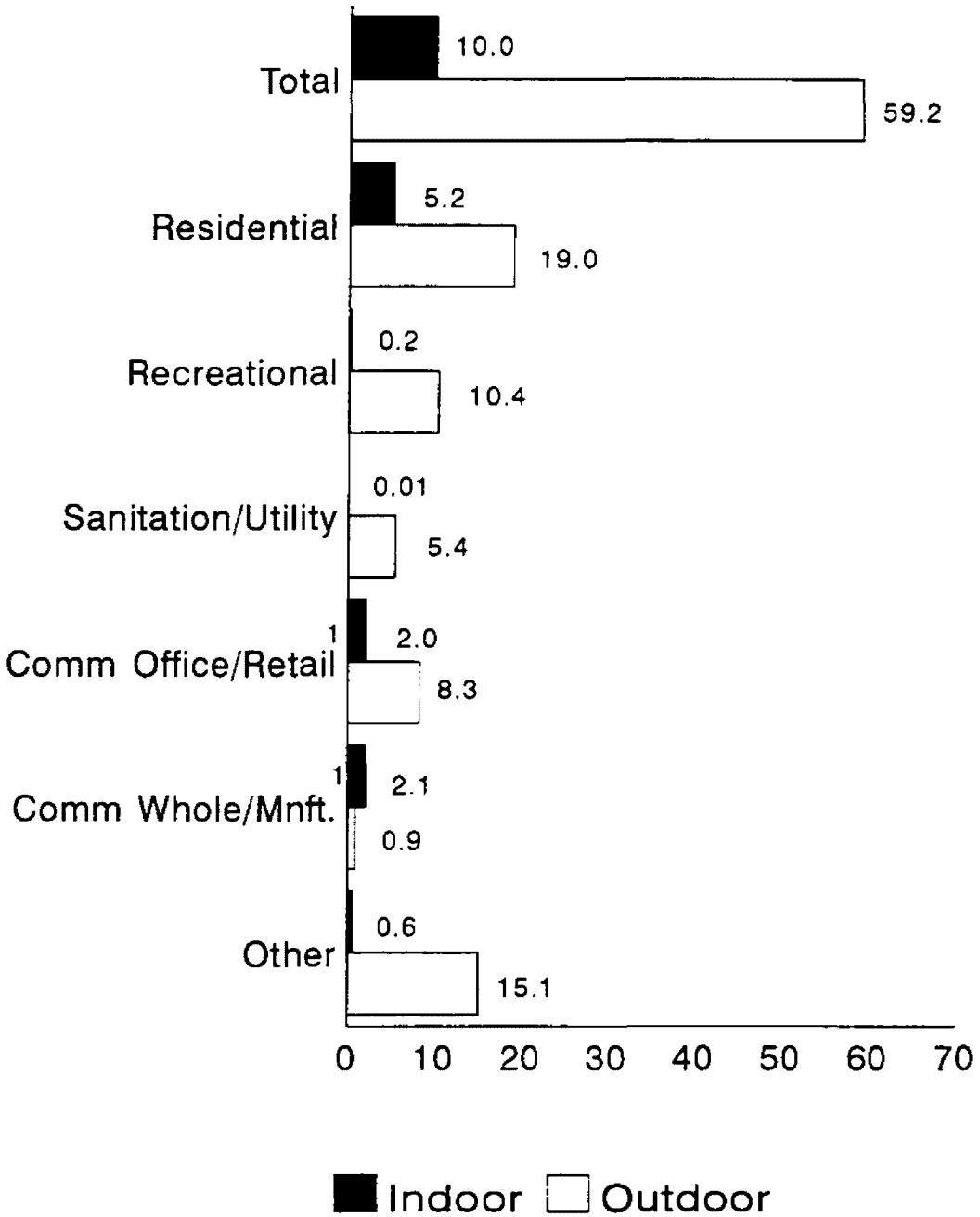
Totals may differ from the sum of the entries because of rounding.

[4] The total usage in this table is 8 thousand pounds less than the totals in Tables 10, 13, 14, 16, and 17 because some respondents were not able to allocate their usage to indoor versus outdoor.

[5] Some respondents were not able to allocate their commercial applications to the two more specific categories.

[6] A large fraction of this other site category is for the treatment of aquatic weeds in irrigation ditches or canals, general weed control around oil wells and on right-of- ways, and for broad area mosquito control.

Distribution of Non-agricultural Pesticide Usage in Pounds (000), U.S. 1993, by Site Category and Indoor/Outdoor Location: 1993 C/CPAS



1 "Commercial indeterminant" was prorated over the "commercial office/retail" and the "commercial wholesale/manufacturing" site categories.

Distribution of Non-agricultural Pesticide Usage in Pounds (000), U.S. 1993, by Indoor/Outdoor Location: 1993 C/CPAS

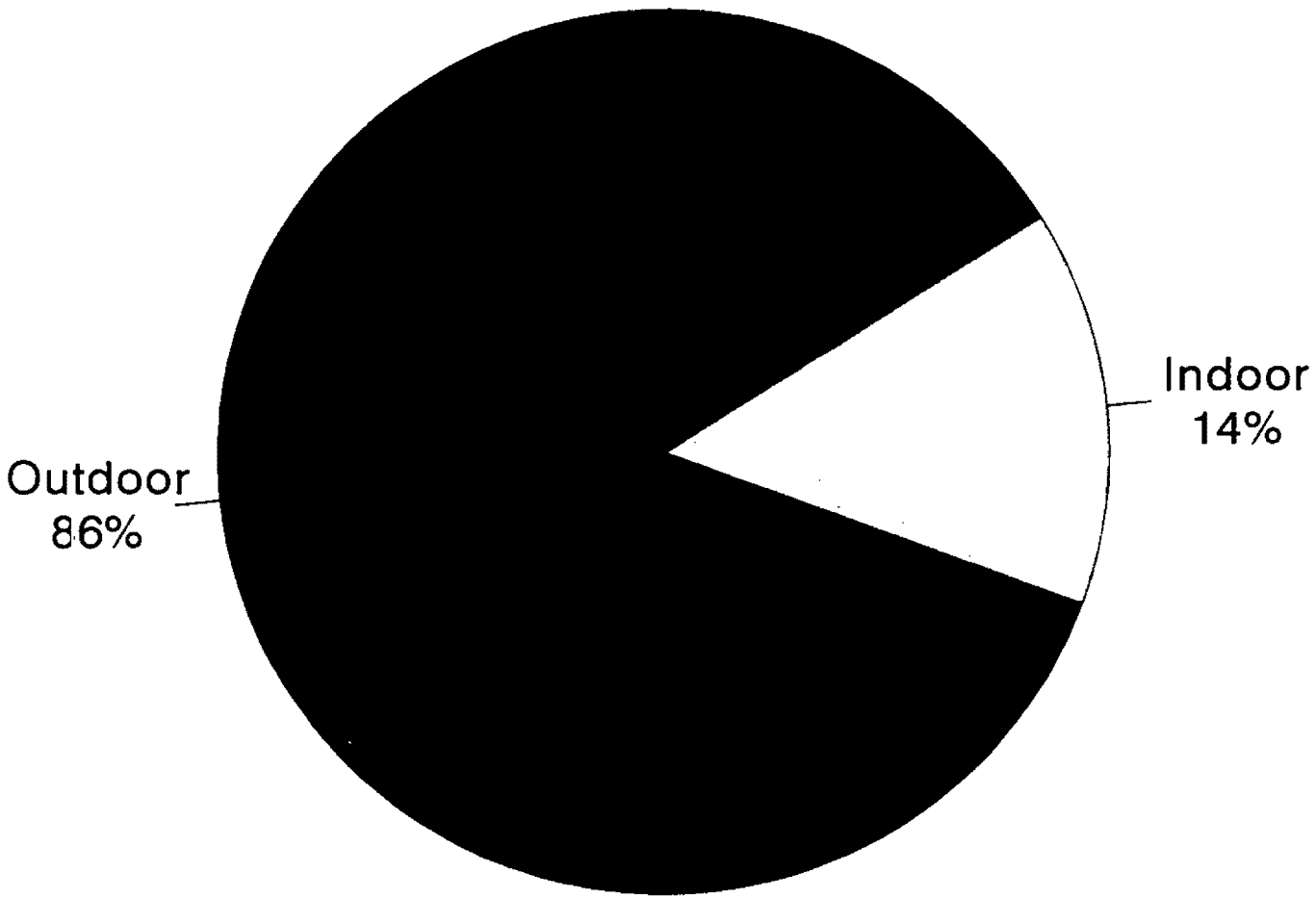


Table 19. Indoors and Outdoors Pesticide Usage[1] by Pesticide Type, and Site Category:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Site Category	Total		Indoor		Outdoor	
		Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
All Types	All Sites[3]	69.188[4]	9.052	10.025	1.470	59.164	8.970
	Residential	24.145	2.890	5.178	604	18.967	2.698
	Recreational	10.649	3.559	219	204	10.430	3.523
	Sanitation/Utilities	5.449	1.251	7	5	5.442	1.251
	Commercial Office/Retail	10.099	3.844	1.978	621	8.121	3.778
	Commercial Wholesale/Manufacturing	2.895	1.136	2.034	1.092	861	210
	Commercial Indeterminant[5]	284	74	42	18	243	66
	Other	15.667	6.111	567	539	15.100	6.088
Herbicide	All Sites	27.558	6.228	286	94	27.273	6.230
	Residential	6.738	1.790	256	88	6.482	1.793
	Recreational	2.124	351	0	0	2.124	351
	Sanitation/Utilities	4.459	1.152	[7]	[7]	4.458	1.152
	Commercial Office/Retail	4.065	1.624	16	7	4.049	1.624
	Commercial Wholesale/Manufacturing	501	151	2	2	499	151
	Commercial Indeterminant[5]	120	33	3	2	117	33
	Other[6]	9.552	5.292	9	5	9.543	5.292
Insecticide	All Sites	22.339	1.929	4.952	566	17.387	1.821
	Residential	15.182	1.838	3.742	411	11.439	1.809
	Recreational	1.563	456	7	4	1.556	456
	Sanitation/Utilities	467	298	7	5	460	298
	Commercial Office/Retail	2.247	289	945	195	1.302	185
	Commercial Wholesale/Manufacturing	493	180	206	91	287	127
	Commercial Indeterminant	127	56	32	15	94	50
	Other[6]	2.260	1.059	12	6	2.248	1.060

[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (See Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Total may differ from the sum of the entries because of rounding.

[4]The total usage in this table is 8 thousand pounds less than the totals in Tables 10, 13, 14, 16, and 17 because some respondents were not able to allocate their usage to indoor versus outdoor.

[5]Some respondents were not able to allocate their commercial usage to the two or more specific categories.

[6]Most of this estimate is for general weed control around oil wells or on right-of-ways.

[7]Most of this estimate is for broad area mosquito control.

[7]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 19. Indoors and Outdoors Pesticide Usage[1] by Pesticide Type, and Site Category (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Site Category	Total		Indoor		Outdoor	
		Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Fungicide	All Sites	3,278	526	135	112	3,140	448
	Residential	302	52	7	4	296	52
	Recreational	2,782	514	115	111	2,667	433
	Sanitation/Utilities	33	30	-	-	33	30
	Commercial Office/Retail	75	25	-	-	74	25
	Commercial Wholesale/Manufacturing	36	30	15	15	20	15
	Commercial Indeterminant	1	-	-	-	1	-
	Other	50	43	1	1	48	43
Fumigant	All Sites	4,913	1,447	4,392	1,373	521	243
	Residential	1,281	408	1,122	338	159	89
	Recreational	45	34	3	2	42	32
	Sanitation/Utilities	63	36	0	0	63	36
	Commercial Office/Retail	1,001	598	973	597	28	13
	Commercial Wholesale/Manufacturing	1,772	1,094	1,748	1,079	25	17
	Commercial Indeterminant	3	2	3	2	-	-
	Other	747	576	543	539	203	203
Other	All Sites	1,112	469	158	95	954	379
	Residential	80	35	19	5	61	34
	Recreational	639	467	94	94	545	374
	Sanitation/Utilities	183	76	-	-	183	76
	Commercial Office/Retail	64	28	20	4	44	28
	Commercial Wholesale/Manufacturing	45	14	22	12	23	6
	Commercial Indeterminant	33	23	2	2	31	23
	Other	68	50	1	-	67	50
Multi-Type	All Sites	9,988	5,118	99	23	9,889	5,112
	Residential	562	296	32	7	530	296

[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (See Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental, right-of-way; aquatic, industrial, institutional, structural and health-related; and public health.

[3]Total may differ from the sum of the entries because of rounding

[4]The total usage in this table is 8 thousand pounds less than the totals in Tables 10, 13, 14, 16, and 17 because some respondents were not able to allocate their usage to indoor versus outdoor.

[5]Some respondents were not able to allocate their commercial usage to the two or more specific categories.

[6]Most of this estimate is for general weed control around oil wells or on right-of-ways.

[7]Most of this estimate is for broad area mosquito control.

[8]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 19. Indoors and Outdoors Pesticide Usage[1] by Pesticide Type, and Site Category (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Site Category	Total		Indoor		Outdoor	
		Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Multi-Type (Continued)	Recreational	3,496	2,976	-	-	3,496	2,976
	Sanitation/Utilities	243	179	-	-	243	179
	Commercial Office/Retail	2,648	2,433	24	4	2,624	2,433
	Commercial Wholesale/Manufacturing	48	26	41	21	6	5
	Commercial Indeterminant	1	-	1	-	-	-
	Other	2,991	2,758	1	-	2,990	2,758

[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (See Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Total may differ from the sum of the entries because of rounding.

[4]The total usage in this table is 8 thousand pounds less than the totals in Tables 10, 13, 14, 16, and 17 because some respondents were not able to allocate their usage to indoor versus outdoor.

[5]Some respondents were not able to allocate their commercial usage to the two or more specific categories.

[6]Most of this estimate is for general weed control around oil wells or on right-of-ways.

[7]Most of this estimate is for broad area mosquito control.

[8]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

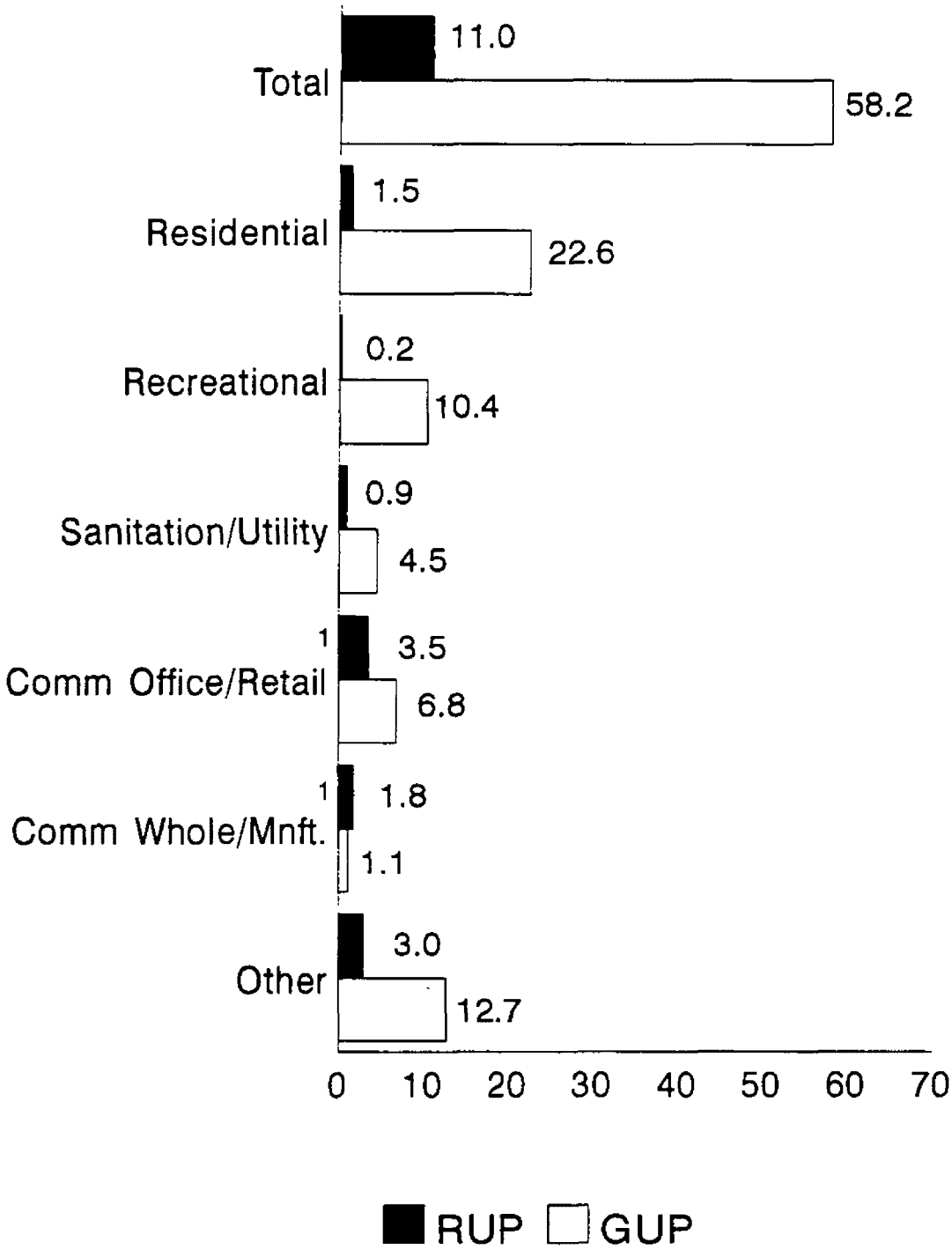
Table 20. Indoors and Outdoors Pesticide Usage[1] by Site Category and Restricted Versus General Use:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Restricted or General Use	Total[3] Estimate	Total[3] Standard Error	Indoor Estimate	Indoor Standard Error	Outdoor Estimate	Outdoor Standard Error
All Sites	Total[3]	69,188[4]	9,052	10,025	1,470	59,164	8,970
	Restricted Use	10,957	3,886	3,952	1,265	7,004	3,656
	General Use	58,232	7,888	6,072	807	52,160	7,780
Residential	Total	24,145	2,890	5,178	604	18,967	2,698
	Restricted Use	1,496	428	1,196	343	299	102
	General Use	22,649	2,854	3,982	446	18,667	2,698
Recreational	Total	10,649	3,559	219	204	10,430	3,523
	Restricted Use	242	113	3	2	239	113
	General Use	10,407	3,549	216	204	10,191	3,511
Sanitation/Utilities	Total	5,449	1,251	7	5	5,442	1,251
	Restricted Use	918	285	.[5]	-	918	285
	General Use	4,530	1,100	7	5	4,523	1,100
Commercial Office/Retail	Total	10,099	3,844	1,978	621	8,121	3,778
	Restricted Use	3,520	2,500	992	597	2,529	2,427
	General Use	6,579	1,704	986	198	5,593	1,663
Commercial Wholesale/Manufacturing	Total	2,895	1,136	2,034	1,092	861	210
	Restricted Use	1,797	1,094	1,753	1,079	44	21
	General Use	1,098	265	281	122	817	209
Commercial Indeterminant[6]	Total	284	74	42	18	243	66
	Restricted Use	29	12	4	2	26	11
	General Use	255	67	38	18	217	59
Other	Total	15,667	6,111	567	539	15,100	6,088
	Restricted Use	2,954	2,665	5	4	2,950	2,665
	General Use	12,713	5,442	562	539	12,151	5,416

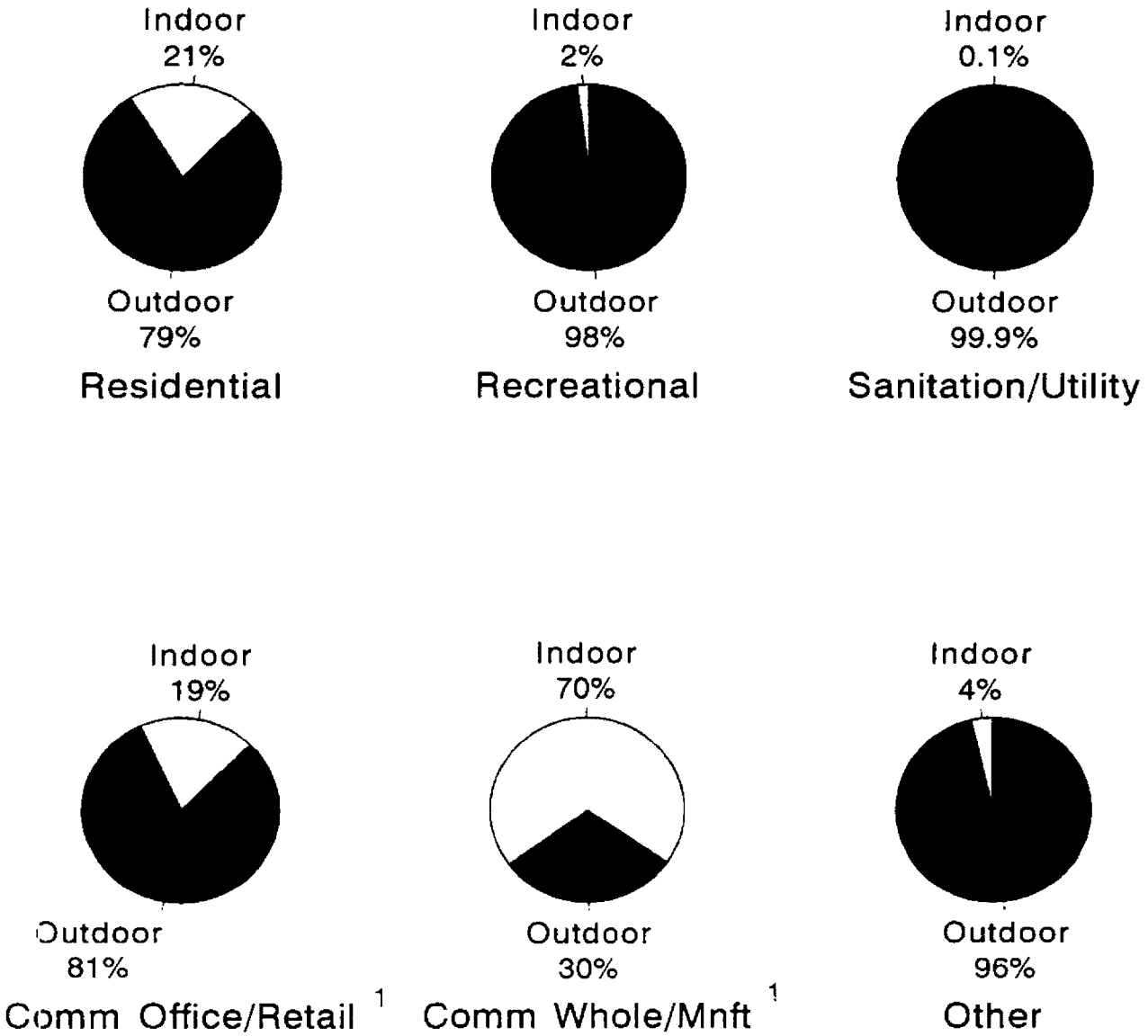
[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]The total usage in this table is 8 thousand pounds less than the totals in tables 10, 13, 14, 16, and 17 because some respondents were not able to allocate their usage to indoor versus outdoor.
[5]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.
[6]Some respondents were not able to allocate their commercial usage to the two more specific categories.

Distribution of Non-agricultural Pesticide Usage in Pounds (000), U.S. 1993, by Site Category and Restricted Versus General Use Product: 1993 C/CPAS



1 "Commercial indeterminant" was prorated over the "commercial office/retail" and the "commercial wholesale/manufacturing" site categories.

Distribution of Non-agricultural Pesticide Usage in Pounds (000), U.S. 1993, by Site Category and Indoor/Outdoor Location: 1993 C/CPAS



1 "Commercial indeterminant" was prorated over the "commercial office/retail" and the "commercial wholesale/manufacturing" site categories.

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient:

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

				Total[3]		Indoor		Outdoor	
Site Category	Type of Pest	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Residential	Insects & Other Invertebrates	CHLORPYRIFOS	059101	6,396	930	1,619	321	4,777	898
		PERMETHRIN, MIXED CIS,TRANS	109701	2,230	804	560	206	1,670	928
		MALATHION	057701	1,890	954	3	3	1,887	954
		CYPERMETHRIN	109702	1,154	535	560	314	594	388
		DIAZINON	057801	865	165	149	71	716	139
		SULFURYL FLUORIDE	• 078003	707	297	628	248	78	66
		METHYL BROMIDE	• 053201	571	243	493	196	78	53
		PIPERONYL BUTOXIDE	067501	340	237	32	7	308	237
		CARBARYL	056801	268	112	1	1	267	112
		BENDIOCARB	105201	261	144	231	143	30	17
		DISODIUM OCTABORATE TETRAHYDRATE	011103	235	102	202	79	33	24
		BORIC ACID	011001	227	83	207	70	21	15
		TRICHLORFON	057901	141	44	0	0	141	44
		ISOFENPHOS	109401	82	31	0	0	82	31
		ACEPHATE	103301	76	10	31	8	46	5
		PROPETAMPHOS	• 113601	66	14	63	14	3	1
		POTASSIUM SOAPS OF FATTY ACIDS	079021	56	36	.	.	56	36
		DICOFOL	010501	35	16	0	0	35	16
		LAMBDA CYHALOTHRIN	128897	33	18	11	5	22	13
		ISAZOFOS	• 126901	21	7	.		20	7

[1]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[2]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.
[3]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[4]Totals may differ from the sum of the entries because of rounding.
[5]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[6]Consists of Codes 103601, 103604
[7]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[8]Consists of Codes 116002, 116004
[9]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[10]Consists of Codes 005102, 005104 (RUP)
[11]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Active Ingredient (AI) Name		AI Code	Total[3] Pounds AI (000)	Total[3] Standard Error (000)	Indoor Pounds AI (000)	Indoor Standard Error (000)	Outdoor Pounds AI (000)	Outdoor Standard Error (000)
Residential (Continued)	Insects & Other Invertebrates (Continued)	SILICA GEL		072602	19	4	16	4	3	1
		OXYDEMETON METHYL	*	058702	11	7	0	0	11	7
		N OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	11	3	10	2	1	1
		FLUVALINATE		109302	9	5	.	.	9	5
		PROPOXUR		047802	9	4	6	3	3	1
		METALDEHYDE		053001	9	5	0	0	9	5
		2,4 D	6	030019	8	6	0	0	8	6
		FONOFOS		041701	8	3	0	0	8	3
		PYRETHRINS		069001	7	2	5	1	2	1
		ESFENVALERATE		109303	7	4	6	4	1	.
		DICHLORVOS		084001	6	2	3	1	3	2
	Plants/Weeds	2,4 D	6	030019	1,707	623	0	0	1,707	623
		PENDIMETHALIN		108501	1,200	404	0	0	1,200	404
		PROPANOIC ACID, 2 (4 CHLORO 2 METHYLPHEN		031519	1,059	389	0	0	1,059	389
		MCPA, DIMETHYLAMINE SALT		030516	411	131	0	0	411	131
		GLYPHOSATE, SALT	5	103601	393	92	0	0	393	92
		DICAMBA, DIMETHYLAMINE SALT		029802	188	57	0	0	188	57
		PRODIAMINE		110201	104	58	0	0	104	58
		SIMAZINE		080807	81	40	0	0	81	40
		BENEFLURALIN		084301	79	31	.	.	79	31

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[5]Consists of Codes 103601, 103604

[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[7]Consists of Codes 116002, 116004

[8]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[9]Consists of Codes 005102, 005104 (RUP)

[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Active Ingredient (AI) Name	AI Code	Total[3] Pounds AI (000)	Total[3] Standard Error (000)	Indoor Pounds AI (000)	Indoor Standard Error (000)	Outdoor Pounds AI (000)	Outdoor Standard Error (000)
Residential (Continued)	Plants/Weeds (Continued)	TRICLOPYR /	116004	79	23	0	0	79	23
		PROPANOIC ACID, 2 (2,4 DICHLOROPHENOXY)	031453	64	44	0	0	64	44
		ACETIC ACID, (2,4 DICHLOROPHENOXY) , 2-B	030053	59	43	0	0	59	43
		ORYZALIN	104201	49	16		-	49	16
		CHLORPYRIFOS	059101	37	21	-	-	37	21
		PROPANOIC ACID, 2 (2,4 DICHLOROPHENOXY)	031419	35	15	0	0	35	15
		TRIFLURALIN	036101	34	14	-	-	34	14
		PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)	031463	32	20	0	0	32	20
		2-ETHYL 4-METHYLPENTYL 2,4 DICHLOROPHENO	030064	30	16	0	0	30	16
		MECOPROP	031501	26	15	0	0	26	15
		ATRAZINE *	080803	25	9	0	0	25	9
		POTASSIUM SOAPS OF FATTY ACIDS	079021	23	16	0	0	23	16
		IMAZAPYR, ISOPROPYLAMINE SALT	128829	20	20	0	0	20	20
		DIURON	035505	13	12	0	0	13	12
		SODIUM BENTAZON	103901	10	4	0	0	10	4
		SIDURON	035509	10	6	0	0	10	6
		BENSULIDE	000801	8	6	0	0	8	6
		TRIADIMEFON	109901	8	8		-	8	8
		ENDOTHALL, DIPOTASSIUM SALT	038904	8	8	0	0	8	8
		OXADIAZON	109001	7	6	0	0	7	6

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4 D and picloram.
[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05
[5]Consists of Codes 103601, 103604
[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[7]Consists of Codes 116002, 116004
[8]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[9]Consists of Codes 005102, 005104 (RUP)
[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

				Total[3]		Indoor		Outdoor	
Site Category	Type of Pest	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Residential (Continued)	Plants/Weeds (Continued)	ACETIC ACID, (2,4-DICHLOROPHENOXY), COM	030016	5	3	0	0	5	3
		ISOXABEN	125851	5	4		.	5	4
		SULFUR	077501	5	3	0	0	5	3
		DITHIOPYR	128994	5	3	0	0	5	3
	Plant Disease/Organisms	CHLOROTHALONIL	081901	83	27	0	0	83	27
		DISODIUM OCTABORATE TETRAHYDRATE	011103	71	48	44	37	27	25
		MANCOZEB	014504	32	11	0	0	32	11
		COPPER HYDROXIDE	023403	25	15	0	0	25	15
		THIOPHANATE METHYL	102001	23	9	0	0	23	9
		IPRODIONE	109801	17	7	0	0	17	7
		PENDIMETHALIN	108501	15	12	0	0	15	12
		TRIADIMEFON	109901	8	4	0	0	8	4
		PENTACHLORONITROBENZENE	056502	7	3	0	0	7	3
		ANILAZINE	080811	6	6	0	0	6	6
	Aquatic Pests	ATRAZINE	032201	7	5	0	0	7	5
		ENDOTHALL, DIPOTASSIUM SALT	038904	5	4	0	0	5	4
	Other Wood Destroying Pests	DISODIUM OCTABORATE TETRAHYDRATE	011103	13	13	6	6	6	6
	Not Classified/Missing/Other	CHLORPYRIFOS	059101	12	9	11	9		
Recreational	Insects & Other Invertebrates	MALATHION	057701	471	319	.		471	319
		TRICHLORFON	057901	180	59	0	0	180	59

[1]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.

[2]Includes turf and ornamental; right-of way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[5]Consists of Codes 103601, 103604

[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[7]Consists of Codes 116002, 116004

[8]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[9]Consists of Codes 005102, 005104 (RUP)

[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Active Ingredient (AI) Name		AI Code	Total[3] Pounds AI (000)	Total[3] Standard Error (000)	Indoor Pounds AI (000)	Indoor Standard Error (000)	Outdoor Pounds AI (000)	Outdoor Standard Error (000)
Recreational (Continued)	Insects & Other Invertebrates (Continued)	PIPERONYL BUTOXIDE		067501	123	101	-	-	123	101
		TONOFOS		041701	117	80	0	0	117	80
		CHLORPYRIFOS		059101	82	17	3	2	80	16
		CARBARYL		056801	54	13	0	0	54	13
		ACEPHATE		103301	52	18	-	-	52	18
		BENDIOCARB		105201	43	33	-		43	33
		ISOFENPHOS		109401	26	12	0	0	26	12
		DIAZINON		057801	11	4	-	-	11	4
		ISAZOFOS	*	126901	10	4	0	0	10	4
		PERMETHRIN, MIXED CIS,TRANS		109701	5	4	-	-	5	4
		MANCOZEB		014504	5	5	0	0	5	5
	Plants/Weeds	GLYPHOSATE, SALT	5	103601	478	115	0	0	478	115
		2,4-D	6	030019	357	78	0	0	357	78
		PENDIMETHALIN		108501	203	116	0	0	203	116
		PROPANOIC ACID, 2 (4 CHLORO-2-METHYLPHEN		031519	148	34	0	0	148	34
		ORYZALIN		104201	105	39	0	0	105	39
		SIMAZINE		080807	71	21	0	0	71	21
		ATRAZINE		032201	67	59	0	0	67	59
		ENDOTHALL, DIPOTASSIUM SALT		038904	56	40	0	0	56	40
		ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 2 B		030053	41	30	0	0	41	30

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related, and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[5]Consists of Codes 103601, 103604
[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[7]Consists of Codes 116002, 116004
[8]Consists of Co 30001, 030019, 030035, 030063 (RUP)
[9]Consists of Codes 005102, 005104 (RUP)
[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Active Ingredient (AI) Name		AI Code	Total[3] Pounds AI (000)	Total[3] Standard Error (000)	Indoor Pounds AI (000)	Indoor Standard Error (000)	Outdoor Pounds AI (000)	Outdoor Standard Error (000)
Recreational (Continued)	Plants/Weeds (Continued)	TRICLOPYR	7	116004	36	16	0	0	36	16
		SODIUM BENTAZON		103901	34	13	0	0	34	13
		DICAMBA, DIMETHYLAMINE SALT		029802	26	6	0	0	26	6
		TRICHLORFON		057901	23	23	0	0	23	23
		BENSULIDE		009801	22	10	0	0	22	10
		SIDURON		035509	20	16	0	0	20	16
		PRODIAMINE		110201	18	10	0	0	18	10
		BENEFLURALIN		084301	15	6	0	0	15	6
		2-ETHYL-4-METHYLPENTYL 2,4-DICHLOROPHENO		030064	15	6	0	0	15	6
		OXADIAZON		109001	13	6	0	0	13	6
		DITHIOPYR		128994	13	4	0	0	13	4
		DIURON		035505	12	11	0	0	12	11
		SULFUR		077501	9	9	0	0	9	9
		IMAZAPYR, ISOPROPYLAMINE SALT		128829	9	5	0	0	9	5
		PICLORAM, SALT	10	005102	7	7	0	0	7	7
		PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)		031463	6	3	0	0	6	3
		CHLOROTHALONIL		081901	6	3	0	0	6	3
		TRIFLURALIN		036101	5	2	0	0	5	2
		COPPER TRIETHANOLAMINE COMPLEX		024403	5	5	0	0	5	5
	Plant Disease/Organisms	CHLOROTHALONIL		081901	897	180	4	4	893	180

[1]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health
[3]Totals may differ from the sum of the entries because of rounding.
[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[5]Consists of Codes 103601, 103604
[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[7]Consists of Codes 116002, 116004
[8]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[9]Consists of Codes 005102, 005104 (RUP)
[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

				Total[3]		Indoor		Outdoor	
Site Category	Type of Pest	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Recreational (Continued)	Plant Disease/Organisms (Continued)	MANCOZEB	014504	290	91	0	0	290	91
		PENTACHLORONITROBENZENE	056502	164	31	0	0	164	31
		IPRODIONE	109801	106	20	0	0	106	20
		THIRAM	079801	105	61	0	0	105	61
		FOSETYL AL	123301	73	27	0	0	73	27
		METALAXYL	113501	65	11	0	0	65	11
		THIOPHANATE-METHYL	102001	61	15	0	0	61	15
		VINCLOZOLIN	113203	60	19	0	0	60	19
		PROPAMOCARB HYDROCHLORIDE	119302	59	19	0	0	59	19
		CHLORONEB	027301	51	22	0	0	51	22
		ANILAZINE	080811	35	11	0	0	35	11
		TRIADIMEFON	109901	34	8	0	0	34	8
		PROPICONAZOLE	122103	24	5	0	0	24	5
		MERCUROUS CHLORIDE	052201	15	4	0	0	15	4
		BENOMYL	099101	14	6	0	0	14	6
		FENARIMOL	206600	10	4	0	0	10	4
	Vertebrates	ACEPHATE	103301	148	148	0	0	148	148
		CHLORPYRIFOS	059101	31	29	0	0	31	29
		FONOFOS	041701	10	10	0	0	10	10
	Aquatic Pests	MANCOZEB	014504	37	15	0	0	37	15

[1]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[5]Consists of Codes 103601, 103604
[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[7]Consists of Codes 116002, 116004
[8]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[9]Consists of Codes 005102, 005104 (RUP)
[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

					Total[3]		Indoor		Outdoor	
Site Category	Type of Pest	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Recreational (Continued)	Aquatic Pests (Continued)	COPPER TRIETHANOLAMINE COMPLEX		024403	29	16	0	0	29	16
		ENDOTHALL, DIPOTASSIUM SALT		038904	24	15	0	0	24	15
		ATRAZINE		032201	19	10	0	0	19	10
		SIMAZINE		080807	5	5	0	0	5	5
	Micro Organisms	METHYL BROMIDE	*	053201	12	11	0	0	12	11
	Not Classified/Missing/Other	THIRAM		079801	34	34	0	0	34	34
		CHLOROTHALONIL		081901	22	22	0	0	22	22
		TRIADIMEFON		109901	9	9	0	0	9	9
Sanitation/Utilities	Insects & Other Invertebrates	MALATHION		057701	291	290	0	0	291	290
		BORIC ACID		011001	5	5	5	5		
	Plants/Weeds	TRICLOPYR	7	116001	909	328	0	0	909	328
		GLYPHOSATE, SALT	5	103601	680	163	0	0	680	163
		DIURON		035505	614	434	0	0	614	434
		2,4-D	6	030019	597	267	0	0	597	267
		2,4-D	8 *	030019	377	148	0	0	377	148
		FOSAMINE AMMONIUM		106701	235	109	0	0	235	109
		PICLORAM, SALT	9 *	005102	216	79	0	0	216	79
		ORYZALIN		104201	85	49	0	0	85	49
		DICAMBA, DIMETHYLAMINE SALT		029802	65	30	0	0	65	30
		TEBUTHIURON		105501	61	28	0	0	61	28

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[5]Consists of Codes 103601, 103604

[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[7]Consists of Codes 116002, 116004

[8]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[9]Consists of Codes 005102, 005104 (RUP)

[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Active Ingredient (AI) Name		AI Code	Total[3] Pounds AI (000)	Total[3] Standard Error (000)	Indoor Pounds AI (000)	Indoor Standard Error (000)	Outdoor Pounds AI (000)	Outdoor Standard Error (000)
Sanitation/Utilities (Continued)	Plants/Weeds (Continued)	SIMAZINE		080807	33	25	0	0	33	25
		IMAZAPYR, ISOPROPYLAMINE SALT		128829	19	8	0	0	19	8
		PICLORAM, SALT	10	005102	18	9	0	0	18	9
		ACETIC ACID, (2,4 DICHLOROPHENOXY)-, 2-B		030053	18	10	0	0	18	10
		BROMACIL, LITHIUM SALT		012302	16	7	0	0	16	7
		PROMETON		080804	12	6	0	0	12	6
		SULFOMETURON METHYL		122001	10	6	0	0	10	6
		PENDIMETHALIN		108501	9	7	0	0	9	7
		PROPANOIC ACID, 2-(4-CHLORO 2 METHYLPHEN		031519	7	5	0	0	7	5
		2 ETHYL 4-METHYLPENTYL 2,4 DICHLOROPHENO		030064	5	1	0	0	5	1
	Aquatic Pests	GLYPHOSATE, SALT	5	103601	21	19	0	0	21	19
		ATRAZINE		032201	9	5	0	0	9	5
Commercial Office/Retail	Insects & Other Invertebrates	CHLORPYRIFOS		059101	884	149	357	113	527	91
		SULFURYL FLUORIDE	*	078003	783	590	778	590	4	3
		MALATHION		057701	229	126	1	1	228	126
		METHYL BROMIDE	*	053201	209	124	195	117	14	9
		BORIC ACID		011001	168	103	161	98	6	5
		CYPERMETHRIN		109702	129	59	35	13	95	56
		ACEPHATE		103301	120	58	95	57	25	9
		DIAZINON		057801	120	30	20	10	100	26

[1]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health
[3]Totals may differ from the sum of the entries because of rounding.
[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[5]Consists of Codes 103601, 103604
[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[7]Consists of Codes 116002, 116004
[8]Consists of Co 001, 030019, 030035, 030063 (RUP)
[9]Consists of Codes 005102, 005104 (RUP)
[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Active Ingredient (AI) Name		AI Code	Total[3] Pounds AI (000)	Total[3] Standard Error (000)	Indoor Pounds AI (000)	Indoor Standard Error (000)	Outdoor Pounds AI (000)	Outdoor Standard Error (000)
Commercial Office/Retail (Continued)	Insects & Other Invertebrates (Continued)	PERMETHRIN, MIXED CIS,TRANS		109701	111	42	58	26	53	23
		BENDIOCARB		105201	66	28	61	28	5	3
		CARBARYL		056801	46	15			46	15
		DISODIUM OCTABORATE TETRAHYDRATE		011103	37	32	11	7	26	26
		TRICHLORFON		057901	31	14	0	0	31	14
		PIPERONYL BUTOXIDE		067501	26	4	24	4	2	1
		ISOFENPHOS		109401	19	8	0	0	19	8
		N OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	19	4	19	4	.	.
		PROPETAMPHOS	*	113601	19	5	17	5	1	1
		POTASSIUM SOAPS OF FATTY ACIDS		079021	13	7	9	7	4	1
		SILICA GEL		072602	10	3	9	1	1	.
		ISAZOFOS	*	126901	9	4	0	0	9	4
		LAMBDA-CYHALOTHRIN		128897	9	6	5	3	4	4
		PYRETHRINS		069001	7	1	7	1	.	.
	Plants/Weeds	SIMAZINE		080807	501	470	0	0	501	470
		PENDIMETHALIN		108501	398	187	0	0	398	187
		GLYPHOSATE, SALT	5	103601	382	73			382	73
		2,4 D	6	030019	318	78	2	2	316	78
		PROPANOIC ACID, 2 (4 CHLORO 2 METHYLPHEN		031519	181	40	2	2	179	40
		MCPA, DIMETHYLAMINE SALT		030516	65	27	0	0	65	27

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.

[2]Includes turf and ornamental; right of way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[5]Consists of Codes 103601, 103604

[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[7]Consists of Codes 116002, 116004

[8]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[9]Consists of Codes 005102, 005104 (RUP)

[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Active Ingredient (AI) Name	AI Code	Total[3] Pounds AI (000)	Total[3] Standard Error (000)	Indoor Pounds AI (000)	Indoor Standard Error (000)	Outdoor Pounds AI (000)	Outdoor Standard Error (000)
Commercial Office/Retail (Continued)	Plants/Weeds (Continued)	ORYZALIN	104201	59	21	0	0	59	21
		DIURON	035505	40	21	0	0	40	21
		DICAMBA, DIMETHYLAMINE SALT	029802	34	7	0	0	34	7
		CHLORPYRIFOS	059101	22	18	-	-	22	18
		ACETIC ACID, (2,4 DICHLOROPHENOXY) , 2 B	030053	20	3	0	0	20	3
		BENEFLURALIN	084301	14	4			13	4
		TRICLOPYR 7	116004	13	4	0	0	13	4
		DICHLOBENIL	027401	12	7	0	0	12	7
		PROPANOIC ACID, 2 (2,4 DICHLOROPHENOXY)	031453	11	3	0	0	11	3
		TRIFLURALIN	036101	11	3			11	3
		IMAZAPYR, ISOPROPYLAMINE SALT	128829	11	10	0	0	11	10
		DITHIOPYR	128994	10	8	0	0	10	8
		PROMETON	080804	9	7	0	0	9	7
		ATRAZINE *	080803	8	5	0	0	8	5
		ENDOTHALL, DIPOTASSIUM SALT	038904	8	8	0	0	8	8
		POTASSIUM SOAPS OF FATTY ACIDS	079021	7	5	0	0	7	5
		2 ETHYL 4 METHYLPENTYL 2,4 DICHLOROPHENO	030064	5	3	0	0	5	3
		PROPANOIC ACID, 2 (2,4 DICHLOROPHENOXY)	031419	5	2	0	0	5	2
		ISOXABEN	125851	5	3	0	0	5	3
	Plant Disease/Organisms	CHLOROTHALONIL	081901	29	17	0	0	29	17

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4 D and picloram.
[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[5]Consists of Codes 103601, 103604
[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[7]Consists of Codes 116002, 116004
[8]Consists of Co[illegible]0001, 030019, 030035, 030063 (RUP)
[9]Consists of Codes 005102, 005104 (RUP)
[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Active Ingredient (AI) Name	AI Code	Total[3] Pounds AI (000)	Total[3] Standard Error (000)	Indoor Pounds AI (000)	Indoor Standard Error (000)	Outdoor Pounds AI (000)	Outdoor Standard Error (000)
Commercial Office/Retail (Continued)	Plant Disease/Organisms (Continued)	IPRODIONE	109801	10	7	0	0	10	7
	Aquatic Pests	ATRAZINE	032201	6	5	0	0	6	5
	Not Classified/Mission/Other	DIURON	035505	59	57	0	0	59	57
		ORYZALIN	104201	9	8	0	0	9	8
Commercial Wholesale/Manufacturing	Insects & Other Invertebrates	METHYL BROMIDE *	053201	1,708	1,074	1,700	1,074	8	8
		CHLORPYRIFOS	059101	156	101	39	21	117	97
		BENDIOCARB	105201	53	47	44	37	10	9
		PIPERONYL BUTOXIDE	067501	48	26	41	21	6	5
		ALUMINUM PHOSPHIDE *	066501	47	24	30	17	17	15
		DIAZINON	057801	23	12	11	9	13	7
		N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE	057001	20	12	20	12		.
		ACEPHATE	103301	19	10	12	8	7	6
		CARBARYL	056801	16	15			16	15
		BORIC ACID	011001	16	9	16	9		
		PYRETHRINS	069001	15	9	13	8	2	1
		SULFURYL FLUORIDE *	078003	12	9	12	9	0	0
		DICHLORVOS	084001	7	4	7	4		
		MALATHION	057701	7	4		.	6	4
	Plants/Weeds	DIURON	035505	155	52	0	0	155	52
		GLYPHOSATE, SALT 5	103601	88	39	0	0	88	39

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[5]Consists of Codes 103601, 103604

[6]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[7]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[8]Consists of Codes 005102, 005104 (RUP)

[9]Consists of Codes 116002, 116004

[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Active Ingredient (AI) Name		AI Code	Total[3] Pounds AI (000)	Total[3] Standard Error (000)	Indoor Pounds AI (000)	Indoor Standard Error (000)	Outdoor Pounds AI (000)	Outdoor Standard Error (000)
Commercial Wholesale/Manufacturing (Continued)	Plants/Weeds (Continued)	CHLORPYRIFOS		059101	68	68	0	0	68	68
		2,4 D	6	030019	34	13	0	0	34	13
		PRODIAMINE		110201	19	19	0	0	19	19
		SIMAZINE		080807	18	14	0	0	18	14
		PROPANOIC ACID, 2 (4-CHLORO 2-METHYL PHEN		031519	10	5	0	0	10	5
		TEBUTHIURON		105501	10	7	0	0	10	7
		DICAMBA, DIMETHYLAMINE SALT		029802	7	5	0	0	7	5
		SULFOMETURON METHYL		122001	7	3	0	0	7	3
		ORYZALIN		104201	7	4	0	0	7	4
	Plant Disease/Organisms	THIOPHANATE-METHYL		102001	29	28	14	14	14	14
Commercial Indeterminant	Insects & Other Invertebrates	CHLORPYRIFOS		059101	64	38	9	5	55	38
		PERMETHRIN, MIXED CIS,TRANS		109701	27	25	13	13	14	13
		ACEPHATE		103301	11	10	4	4	7	6
	Plants/Weeds	GLYPHOSATE, SALT	5	103601	47	18	0	0	47	18
		TEBUTHIURON		105501	12	12	0	0	12	12
		2,4 D	6	030019	12	7	0	0	12	7
		DIURON		035505	10	6	0	0	10	6
Other	Insects & Invertebrates	MALATHION		057701	1,402	727	.	.	1,401	727
		METHYL BROMIDE	*	053201	202	202			202	202
		PIPERONYL BUTOXIDE		067501	88	43	.		88	43

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4 D and picloram.
[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health
[3]Totals may differ from the sum of the entries because of rounding.
[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[5]Consists of Codes 103601, 103604
[6]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[7]Consists of Codes 116002, 116004
[8]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[9]Consists of Codes 005102, 005104 (RUP)
[10]Consists of Codes 005102, 005104 (GUP)

Table 21. Indoors and Outdoors Pesticide Usage[1] by Type of Pest and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

					Total[3]		Indoor		Outdoor	
Site Category	Type of Pest	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)	Pounds AI (000)	Standard Error (000)
Other (Continued)	Insects & Invertebrates (Continued)	PERMETHRIN, MIXED CIS/TRANS		109701	15	14			15	14
		CHLORPYRIFOS		059101	9	5	1	1	8	5
		CARBARYL		056801	6	4	-	-	6	4
	Plant/Weeds	DIURON		035505	1,428	1,256	0	0	1,428	1,256
		GLYPHOSATE, SALT	5	103601	1,324	597		-	1,323	597
		2,4-D	6	030019	360	213	4	4	355	213
		SIMAZINE		080807	179	159	0	0	179	159
		TRICLOPYR	7	116001	102	54	0	0	102	54
		IMAZAPYR, ISOPROPYLAMINE SALT		128829	68	39	0	0	68	39
		SULFOMETHURON METHYL		122001	52	29	0	0	52	29
		2,4-D	8 *	030019	30	20	0	0	30	20
		PICLORAM, SALT	9 *	005102	30	13			30	13
		ORYZALIN		104201	29	11			29	11
		DICAMBA, DIMETHYLAMINE SALT		029802	23	17	0	0	23	17
		FOSAMINE AMMONIUM		106701	17	12	0	0	17	12
		ENDOTHALL, DIPOTASSIUM SALT		038904	7	5	0	0	7	5
		TEBUTHIURON		105501	6	5	0	0	6	5
	Aquatic Pests	ATRAZINE		032201	20	13	0	0	20	13
		SIMAZINE		080807	12	8	0	0	12	8
		GLYPHOSATE, SALT	5	103601	9	6	0	0	9	6

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, Q15, Q17a, Q17b, Q17c, and Q17d (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C. See Section 4.1 for additional details.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[5]Consists of Codes 103601, 103604

[6]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[7]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[8]Consists of Codes 116002, 116004

[9]Consists of Codes 005102, 005104 (RUP)

[10]Consists of Codes 005102, 005104 (GUP)

Table 22. Indoors Pesticide Usage[1] by Type of Pest:

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Pounds AI (000)	Standard Error (000)
All Types[3]	10,025	1,470
Insects & Other Invertebrates	9,149	1,367
Plants/Weeds	10	6
Plant Disease/Organisms	67	40
Vertebrates	120	111
Aquatic Pests	548	539
Micro-Organisms	88	87
Other Wood Destroying Pests	7	7
Not Classified/Missing/Other	37	13

[1]Source questions Q12, Q14, Q15, Q17c and Q17e (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Total may differ from the sum of the entries because of rounding.

Table 23. Indoors Pesticide Usage[1] by Type of Pest, Principal Indoor Pest and Restricted Versus General Use:

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Indoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
All Types	All Indoor Pests	Total[4]	10,025	1,470	100.0
		Restricted Use	3,952	1,265	39.4
		General Use	6,072	807	60.6
Insects & Other Invertebrates	All Insects & Other Invertebrates	Total	9,149	1,367	100.0
		Restricted Use	3,943	1,265	43.1
		General Use	5,206	602	56.9
	Termites	Total	4,176	899	100.0
		Restricted Use	1,906	622	45.6
		General Use	2,270	628	54.4
	Cockroaches	Total	2,480	1,091	100.0
		Restricted Use	1,086	1,050	43.8
		General Use	1,394	269	56.2
	Ants - Not Fire or Carpenter	Total	566	339	100.0
		Restricted Use	1	-[5]	0.1
		General Use	565	339	99.9
	Stored Product Pests	Total	449	279	100.0
		Restricted Use	440	278	97.9
		General Use	9	4	2.1
	Ants - Carpenter	Total	275	153	100.0
		Restricted Use	4	3	1.5
		General Use	271	153	98.5
	Fleas	Total	261	53	100.0
		Restricted Use	47	10	18.0
		General Use	214	58	82.0

[1] Source questions Q12, Q14, Q15, Q17c and Q17e (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2] Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3] Includes pests with at least 500 pounds total AIs and at least 10 observations.

[4] Totals may differ from the sum of the entries because of rounding.

[5] Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 23. Indoors Pesticide Usage[1] by Type of Pest, Principal Indoor Pest and Restricted Versus General Use (Continued):

1993 C/CPAS Results for the Five Non-agricultural[2] Certified/Commercial Pesticide Applicator Categories

Type of Pest	Principal Indoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
Insects & Other Invertebrates (Continued)	Spiders	Total	237	222	100.0
		Restricted Use	-	-	-
		General Use	237	222	100.0
	Beetles	Total	172	128	100.0
		Restricted Use	148	127	85.9
		General Use	24	13	14.1
	Caterpillars/Moths	Total	142	100	100.0
		Restricted Use	141	100	98.7
		General Use	2	1	1.3
	Flies/Gnats/Midges	Total	98	65	100.0
		Restricted Use	-	-	-
		General Use	98	65	100.0
	Misc Household Pests	Total	91	67	100.0
		Restricted Use	66	66	72.3
		General Use	25	14	27.7
	Misc Ornamental Pests	Total	65	33	100.0
		Restricted Use	3	3	4.6
		General Use	62	33	95.4
	Misc Lawn/Garden Pests	Total	19	16	100.0
		Restricted Use	0	0	0.0
		General Use	19	16	100.0

[1]Source questions Q12, Q14, Q15, Q17c and Q17e (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Includes pests with at least 500 pounds total AIs and at least 10 observations.
[4]Totals may differ from the sum of the entries because of rounding.
[5]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 23. Indoors Pesticide Usage[1] by Type of Pest, Principal Indoor Pest and Restricted Versus General Use (Continued):

1993 C/CPAS Results for the Five Non-agricultural[2] Certified/Commercial Pesticide Applicator Categories

Type of Pest	Principal Indoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
Insects & Other Invertebrates (Continued)	Other Indoor Pests	Total	112	73	100.0
		Restricted Use	100	73	88.8
		General Use	13	4	11.2
Plants/Weeds	All Plants/Weeds	Total	10	6	100.0
		Restricted Use	-	-	1.2
		General Use	10	6	98.8
	Broadleaf Weeds	Total	8	6	100.0
		Restricted Use	-	-	1.4
		General Use	8	6	98.6
Plant Disease/Organisms	All Plant Disease/Organisms	Total	67	40	100.0
		Restricted Use	-	-	0.1
		General Use	67	40	99.9
	Fungus	Total	45	37	100.0
		Restricted Use	0	0	0.0
		General Use	45	37	100.0
	Blights	Total	15	15	100.0
		Restricted Use	0	0	0.0
		General Use	15	15	100.0
	Misc Plant Diseases	Total	6	4	100.0
		Restricted Use	-	-	1.5
		General Use	6	4	98.5

[1]Source questions Q12, Q14, Q15, Q17c and Q17e (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Includes pests with at least 500 pounds total AIs and at least 10 observations.
[4]Totals may differ from the sum of the entries because of rounding.
[5]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 23. Indoors Pesticide Usage[1] by Type of Pest, Principal Indoor Pest and Restricted Versus General Use (Continued):

1993 C/CPAS Results for the Five Non-agricultural[2] Certified/Commercial Pesticide Applicator Categories

Type of Pest	Principal Indoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
Vertebrates	All Vertebrates	Total	120	111	100.0
		Restricted Use	4	2	3.0
		General Use	116	111	97.0
	Mice/Rats	Total	9	5	100.0
		Restricted Use	4	2	39.3
		General Use	6	5	60.7
	Other Indoor Pests	Total	111	110	100.0
		Restricted Use	-	-	-
		General Use	111	110	100.0
Aquatic Pests	All Aquatic Pests	Total	548	539	100.0
		Restricted Use	-	-	-
		General Use	548	539	100.0
Micro-Organisms	All Micro-Organisms	Total	88	87	100.0
		Restricted Use	0	0	0.0
		General Use	88	87	100.0
Other Wood Destroying Pests	All Other Wood Destroying Pests	Total	7	7	100.0
		Restricted Use	0	0	0.0
		General Use	7	7	100.0
Not Classified/Missing/Other	All Others	Total	37	13	100.0
		Restricted Use	5	3	14.5
		General Use	31	13	85.5
	Other Indoor Pests	Total	37	13	100.0
		Restricted Use	5	3	14.5
		General Use	31	13	85.5

[1]Source questions Q12, Q14, Q15, Q17c and Q17e (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

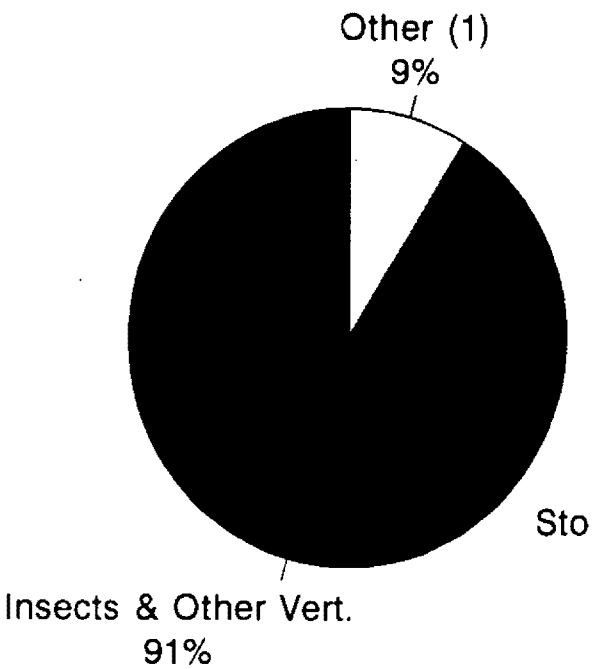
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AIs and at least 10 observations.

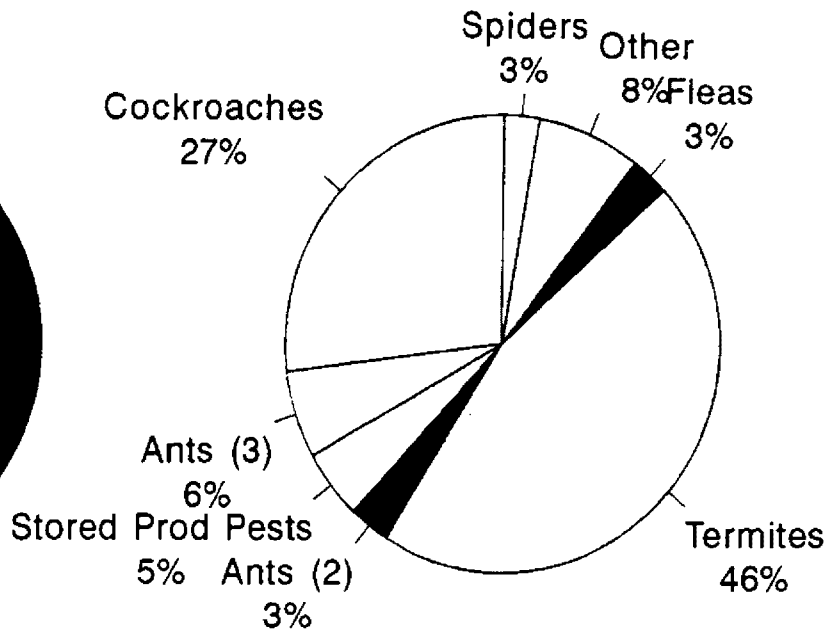
[4]Totals may differ from the sum of the entries because of rounding.

[5]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Relative Distribution of Non-agricultural Pesticide Usage, U.S. 1993, by Principle Indoor Pest and Principle Indoor Insects: 1993 C/CPAS



Type of Indoor Pest



Selected Indoor Insects

1 Other Indoor Pests includes Plants/Weeds, Plant Diseases/Organisms, Vertebrates, Micro-organisms, Aquatic Pests, Other Wood Destroying Pests and those pests not classified/Missing/Other.

2 Ants - Carpenter

3 Ants - Not Fire or Carpenter

Table 24. Indoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Indoor Pest:

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Principal Indoor Pest[3]	Pounds AI (000)	Standard Error (000)
Residential	Insects & Other Invertebrates	Termites	2,942	623
		Cockroaches	779	142
		Ants - Not Fire or Carpenter	491	331
		Ants - Carpenter	245	146
		Fleas	240	48
		Spiders	188	178
		Beetles	131	114
		Misc Ornamental Pests	32	22
		Misc Lawn/Garden Pests	19	16
		Misc Household Pests	18	10
		Other Wood Chewing Insects	4	3
		Bees/Hornets/Wasps	2	1
		Crickets/Grasshoppers	2	2
		Flies/gnats/midges	1	0
		Ticks	1	1
		Ants - Fire	1	0
	Plant Disease/Organisms	Fungus	45	37
		Misc Plant Diseases	1	1
	Vertebrates	Mice/Rats	5	5
	Other Wood Destroying Pests	Wood Preservative	6	6
	Not Classified/Missing/Other	Not Classified/Missing/Other	25	11

[1]Source questions Q12, Q14, Q15, Q17c and Q17e (see Appendix A) and state list certification information. Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 24. Indoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Indoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Principal Indoor Pest[3]	Pounds AI (000)	Standard Error (000)
Recreational	Insects & Other Invertebrates	Cockroaches	6	4
		Termites	2	2
		Weevils	1	1
	Plant Disease/Organisms	Misc Plant Diseases	4	4
	Vertebrates	Other Rodents	110	110
	Aquatic Pests	Algae	6	6
	Micro-Organisms	Micro-organism	87	87
Sanitation/Utilities	Insects & Other Invertebrates	Cockroaches	5	5
		Termites	1	1
Commercial Office/Retail	Insects & Other Invertebrates	Termites	1,166	602
		Cockroaches	465	128
		Caterpillars/Moths	77	77
		Flies/gnats/midges	68	61
		Ants - Not Fire or Carpenter	58	31
		Spiders	47	44
		Ants - Carpenter	28	10
		Misc Ornamental Pests	21	12
		Fleas	17	8
		Beetles	14	13
		Misc Household Pests	3	1
		Mites	2	1
Commercial Office/Retail	Plants/Weeds	Broadleaf Weeds	3	3
		Crabgrass	1	1
	Vertebrates	Mice/Rats	1	0

[1]Source questions Q12, Q14, Q15, Q17c and Q17e (see Appendix A) and state list certification information. Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 24. Indoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Indoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Principal Indoor Pest[3]	Pounds AI (000)	Standard Error (000)
Commercial Office/Retail (Continued)	Aquatic Pests	Algae	1	1
	Other Wood Destroying Pests	Wood Preservative	1	1
	Not Classified/Missing/Other	Not Classified/Missing/Other	6	4
Commercial Wholesale/Manufacturing	Insects & Other Invertebrates	Cockroaches	1,208	1,055
		Stored Product Pests	446	279
		Weevils	98	73
		Misc Household Pests	69	66
		Caterpillars/Moths	65	64
		Termites	40	22
		Flies/gnats/midges	28	24
		Beetles	21	12
		Ants - Not Fire or Carpenter	16	9
		Misc Ornamental Pests	12	12
		Fleas	3	3
		Aphids	2	2
		Spiders	2	1
		Ants - Carpenter	1	0
	Plant Disease/Organisms	Blights	15	15
	Vertebrates	Mice/Rats	3	2
	Not Classified/Missing/Other	Not Classified/Missing/Other	4	3
Commercial Indeterminant	Insects & Other Invertebrates	Termites	24	15
		Cockroaches	9	4
		Stored Product Pests	3	1

[1]Source questions Q12, Q14, Q15, Q17c and Q17e (see Appendix A) and state list certification information. Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 24. Indoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Indoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest	Principal Indoor Pest[3]	Pounds AI (000)	Standard Error (000)
Commercial Indeterminant (Continued)	Insects & Other Invertebrates (Continued)	Aphids	1	1
		Other wood chewing insects	1	1
		Ants - Carpenter	1	1
	Aquatic Pests	Algae	2	2
Other	Insects & Other Invertebrates	Cockroaches	8	5
		Beetles	6	4
		Aphids	1	1
		Termites	1	1
		Mites	1	-
		Misc Ornamental Pests	1	-
	Plants/Weeds	Broadleaf Weeds	5	5
	Aquatic Pests	Aquatic micro-organisms	539	539
	Not Classified/Missing/Other	Not Classified/Missing/Other	2	2

[1]Source questions Q12, Q14, Q15, Q17c and Q17e (see Appendix A) and state list certification information. Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 25. Indoors Pesticide Usage[1] by Type of Pest, Principal Indoor Pest and Active Ingredient:

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Indoor Pest[3]	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)
Insects & Other Invertebrates	Termites	CHLORPYRIFOS		059101	1,431	420
		SULFURYL FLUORIDE	*	078003	1,415	552
		PERMETHRIN, MIXED CIS,TRANS		109701	615	231
		METHYL BROMIDE	*	053201	483	238
		DISODIUM OCTABORATE TETRAHYDRATE		011103	200	85
		CYPERMETHRIN		109702	16	6
	Cockroaches	BORIC ACID		011001	362	176
		CHLORPYRIFOS		059101	322	97
		CYPERMETHRIN		109702	228	100
		ACEPHATE		103301	88	30
		BENDIOCARB		105201	68	40
		PIPERONYL BUTOXIDE		067501	55	12
		DIAZINON		057801	50	15
		PROPETAMPHOS	*	113601	36	10
		N OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	25	6
		SILICA GEL		072602	16	5
		PYRETHRINS		069001	15	5
		LAMBDA CYHALOTHRIN		128897	13	7
		ESFENVALERATE		109303	8	6

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4 D and picloram.

[1]Source questions Q17, Q14, Q15, Q17d and Q17f (see Appendix A) and state list certification information. Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N C

[2]Includes turf and ornamental, right of way; aquatic; industrial, institutional, structural and health related, and public health

[3]Includes pests with at least 500 pounds total AIs and at least 10 observations

Table 25. Indoors Pesticide Usage[1] by Type of Pest, Principal Indoor Pest and Active Ingredient (Continued):

1993 C/CPAS Results for the Five Non-agricultural[2] Certified/Commercial Pesticide Applicator Categories

Type of Pest	Principal Indoor Pest[3]	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)
Insects & Other Invertebrates (Continued)	Cockroaches (Continued)	PROPOXUR		047802	8	4
	Ants - Other	CYPERMETHRIN		109702	309	301
		DIAZINON		057801	107	69
		BENDIOCARB		105201	75	53
		CHLORPYRIFOS		059101	43	14
		BORIC ACID		011001	22	16
	Stored Product Pests	METHYL BROMIDE	*	053201	416	264
		ALUMINUM PHOSPHIDE	*	086501	23	15
	Ants - Carpenter	BENDIOCARB		105201	177	146
		CHLORPYRIFOS		059101	60	41
		SILICA GEL		072602	9	3
		CYPERMETHRIN		109702	8	6
		BORIC ACID		011001	7	4
	Fleas	CHLORPYRIFOS		059101	145	55
		PROPETAMPHOS	*	113601	47	10
		PERMETHRIN, MIXED CIS,TRANS		109701	12	5
		BENDIOCARB		105201	12	6
		PIPERONYL BUTOXIDE		067501	11	6
	Spiders	CYPERMETHRIN		109702	5	2

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A) and state list certification information. Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, NC.

[2]Includes turf and ornamental, right-of-way, aquatic, industrial, institutional, structural and health related, and public health.

[3]Includes pests with at least 500 pounds total AIs and at least 10 observations.

Table 25. Indoors Pesticide Usage[1] by Type of Pest, Principal Indoor Pest and Active Ingredient (Continued):

1993 C/CPAS Results for the Five Non-agricultural[2] Certified/Commercial Pesticide Applicator Categories

Type of Pest	Principal Indoor Pest[3]	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)
Insects & Other Vertebrates (Continued)	Beetles	DISODIUM OCTABORATE TETRAHYDRATE	011103	16	14
	Flies/Gnats/Midges	N OCTYL BICYCLOHEPTENEDICARBOXIMIDE	057001	17	12
		PIPERONYL BUTOXIDE	067501	13	8
		PYRETHRINS	069001	6	4
	Misc Household Pests	DIAZINON	057801	14	12
	Misc Ornamental Pests	CYPERMETHRIN	109702	28	27
		PIPERONYL BUTOXIDE	067501	11	10
		DIAZINON	057801	5	5
Not Classified/Missing/Other	Other Indoor Pests	CHLORPYRIFOS	059101	12	9

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A) and state list certification information. Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, NC.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related, and public health.

[3]Includes pests with at least 500 pounds total AIs and at least 10 observations.

Table 26. Outdoors Pesticide Usage[1] by Type of Pest:

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

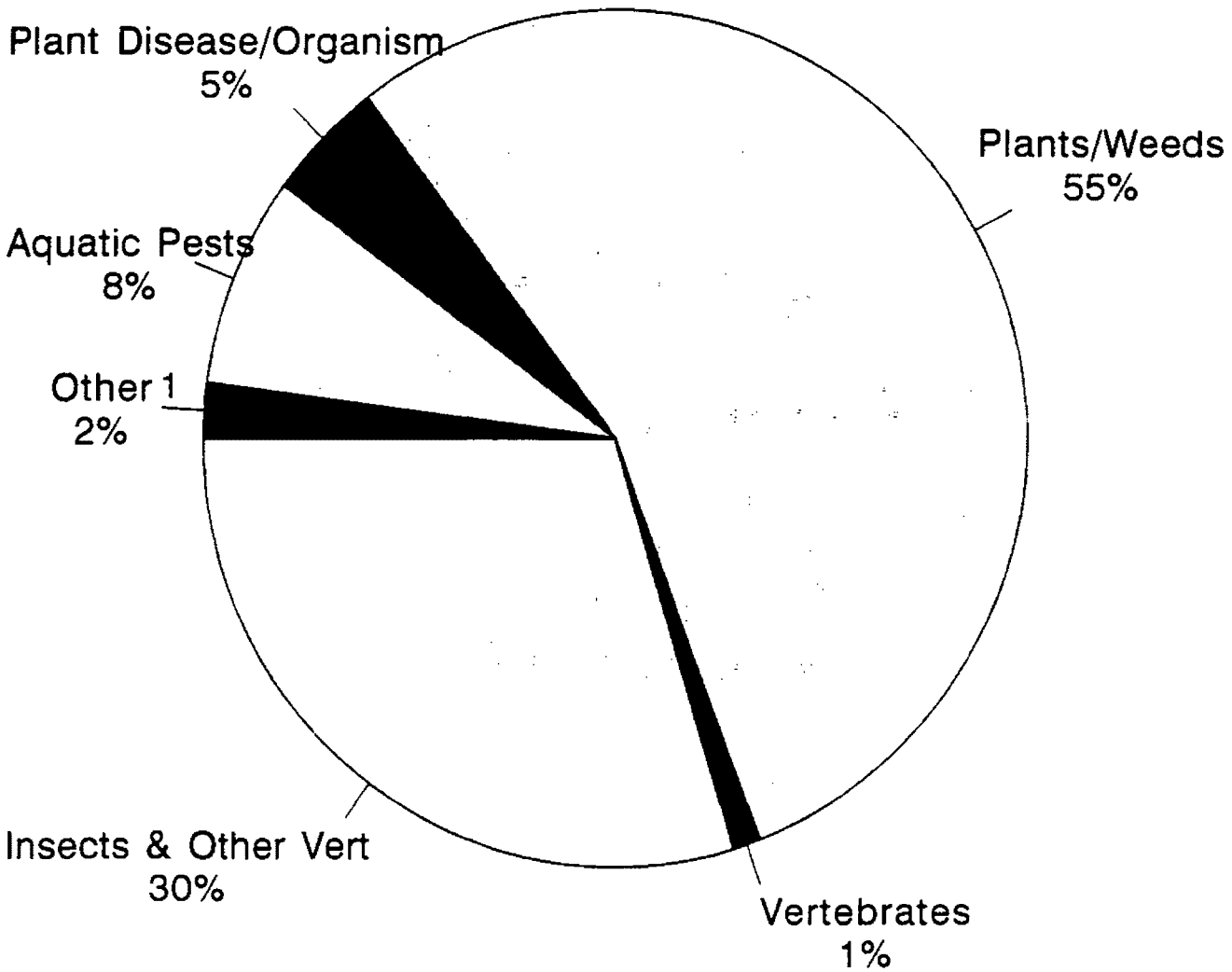
Type of Pest	Pounds AI (000)	Standard Error (000)
All Types[3]	59,164	8,976
Insects & Other Invertebrates	17,795	2,017
Plants/Weeds	32,632	7,694
Plant Disease/Organisms	2,736	383
Vertebrates	644	476
Aquatic Pests	4,737	3,586
Micro-Organisms	372	351
Other Wood Destroying Pests	52	37
Not Classified/Missing/Other	196	96

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Total may differ from the sum of the entries because of rounding.

Relative Distribution of Non-agricultural Pesticide Usage, U.S. 1993, by Type of Outdoor Pest: 1993 C/CPAS



1 Other Outdoor Pests includes Micro-organisms, Growth Regulators, Other Wood Destroying Pests, and those pests not classified

Table 27. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Restricted Versus General Use:

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
All Types	All Outdoor Pests	Total[4]	59,164	8,970	100.0
		Restricted Use	7,004	3,656	11.8
		General Use	52,160	7,780	88.2
Insects & Other Invertebrates	All Insects & Other Invertebrates	Total	17,795	2,017	100.0
		Restricted Use	764	261	4.3
		General Use	17,031	2,000	95.7
	Mosquitoes	Total	5,907	1,896	100.0
		Restricted Use	-[5]	-	-
		General Use	5,907	1,896	100.0
	Termites	Total	5,109	670	100.0
		Restricted Use	163	96	3.2
		General Use	4,946	652	96.8
	Grubs/Larvae	Total	1,353	261	100.0
		Restricted Use	235	117	17.4
		General Use	1,118	224	82.6
	Misc Lawn/Garden Pests	Total	1,163	934	100.0
		Restricted Use	3	2	0.2
		General Use	1,160	935	99.8
	Ants - Not Fire Or Capenter	Total	1,119	563	100.0
		Restricted Use	109	101	9.7
		General Use	1,010	554	90.3
	Fleas	Total	832	708	100.0
		Restricted Use	2	1	0.3
		General Use	830	708	99.7

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Includes pests with at least 500 pounds total AI and at least 10 observations.
[4]Totals may differ from the sum of the entries because of rounding.
[5]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 27. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Restricted Versus General (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
Insects & Other Invertebrates (Continued)	Cockroaches	Total	354	105	100.0
		Restricted Use	2	1	0.7
		General Use	351	105	99.3
	Aphids	Total	309	106	100.0
		Restricted Use	11	8	3.6
		General Use	297	103	96.4
	Misc Household Pests	Total	257	151	100.0
		Restricted Use	101	101	39.5
		General Use	155	112	60.5
	Ants - Carpenter	Total	222	92	100.0
		Restricted Use	2	1	0.7
		General Use	221	92	99.3
	Misc Ornamental Pests	Total	181	47	100.0
		Restricted Use	50	34	27.6
		General Use	131	33	72.4
	Crickets/Grasshoppers	Total	142	56	100.0
		Restricted Use	21	21	15.1
		General Use	120	44	84.9
	Spiders	Total	133	61	100.0
		Restricted Use	-	-	0.1
		General Use	133	61	99.9
	Beetles	Total	130	39	100.0
		Restricted Use	35	32	26.8
		General Use	95	24	73.2

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Includes pests with at least 500 pounds total AI and at least 10 observations.
[4]Totals may differ from the sum of the entries because of rounding.
[5]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 27. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Restricted Versus General (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
Insects & Other Invertebrates (Continued)	Mites	Total	127	36	100.0
		Restricted Use	1	-	0.4
		General Use	126	36	99.6
	_Ants - Fire	Total	111	40	100.0
		Restricted Use	1	-	0.5
		General Use	110	40	99.5
	Caterpillars/Moths	Total	107	43	100.0
		Restricted Use	1	1	1.2
		General Use	106	43	98.8
	Flies/Gnats/Midges	Total	100	63	100.0
		Restricted Use	4	4	4.4
		General Use	95	63	95.6
	Nematodes	Total	90	37	100.0
		Restricted Use	2	1	2.1
		General Use	88	37	97.9
	Stored Product Pests	Total	18	15	100.0
		Restricted Use	18	15	96.1
		General Use	1	-	3.9
	Ticks	Total	14	4	100.0
		Restricted Use	-	-	0.7
		General Use	14	4	99.3

Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[1]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[2]Includes pests with at least 500 pounds total AI and at least 10 observations.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 27. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Restricted Versus General (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
Insects & Other Invertebrates (Continued)	Bees/Hornets/Wasps	Total	12	3	100.0
		Restricted Use	1	1	6.1
		General Use	11	3	93.9
	Other Outdoor Pests	Total	6	3	100.0
		Restricted Use	1	1	19.6
		General Use	5	3	80.4
Plants/Weeds	All Plants/Weeds	Total	32,632	7,694	100.0
		Restricted Use	6,010	3,636	18.4
		General Use	26,622	6,199	81.6
	Broadleaf Weeds	Total	24,208	7,010	100.0
		Restricted Use	3,232	2,437	13.4
		General Use	20,976	6,124	86.6
	Annual Grasses	Total	2,099	371	100.0
		Restricted Use	43	16	2.1
		General Use	2,055	368	97.9
	Crabgrass	Total	1,096	330	100.0
		Restricted Use	0	0	0.0
		General Use	1,096	330	100.0
	Perennial Grasses	Total	744	283	100.0
		Restricted Use	1	-	0.1
		General Use	743	283	99.9
	Woody Brush/Vines	Total	618	163	100.0
		Restricted Use	38	20	6.1
		General Use	580	153	93.9

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Includes pests with at least 500 pounds total AI and at least 10 observations.
[4]Totals may differ from the sum of the entries because of rounding.
[5]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05

Table 27. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Restricted Versus General (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
Plants/Weeds (Continued)	Trees	Total	601	349	100.0
		Restricted Use	20	15	3.4
		General Use	580	346	96.6
	Weeds & Grasses	Total	363	161	100.0
		Restricted Use	0	0	0.0
		General Use	363	161	100.0
	Misc Weeds	Total	2,842	2,776	100.0
		Restricted Use	2,675	2,675	94.1
		General Use	167	105	5.9
	Nutsedge	Total	61	15	100.0
		Restricted Use	-	-	0.7
		General Use	61	15	99.3
Plant Disease/Organisms	All Plant Disease/Organisms	Total	2,736	383	100.0
		Restricted Use	152	115	5.6
		General Use	2,584	357	94.4
	Brown Patch	Total	872	216	100.0
		Restricted Use	-	-	-
		General Use	872	217	100.0
	Misc Plant Diseases	Total	582	172	100.0
		Restricted Use	152	115	26.1
		General Use	430	88	73.9
	Blights	Total	498	122	100.0
		Restricted Use	-	-	-
		General Use	497	122	100.0

Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[1]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[2]Includes pests with at least 500 pounds total AI and at least 10 observations.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 27. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Restricted Versus General (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
Plant/Disease Organisms (Continued)	Dollar Spot	Total	480	89	100.0
		Restricted Use	0	0	0.0
		General Use	480	89	100.0
	Leaf Spot	Total	185	44	100.0
		Restricted Use	0	0	0.0
		General Use	185	44	100.0
	Fungus	Total	119	38	100.0
		Restricted Use	0	0	0.0
		General Use	119	38	100.0
Vertebrates	All Vertebrates	Total	644	476	100.0
		Restricted Use	3	1	0.4
		General Use	641	476	99.6
	Other Rodents	Total	636	476	100.0
		Restricted Use	2	1	0.3
		General Use	634	476	99.7
	Other Outdoor Pests	Total	8	2	100.0
		Restricted Use	-	-	4.5
		General Use	7	2	95.5
Aquatic Pests	All Aquatic Pests	Total	4,737	3,580	100.0
		Restricted Use	57	34	1.2
		General Use	4,680	3,580	98.8
	Algae	Total	4,187	3,515	100.0
		Restricted Use	0	0	0.0
		General Use	4,187	3,515	100.0

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Includes pests with at least 500 pounds total AI and at least 10 observations.
[4]Totals may differ from the sum of the entries because of rounding.
[5]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 27. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Restricted Versus General (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
Aquatic Pests (Continued)	Fish	Total	263	187	100.0
		Restricted Use	31	30	11.8
		General Use	232	185	88.2
	Aquatic Weeds-Submerged	Total	163	78	100.0
		Restricted Use	0	0	0.0
		General Use	163	78	100.0
	Marine Animals	Total	47	27	100.0
		Restricted Use	26	16	56.3
		General Use	20	20	43.7
	Aquatic Micro-Organisms	Total	34	34	100.0
		Restricted Use	0	0	0.0
		General Use	34	34	100.0
	Aquatic Weeds-Emergent	Total	28	20	100.0
		Restricted Use	0	0	0.0
		General Use	28	20	100.0
	Aquatic Weeds-Floating	Total	16	10	100.0
		Restricted Use	0	0	0.0
		General Use	16	10	100.0
Micro-Organisms	All Micro-Organisms	Total	372	351	100.0
		Restricted Use	12	11	3.2
		General Use	361	351	96.8
Other Wood Destroying Pests	All Other Wood Destroying Pests	Total	52	37	100.0
		Restricted Use	1	1	2.2
		General Use	51	36	97.8

Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Totals may differ from the sum of the entries because of rounding.

[5]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05

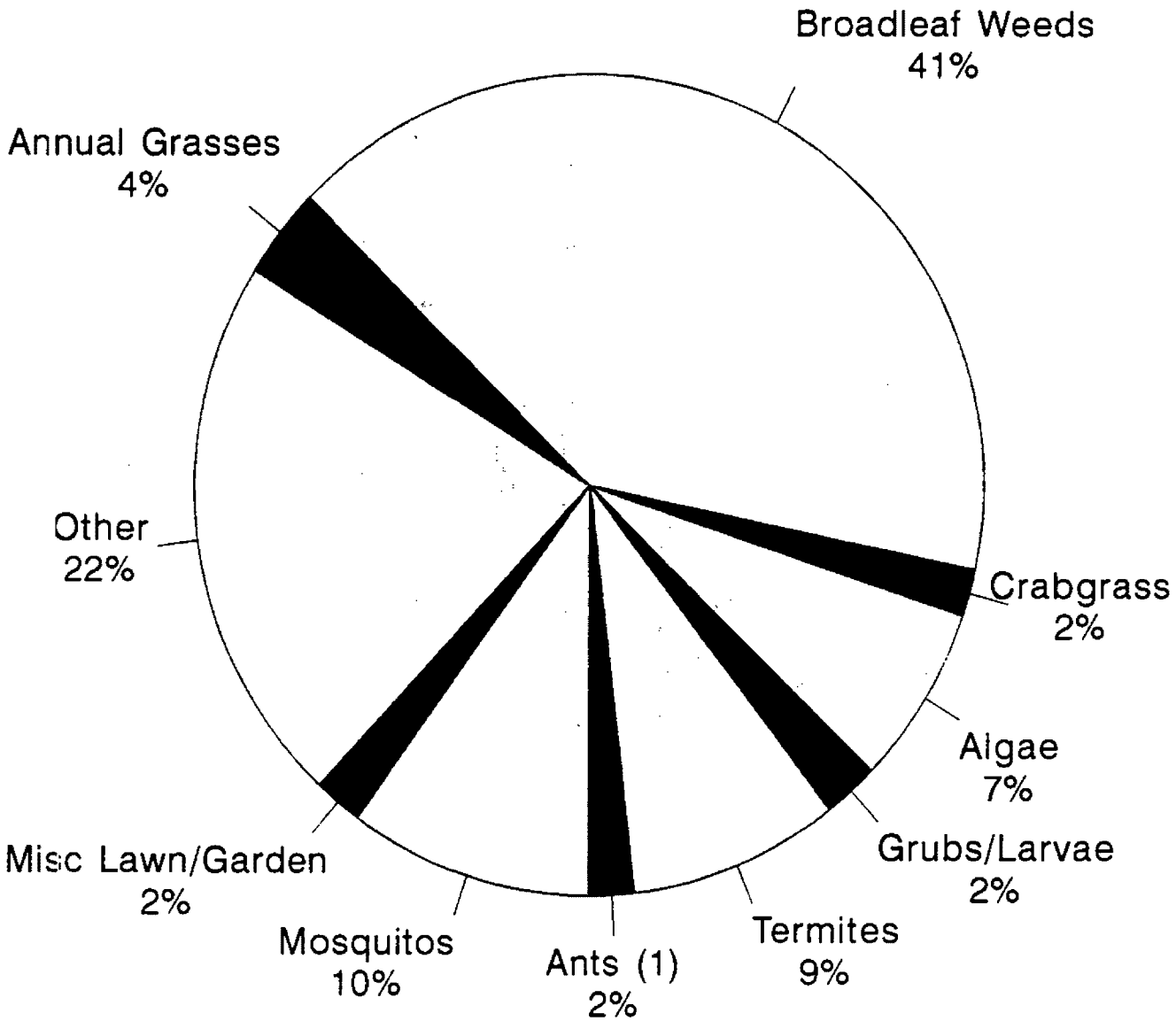
Table 27. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Restricted Versus General (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Restricted or General Use	Pounds AI (000)	Standard Error (000)	Percent of Total
Not Classified/Missing/Other	All Others	Total	196	96	100.0
		Restricted Use	6	4	2.8
		General Use	190	96	97.2

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Includes pests with at least 500 pounds total AI and at least 10 observations.
[4]Totals may differ from the sum of the entries because of rounding.
[5]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Relative Distribution of Non-agricultural Pesticide Usage, U.S. 1993, by Selected Outdoor Pest: 1993 C/CPAS



1 Ants - Not Fire

Table 28. Outdoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Outdoor Pest:

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest[3]	Principal Outdoor Pest[3]	Pounds AI (000)	Standard Error (000)
Residential	Insects & Other Invertebrates	Termites	4,369	645
		Mosquitoes	2,738	1,233
		Misc Lawn/Garden Pests	1,063	929
		Ants - Not Fire or Carpenter	888	498
		Fleas	782	672
		Grubs/Larvae	556	150
		Cockroaches	296	100
		Ants - Carpenter	193	85
		Aphids	155	50
		Misc Household Pests	147	111
		Misc Ornamental Pests	134	35
		Spiders	103	49
		Beetles	101	34
		Mites	91	33
		Caterpillars/Moths	81	35
		Ants - Fire	64	34
		Crickets/Grasshoppers	31	9
		Nematodes	28	24
		Flies/Gnats/Midges	23	11
		Ticks	13	4
		Bees/Hornets/Wasps	9	3
		Weevils	6	3

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 28. Outdoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Outdoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest[3]	Principal Outdoor Pest[3]	Pounds AI (000)	Standard Error (000)
Residential (Continued)	Plants/Weeds	Broadleaf Weeds	5,355	1,765
		Crabgrass	594	218
		Annual Grasses	456	148
		Perennial Grasses	62	16
		Woody Brush/Vines	16	10
		Weeds & Grasses	13	7
		Nutsedge	8	4
		Misc Weeds	3	1
		Trees	1	-[4]
	Plant Disease/Organisms	Misc Plant Diseases	102	35
		Brown Patch	69	25
		Fungus	69	31
		Leaf Spot	53	17
		Dollar Spot	15	6
		Blights	9	2
	Vertebrates	Other Nonrodents	2	2
		Mice/Rats	1	1
		Other Rodents	1	-
		Snakes	1	-
	Aquatic Pests	Algae	222	180
		Aquatic Weeds-Submerged	26	18
		Aquatic Weeds-Floating	1	1
	Other Wood Destroying Pests	Wood Preservative	6	6

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 28. Outdoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Outdoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest[3]	Principal Outdoor Pest[3]	Pounds AI (000)	Standard Error (000)
Residential (Continued)	Not Classified/Missing/Other	Not Classified/Missing/Other	10	4
		Growth Regulator	2	2
Recreational	Insects & Other Invertebrates	Mosquitoes	683	475
		Grubs/Larvae	605	154
		Crickets/Grasshoppers	109	53
		Misc Lawn/Garden Pests	63	13
		Nematodes	45	23
		Misc Ornamental Pests	23	19
		Ants - Fire	22	9
		Ants - Not Fire or Carpenter	12	5
		Caterpillars/Moths	9	8
		Beetles	9	5
		Ants - Carpenter	4	3
		Termites	4	3
		Flies/Gnats/Midges	3	1
		Aphids	2	1
		Mites	1	1
		Misc Household Pests	1	1
		Spiders	1	1
		Fleas	1	-
	Plants/Weeds	Broadleaf Weeds	1,196	224
		Annual Grasses	352	102
		Crabgrass	246	120
		Weeds & Grasses	144	137
		Perennial Grasses	83	27

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 28. Outdoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Outdoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest[3]	Principal Outdoor Pest[3]	Pounds AI (000)	Standard Error (000)
Recreational (Continued)	Plants/Weeds (Continued)	Woody Brush/Vines	47	46
		Nutsedge	43	15
		Misc Weeds	34	27
		Trees	8	5
	Plant Disease/Organisms	Brown Patch	766	208
		Blights	466	120
		Dollar Spot	460	89
		Misc Plant Diseases	251	37
		Leaf Spot	127	43
		Fungus	48	22
	Vertebrates	Other Rodents	635	476
		Other Nonrodents	1	1
	Aquatic Pests	Algae	3,379	2,989
		Aquatic Weeds-Submerged	57	33
		Fish	37	31
		Aquatic Weeds-Floating	9	7
	Micro-Organisms	Microorganism	361	349
		Parasites	4	4
	Not Classified/Missing/Other	Not Classified/Missing/Other	78	76
		Growth Regulator	6	2
Sanitation/Utilities	Insects & Other Invertebrates	Mosquitoes	292	290
		Grubs/Larvae	5	2
		Beetles	2	2
		Termites	1	1
		Spiders	1	1

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 28. Outdoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Outdoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest[3]	Principal Outdoor Pest[3]	Pounds AI (000)	Standard Error (000)
Sanitation/Utilities (Continued)	Insects & Other Invertebrates (Continued)	Ants - Fire	1	1
	Plants/Weeds	Broadleaf Weeds	3,024	775
		Woody Brush/Vines	477	147
		Perennial Grasses	397	271
		Annual Grasses	339	169
		Trees	253	168
		Weeds & Grasses	110	65
		Misc Weeds	35	24
		Crabgrass	1	1
	Plant Disease/Organisms	Misc Plant Diseases	204	143
	Aquatic Pests	Algae	179	175
		Fish	30	30
		Aquatic Weeds-Emergent	22	20
		Aquatic Weeds-Submerged	18	17
		Aquatic Weeds-Floating	5	4
	Other Wood Destroying Pests	Wood Preservative	45	36
Commercial Office/Retail	Insects & Other Invertebrates	Termites	569	96
		Grubs/Larvae	175	52
		Mosquitoes	148	85
		Aphids	131	96
		Ants - Not Fire or Carpenter	104	55
		Misc Lawn/Garden Pests	35	13
		Cockroaches	31	8
		Spiders	26	13

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 28. Outdoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Outdoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest[3]	Principal Outdoor Pest[3]	Pounds AI (000)	Standard Error (000)
Commercial Office/Retail (Continued)	Insects & Other Invertebrates (Continued)	Ants - Carpenter	26	17
		Mites	19	6
		Beetles	17	8
		Misc Ornamental Pests	12	3
		Fleas	11	5
		Ants - Fire	10	4
		Misc Household Pests	5	4
		Caterpillars/Moths	3	2
		Flies/Gnats/Midges	2	1
		Bees/Hornets/Wasps	2	1
		Crickets/Grasshoppers	2	1
		Ticks	1	1
		Nematodes	1	-
	Plants/Weeds	Broadleaf Weeds	5,784	3,706
		Crabgrass	250	169
		Annual Grasses	242	56
		Perennial Grasses	112	41
		Weeds & Grasses	11	4
		Woody Brush/Vines	3	1
		Misc Weeds	2	2
		Nutsedge	2	1
		Trees	1	-
	Plant Disease/Organisms	Brown Patch	36	20
		Misc Plant Diseases	16	6

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 28. Outdoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Outdoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest[3]	Principal Outdoor Pest[3]	Pounds AI (000)	Standard Error (000)
Commercial Office/Retail (Continued)	Plant Disease/Organisms (Continued)	Blights	6	4
		Leaf Spot	5	2
		Dollar Spot	3	1
		Fungus	2	1
	Vertebrates	Birds/Fowl	1	-
	Aquatic Pests	Algae	185	175
		Aquatic micro-organisms	27	27
		Aquatic Weeds-Submerged	19	17
	Micro-Organisms	Microorganism	2	2
	Other Wood Destroying Pests	Wood Preservative	1	1
	Not Classified/Missing/Other	Growth Regulator	60	57
		Not Classified/Missing/Other	21	9
Commercial Wholesale/Manufacturing	Insects & Other Invertebrates	Termites	126	98
		Cockroaches	25	23
		Aphids	19	12
		Stored Product Pests	18	15
		Nematodes	15	15
		Ants - Not Fire or Carpenter	9	7
		Mites	9	8
		Flies/Gnats/Midges	6	4
		Ants - Fire	6	6
		Mosquitoes	6	4
		Grubs/Larvae	6	2
		Fleas	3	2

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 28. Outdoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Outdoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest[3]	Principal Outdoor Pest[3]	Pounds AI (000)	Standard Error (000)
Commercial Wholesale/Manufacturing (Continued)	Insects & Other Invertebrates (Continued)	Misc Ornamental Pests	2	1
		Spiders	1	1
		Beetles	1	1
		Misc Lawn/Garden Pests	1	1
		Crickets/Grasshoppers	1	1
	Plants/Weeds	Broadleaf Weeds	262	134
		Annual Grasses	261	89
		Perennial Grasses	15	5
		Misc Weeds	6	3
		Weeds & Grasses	6	3
		Crabgrass	3	1
		Nutsedge	3	3
		Woody Brush/Vines	2	2
	Plant Disease/Organisms	Blights	16	15
		Misc Plant Diseases	6	5
		Dollar Spot	2	2
		Brown Patch	1	1
	Aquatic Pests	Marine Animals	12	12
		Aquatic micro-organisms	7	7
	Not Classified/Missing/Other	Not Classified/Missing/Other	6	4
Commercial Indeterminant	Insects & Other Invertebrates	Termites	38	19
		Fleas	36	36
		Misc Ornamental Pests	9	8
		Ants - Fire	6	6

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental, right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 28. Outdoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Outdoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest[3]	Principal Outdoor Pest[3]	Pounds AI (000)	Standard Error (000)
Commercial Indeterminant (Continued)	Insects & Other Invertebrates (Continued)	Mosquitoes	3	3
		Cockroaches	2	2
		Ants - Not Fire or Carpenter	2	1
		Nematodes	1	1
		Flies/Gnats/Midges	1	1
		Misc Lawn/Garden Pests	1	-
		Aphids	1	-
	Plants/Weeds	Broadleaf Weeds	79	26
		Perennial Grasses	16	14
		Annual Grasses	15	6
		Weeds & Grasses	2	1
		Misc Weeds	1	1
		Woody Brush/Vines	1	-
		Crabgrass	1	-
	Aquatic Pests	Marine Animals	24	22
		Algae	1	1
	Not Classified/Missing/Other	Growth Regulator	3	2
Other	Insects & Other Invertebrates	Mosquitoes	2,038	1,036
		Ants - Not Fire or Carpenter	104	101
		Misc Household Pests	103	101
		Flies/Gnats/Midges	65	62
		Caterpillars/Moths	14	12
		Grubs/Larvae	8	7
		Mites	7	3

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 28. Outdoors Pesticide Usage[1] by Site Category, Type of Pest and Principal Outdoor Pest (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Pest[3]	Principal Outdoor Pest[3]	Pounds AI (000)	Standard Error (000)
Other (Continued)	Insects & Other Invertebrates (Continued)	Termites	2	2
		Ants - Fire	2	1
		Aphids	1	1
		Bees/Hornets/Wasps	1	1
	Plants/Weeds	Broadleaf Weeds	8,509	5,283
		Misc Weeds	2,762	2,757
		Annual Grasses	434	174
		Trees	339	306
		Weeds & Grasses	77	52
		Woody Brush/Vines	73	38
		Perennial Grasses	60	31
		Nutsedge	5	5
		Crabgrass	1	1
	Plant Disease/Organisms	Misc Plant Diseases	2	1
	Aquatic Pests	Algae	221	109
		Fish	195	183
		Aquatic Weeds-Submerged	44	23
		Marine Animals	11	10
		Aquatic Weeds-Emergent	5	5
		Aquatic Weeds-Floating	1	1
		Fish parasites	1	1
	Micro-Organisms	Microorganism	5	5
	Not Classified/Missing/Other	Growth Regulator	5	4
		Not Classified/Missing/Other	3	2

[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Includes pests with at least 500 pounds total AI and at least 10 observations.

[4]Usage amounts or standard errors greater than zero but less than 500 pounds or precents greater than zero but less than 0.05.

Table 29. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Active Ingredient:

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Active Ingredients (AI) Name	AI Code	Pounds (AI) Name	Standard Error (000)
Insects & Other Invertebrates	Mosquito	MALATHION	057701	4,035	1,358
		PIPERONYL BUTOXIDE	067501	503	340
		PERMETHRIN, MIXED CIS,TRANS	109701	68	37
		CHLORPYRIFOS	059101	12	6
	Termites	CHLORPYRIFOS	059101	5,624	500
		PERMETHRIN, MIXED CIS,TRANS	109701	758	228
		CYPERMETHRIN	109702	497	357
		DISODIUM OCTABORATE TETRAHYDRATE	011103	58	50
	Grubs/Larvae	TRICHLORFON	057901	302	104
		DIAZINON	057801	257	114
		ISOFENPHOS	109401	115	38
		FONOFOS	041701	105	78
		CARBARYL	056801	72	20
		CHLORPYRIFOS	059101	55	13
		ISAZOFOS	126901	29	7
		MALATHION	057701	16	9
	Misc Lawn/Garden Pests	CHLORPYRIFOS	059101	117	30
		TRICHLORFON	057901	24	10
		CARBARYL	056801	21	10
		DIAZINON	057801	15	6
		METALDEHYDE	053001	13	7
	Ants - Not Fire or Carpenter	CHLORPYRIFOS	059101	676	539
		DIAZINON	057801	225	90
		CYPERMETHRIN	109702	36	21
		CARBARYL	056801	16	10
		MALATHION	057701	15	7
	Fleas	CHLORPYRIFOS	059101	754	711
		DIAZINON	057801	22	8
		MALATHION	057701	16	6
Insects & Other Invertebrates (Continued)	Fleas (Continued)	FLUVALINATE	109302	10	6
	Cockroaches	CYPERMETHRIN	109702	134	91

*Restricted Use Pesticide (RUP). Note that some AIs are in both RUP and general use products, for example, 2,4-B and picloram.
[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health
[3]Includes pests with at least 500 pounds total AIs and at least 10 observations
[4]Consists of Codes 103601, 103604
[5]Consists of Codes 030019, 030035, 030063 (GUP)
[6]Consists of Codes 116002, 116004
[7]Consists of Codes 030019, 030035, 030063 (RUP)
[8]Consists of Codes 005102, 005104 (RUP)
[9]Consists of Codes 005102, 005104 (GUP)

Table 29. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Active Ingredient (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Active Ingredients (AI) Name	AI Code	Pounds (AI) Name	Standard Error (000)
		CHLORPYRIFOS	059101	84	36
		DIAZINON	057801	51	22
		BORIC ACID	011001	23	19
		BENDIOCARB	105201	10	9
		LAMBDA-CYHALOTHRIN	128897	8	*
	Aphids	MALATHION	057701	111	93
		DIAZINON	057801	62	33
		ACEPHATE	103301	25	8
		CARBARYL	056801	19	11
		POTASSIUM SOAPS OF FATTY ACIDS	079021	18	11
		OXYDEMETON-METHYL	058702	8	6
	Misc Household Pests	CHLORPYRIFOS	059101	6	3
	Ants - Carpenter	CHLORPYRIFOS	059101	120	80
		DIAZINON	057801	64	42
		BENDIOCARB	105201	11	*
	Misc Ornamental Pests	DIAZINON	057801	22	11
		CARBARYL	056801	20	12
		MALATHION	057701	16	6
		CHLORPYRIFOS	059101	11	3
		ACEPHATE	103301	8	2
		POTASSIUM SOAPS OF FATTY ACIDS	079021	6	4
	Crickets-Grasshoppers	ACEPHATE	103301	36	20
		DIAZINON	057801	21	8
		CHLORPYRIFOS	059101	18	14
	Spiders	CHLORPYRIFOS	059101	36	16
		DIAZINON	057801	19	11
	Beetles	CARBARYL	056801	58	18
		CHLORPYRIFOS	059101	11	*
Insects & Other Invertebrates Continued	Mites	POTASSIUM SOAPS OF FATTY ACIDS	079021	37	31
		DICOFOL	010501	34	17
		MALATHION	057701	8	3
		ACEPHATE	103301	8	5

*Restricted Use Pesticide (RUP). Note that some AIs are in both RUP and general use products, for example, 2,4-B and picloram.
[2]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[3]Includes turf and ornamental, right-of-way, aquatic, industrial, institutional, structural and health-related and public health.
[4]Includes pests with at least 500 pounds total AIs and at least 10 observations.
[5]Consists of Codes 103601, 103604
[6]Consists of Codes 030019, 030035, 030063 (GUP)
[7]Consists of Codes 116002, 116004
[8]Consists of Codes 030019, 030035, 030063 (RUP)
[9]Consists of Codes 005102, 005104 (RUP)
[10]Consists of Codes 005102, 005104 (GUP)

Table 29. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Active Ingredient (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Active Ingredients (AI) Name	AI Code	Pounds (AI) Name	Standard Error (000)
	Ants - Fire	ACEPHATE	103301	41	8
		CHLORPYRIFOS	059101	15	8
		DIAZINON	057801	10	5
	Caterpillars/Moths	CARBARYL	056801	33	15
	Flies Gnats Midges	CARBARYL	056801	9	-
		CHLORPYRIFOS	059101	8	6
	Nematodes	CARBARYL	056801	18	16
	Ticks	DIAZINON	057801	8	3
		CHLORPYRIFOS	059101	5	3
Plants/Weeds	Broadleaf Weeds	2,4-D	030019	3,225	533
		GLYPHOSATE, SALT	103601	2,038	595
		DIURON	035505	1,731	1,269
		PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN	031519	1,386	397
		TRICLOPYR	116004	838	295
		SIMAZINE	080807	812	536
		PENDIMETHALIN	108501	705	398
		MCPA, DIMETHYLAMINE SALT	030516	475	153
		2,4-D	030019	385	148
		DICAMBA, DIMETHYLAMINE SALT	029802	323	67
		PICLORAM, SALT	005102	235	80
		ORYZALIN	104201	232	70
		ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 2-B	030053	126	55
		PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-	031453	84	46
		IMAZAPYR, ISOPROPYLAMINE SALT	128829	70	42
		SULFOMETURON METHYL	122001	53	29
		2-ETHYL-4-METHYLPENTYL 2,4-DICHLOROPHENO	030064	52	19
Plants/Weeds (Continued)	Broadleaf Weeds (Continued)	TEBUTHIURON	105501	48	17
		PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-	031463	43	21
		PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-	031419	42	16
		MECOPROP	031501	34	17
		ATRAZINE	080803	33	14

*Restricted Use Pesticide (RUP). Note that some AIs are in both RUP and general use products, for example, 2,4-B and picloram
[2]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[3]Includes turf and ornamental; right-of-way; aquatic, industrial, institutional, structural and health-related; and public health
[4]Includes pests with at least 500 pounds total AIs and at least 10 observations
[5]Consists of Codes 103601, 103604
[6]Consists of Codes 030019, 030035, 030063 (GUP)
[7]Consists of Codes 116002, 116004
[8]Consists of Codes 030019, 030035, 030063 (RUP)
[9]Consists of Codes 005102, 005104 (RUP)
[10]Consists of Codes 005102, 005104 (GUP)

Table 29. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Active Ingredient (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Active Ingredients (AI) Name	AI Code	Pounds (AI) Name	Standard Error (000)
		CHLORPYRIFOS	059101	29	27
		ACETIC ACID, (2,4-DICHLOROPHENOXY)-, COM	030016	17	5
		DICHLOBENIL	027401	14	7
		ATRAZINE	032201	14	5
		BROMACIL, LITHIUM SALT	012302	12	7
		PICLORAM, SALT	005102	12	7
		BENFLURALIN	084301	10	5
		ISOXABEN	125851	10	5
		OXADIAZON	109001	9	6
		PROMETON	080804	7	4
		TRIFLURALIN	036101	7	2
		DITHIOPYR	128994	6	4
	Annual Grasses	GLYPHOSATE, SALT	103601	590	158
		PENDIMETHALIN	108501	360	176
		DIURON	035505	318	145
		PRODIAMINE	110201	57	40
		BENFLURALIN	084301	55	30
		ORYZALIN	104201	51	18
		SIMAZINE	080807	44	13
		TRIFLURALIN	036101	33	15
		BENSULIDE	009801	20	11
		SULFOMETURON METHYL	122001	14	7
		2,4-D	030019	12	4
		ATRAZINE	032201	9	3
		OXADIAZON	109001	7	3
		PROMETON	080804	6	3
Plants/Weeds (Continued)	Annual Grasses (Continued)	PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN	031519	5	3
	Crabgrass	PENDIMETHALIN	108501	747	318
		PRODIAMINE	110201	[illegible]	52
		BENFLURALIN	084301	43	14
		2,4-D	030019	28	15
		SIDURON	035509	26	18

*Restricted Use Pesticide (RUP). Note that some AIs are in both RUP and general use products, for example, 2,4-B and picloram.
[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic, industrial, institutional, structural and health-related; and public health.
[3]Includes pests with at least 500 pounds total AIs and at least 10 observations.
[4]Consists of Codes 103601, 103604
[5]Consists of Codes 030019, 030035, 030063 (GUP)
[6]Consists of Codes 116002, 116004
[7]Consists of Codes 030019, 030035, 030063 (RUP)
[8]Consists of Codes 005102, 005104 (RUP)
[9]Consists of Codes 005102, 005104 (GUP)

Table 29. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Active Ingredient (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Active Ingredients (AI) Name	AI Code	Pounds (AI) Name	Standard Error (000)
		DITHIOPYR	128994	21	10
		PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN	031519	15	8
		TRIFLURALIN	036101	12	4
		BENSULIDE	009801	11	4
		OXADIAZON	109001	[7]	5
		ORYZALIN	104201	[7]	3
		GLYPHOSATE, SALT	103601	5	3
	Perennial Grasses	GLYPHOSATE, SALT	103601	334	104
		DIURON	035505	181	136
		ORYZALIN	104201	30	19
		SIMAZINE	080807	18	11
	Woody Brush/Vines	FOSAMINE AMMONIUM	106701	186	101
		TRICLOPYR	116004	137	49
		2,4-D	030019	[7]9	38
		GLYPHOSATE, SALT	103601	50	30
		PICLORAM, SALT	005102	13	9
		ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 2-B	030053	12	8
		IMAZAPYR, ISOPROPYLAMINE SALT	128829	9	[7]
		PICLORAM, SALT	005102	9	6
		DICAMBA, DIMETHYLAMINE SALT	029802	[7]	6
	Weeds & Grasses	GLYPHOSATE, SALT	103601	89	33
		DIURON	035505	21	12
	Nutsedge	SODIUM BENTAZON	103901	42	12
Plant Disease/Organisms	Brown Patch	CHLOROTHALONIL	081901	473	113
Plants Disease/Organisms (Continued)	Brown Patch (Continued)	MANCOZEB	014504	136	[7]4
		THIRAM	079801	81	60
		IPRODIONE	109801	67	18
		THIOPHANATE-METHYL	102001	24	10
		VINCLOZOLIN	113201	19	9
		PROPICONAZOLE	122101	12	5
		TRIADIMEFON	109901	10	3
		PENTACHLORONITROBENZENE	056502	5	3

*Restricted Use Pesticide (RUP). Note that some AIs are in both RUP and general use products, for example, 2,4-B and picloram.
[1]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Includes pests with at least 500 pounds total AIs and at least 10 observations.
[4]Consists of Codes 103601, 103604.
[5]Consists of Codes 030019, 030035, 030063 (GUP).
[6]Consists of Codes 116002, 116004.
[7]Consists of Codes 030019, 030035, 030063 (RUP).
[8]Consists of Codes 005102, 005104 (RUP).
[9]Consists of Codes 005102, 005104 (GUP).

Table 29. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Active Ingredient (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Active Ingredients (AI) Name	AI Code	Pounds (AI) Name	Standard Error (000)
	Misc Plant Diseases	PENTACHLORONITROBENZENE	056502	143	27
		THIOPHANATE-METHYL	102001	27	11
		CHLOROTHALONIL	081901	22	9
		MANCOZEB	014504	19	7
		COPPER HYDROXIDE	023401	15	11
		MERCUROUS CHLORIDE	052201	14	4
		CHLORONEB	027301	12	5
		TRIADIMEFON	109901	10	5
		IPRODIONE	109801	7	6
	Blights	CHLOROTHALONIL	081901	153	106
		FOSETYL-AL	123301	72	27
		METALAXYL	113501	58	11
		PROPAMOCARB HYDROCHLORIDE	119302	58	19
		MANCOZEB	014504	37	18
		CHLORONEB	027301	37	22
		THIOPHANATE-METHYL	102001	25	16
		IPRODIONE	109801	7	5
	Dollar Spot	CHLOROTHALONIL	081901	253	56
		MANCOZEB	014504	79	57
		VINCLOZOLIN	113201	30	14
		IPRODIONE	109801	25	10
		TRIADIMEFON	109901	13	6
		THIOPHANATE-METHYL	102001	16	4
Plant Disease/Organisms (Continued)	Dollar Spot (Continued)	ANILAZINE	080811	12	7
		PROPICONAZOLE	122101	10	3
	Leaf Spot	CHLOROTHALONIL	081901	62	30
		MANCOZEB	014504	42	20
		ANILAZINE	080811	25	12
		IPRODIONE	109801	20	6
		VINCLOZOLIN	113201	10	7
	Fungus	CHLOROTHALONIL	081901	45	22
		DISODIUM OCTABORATE TETRAHYDRATE	011103	26	25

[1]Restricted Use Pesticide (RUP). Note that some AIs are in both RUP and general use products, for example, 2,4-B and picloram.
Source: questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
Includes pests with at least 500 pounds total AIs and at least 10 observations.
[3]Consists of Codes 103601, 103604.
[4]Consists of Codes 030019, 030035, 030063 (GUP).
[5]Consists of Codes 116002, 116004.
[6]Consists of Codes 030019, 030035, 030063 (RUP).
[7]Consists of Codes 005102, 005104 (RUP).
[8]Consists of Codes 005102, 005104 (GUP).

Table 29. Outdoors Pesticide Usage[1] by Type of Pest, Principal Outdoor Pest and Active Ingredient (Continued):

1993 C/CPAS Results for the Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Type of Pest	Principal Outdoor Pest[3]	Active Ingredients (AI) Name	AI Code	Pounds (AI) Name	Standard Error (000)
		MANCOZEB	014504	10	6
		THIOPHANATE-METHYL	102001	6	3
Aquatic Pests	Algae	COPPER TRIETHANOLAMINE COMPLEX	024403	38	19
		MANCOZEB	014504	37	15
		SIMAZINE	080807	6	5
	Aquatic Weeds-Submerged	ATRAZINE	032201	54	26
		ENDOTHALL, DIPOTASSIUM SALT	038904	41	21
		GLYPHOSATE, SALT	103601	6	2

[1]Restricted Use Pesticide (RUP). Note that some AIs are in both RUP and general use products, for example, 2,4-B and picloram.
[2]Source questions Q12, Q14, Q15, Q17d and Q17f (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[3]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[4]Includes pests with at least 500 pounds total AIs and at least 10 observations.
[5]Consists of Codes 103601, 103604.
[6]Consists of Codes 030019, 030035, 030063 (RUP).
[7]Consists of Codes 030019, 030035, 030063 (RUP).
[8]Consists of Codes 005102, 005104 (RUP).
[9]Consists of Codes 116002, 116004.
[10]Consists of Codes 005102, 005104 (GUP).

Appendix A

C\CPAS Questionnaire

Appendix A contains a modified version of the 1993 Certified/Commercial Pesticide Applicator Survey (C/CPAS) questionnaire. For simplicity, we included only the first pesticide table in this appendix. The remaining 19 pesticide tables, that appear on pages 6 through 24 of the questionnaire, are identical to the first.

Certified/Commercial Pesticide Applicator Survey Questionnaire

OMB N 0131
Expirai . 10/31/96

I. Identification

II. Interviewing Result Codes

Pending Codes (Use in Section III)
01 = Appointment made
02 = Broken appointment
03 = Abstraction appointment
04 = Temporarily away
05 = Unable to contact
06 = Unable to locate
07 = Refusal
08 = Refusal, abstraction
09 = Language barrier (SPECIFY) _____
10 = Other (SPECIFY) _____

Final Codes – (Use in Section III)
11 = Questionnaire only complete
12 = Questionnaire/Abstraction complete
13 = Questionnaire complete/no records
14 = Ineligible

Final Codes – (Do Not Use in Section III)
15 = Respondent away during survey
16 = Unable to contact
17 = Unable to locate
18 = Refusal, no data
19 = Refusal, partial questionnaire
20 = Refusal, partial abstraction
21 = Refusal, no abstraction
22 = Language barrier (SPECIFY) _____
23 = Out of business
24 = Other (SPECIFY) _____

Final Result Code

Date [ ][ ] [ ][ ] Time [ ][ ] : [ ][ ] AM PM Approved final result code: [ ][ ]

Interviewer ID [ ][ ][ ][ ][ ][ ] Supervisor _____

III. Record of Attempts to Conduct Interview

Date Month	Date Day	Time Hour	Time Minute		Interview Result Code	Interviewer ID	Description of Result
[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	AM/PM	[ ][ ]	[ ][ ][ ][ ][ ][ ]	_____
[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	AM/PM	[ ][ ]	[ ][ ][ ][ ][ ][ ]	_____
[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	AM/PM	[ ][ ]	[ ][ ][ ][ ][ ][ ]	_____
[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	AM/PM	[ ][ ]	[ ][ ][ ][ ][ ][ ]	_____
[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	AM/PM	[ ][ ]	[ ][ ][ ][ ][ ][ ]	_____
[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	AM/PM	[ ][ ]	[ ][ ][ ][ ][ ][ ]	_____
[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	AM/PM	[ ][ ]	[ ][ ][ ][ ][ ][ ]	_____
[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	AM/PM	[ ][ ]	[ ][ ][ ][ ][ ][ ]	_____

1. **THE SELECTED UNIT IS:**

BUSINESS 1
INDIVIDUAL APPLICATOR . . . . . 2 → *(GO TO Q.3)*

2. **Does this business provide insect, weed or other pest control services in nonagricultural areas for a fee?**

YES . . . . . 1 → *(GO TO Q.6)*
NO . . . . . 2 → **STOP. THANK RESPONDENT**

3. **Do you work for a licensed, commercial pesticide application business?**

YES . . . . . 1 → **STOP. THANK RESPONDENT**
NO 2

4. **Do you provide insect, weed or other pest control services in nonagricultural areas for your employer as part of your duties?**

YES 1
NO . . . . . 2 → **STOP. THANK RESPONDENT**

5. **What kind of business do you work for?**

Golf Course 1
Nursery 2
Food Processor 3
Hospital or Related Institution 4
Public or Government 5
Eating Establishment 6
Utility 7
Commercial Transportation 8
OTHER COMMERCIAL OR INDUSTRIAL 9
OTHER *(SPECIFY)*_____ 10
REFUSED 11

6. **(Have you/Has this business) provided insect, weed or other pest control services in the past 12 months?**

YES 1

NO ..... 2 → **STOP. THANK RESPONDENT**

INTERVIEWER CHECKPOINT: *IF SELECTED UNIT IS A BUSINESS, GO TO Q.7. IF SELECTED UNIT IS AN INDIVIDUAL, GO TO Q.12.*

7. **Does this business have more than one office or location that provides insect, weed or other pest control services?**

YES 1

NO ..... 2 → *(GO TO Q.9a)*

8a. **Can you provide information about the pesticide products and associated amounts used at this location separately from what is used at the other locations?**

YES ..... 1 → *(GO TO Q.9a)*

NO 2

8b. **In order to properly analyze the data, I need the name and address for each location that will be included in the information you provide.**

NAME:	1. _____	2. _____	3. _____
ADDRESS 1:	_____	_____	_____
ADDRESS 2:	_____	_____	_____
CITY, STATE:	_____	_____	_____
ZIP CODE:	_____	_____	_____

9a. Does this business offer insect, weed or other pest control services through any firm having another name?

YES 1

NO . . . . . 2 → *(GO TO Q.10a)*

9b. What is the name and address of all such firms?

NAME:	1. _____	2. _____	3. _____
ADDRESS 1:	_____	_____	_____
ADDRESS 2:	_____	_____	_____
CITY, STATE	_____	_____	_____
ZIP CODE	_____	_____	_____

10a. During the past twelve months, has this firm merged with any other pest control service firm?

YES 1

NO . . . . . 2 → *(GO TO Q.11a)*

10b. What is the name and former address of the firm(s) with whom you merged?

NAME:	1. _____	2. _____	3. _____
ADDRESS 1:	_____	_____	_____
ADDRESS 2:	_____	_____	_____
CITY, STATE:	_____	_____	_____
ZIP CODE:	_____	_____	_____

11a. During the past twelve months, has this firm split to form two or more separate operating firms?

YES 1

NO . . . . . 2 → *(GO TO Q.12)*

11b. What is the name and address of the firm(s) that split from this firm?

NAME:	1. _____	2. _____	3. _____
ADDRESS 1:	_____	_____	_____
ADDRESS 2:	_____	_____	_____
CITY, STATE	_____	_____	_____
ZIP CODE	_____	_____	_____

12. I now need to list all the pesticides (you/your business) applied during 1993 as a paid service or used on the business property.

ASK FOR PESTICIDE PRODUCT FORM. IF COMPLETE, COPY PRODUCT INFORMATION INTO PESTICIDE TABLE AND ASK Q.13 AND Q.16a-17f FOR EACH PRODUCT. IF INCOMPLETE, CONTINUE WITH Q.12.

Let's start with restricted-use pesticides. Please give me the product names as they appear on the labels.

ENTER EACH PRODUCT NAME REPORTED IN Q.12 OF THE PESTICIDE TABLE. AFTER RECORDING THE LAST PRODUCT AND BEFORE ASKING ABOUT ANOTHER GROUP OF PRODUCTS, ASK: ANY OTHER [PRODUCT GROUP]?

A. *WHEN ALL RESTRICTED-USE PESTICIDES ARE RECORDED, ASK:* **What are the herbicides (you/your business) used?**

B. *WHEN ALL HERBICIDES ARE RECORDED, ASK:* **What are the insecticides (you/your business) used?**

C. *WHEN ALL INSECTICIDES ARE RECORDED, ASK:* **What are the fungicides (you/your business) used?**

D. *WHEN ALL FUNGICIDES ARE RECORDED, ASK:* **What are the rodenticides (you/your business) used?**

E. *WHEN ALL RODENTICIDES ARE REPORTED, ASK:* **Are there are any other pesticides that (you/your business) used [such as termiticides, nematicides, growth regulators, biocides, or other EPA registered products]?**

FOR EACH PRODUCT LISTED IN THE PESTICIDE TABLE, ASK QUESTIONS 13-17f BEFORE GOING TO THE NEXT PRODUCT.

PESTICIDE TABLE 1

12. PRODUCT NAME AS IT APPEARS ON THE LABEL.

_____

_____

13. Look at Card A and tell me the code for the formulation of this product.

[ ][ ]

a. *IF CODE=30, THEN ASK THE RESPONDENT TO SPECIFY THE FORMULATION.*

_____

14. What is the EPA Registration Number for [PRODUCT]?

EPA REG. NO. _____

IF NOT AVAILABLE, ENTER "DK" ABOVE AND ASK:

a. Who is the manufacturer of [PRODUCT]?

_____

b. What is the percent of active ingredient for this product? *If more than one A.I.* Enter Name:

(i) [ ][ ].[ ][ ] % _____

(ii) [ ][ ].[ ][ ] % _____

c. What is the brand name of this product?

_____

15. What was the total amount of [PRODUCT] applied by (you/your business) during 1993?

[ ][ ][ ][ ][ ][ ].[ ]

OUNCES 1
QUARTS 2
GALLONS 3
POUNDS 4
OTHER /*SPECIFY* _____) 5

16a. Is this the amount of the concentrated, ready-to-use, or the diluted product?

CONCENTRATED/READY-TO-USE . . . . . 1 → *(GO TO Q.17a)*
DILUTED 2

16b. What dilution rate does this amount represent?

[ ][ ].[ ][ ] %

17a. Using Card B, tell me the code for the site where [PRODUCT] was applied (most/next most) frequently. RECORD IN COLUMN A.

17b. What percent of the total product amount was used on this site? RECORD IN COLUMN B.

17c. Of the [TOTAL %] used on [SITE], what percent was used indoors? RECORD IN COLUMN C.

17d. Of the [TOTAL %] used on [SITE], what percent was used outdoors? RECORD IN COLUMN D.

17e. What was the most common target pest for the indoor site? RECORD IN COLUMN E.

17f. What was the most common target pest for the outdoor site? RECORD IN COLUMN F.

(A) Site	(B) Total (%)	(C) Indoor (%)	(D) Outdoor (%)	(E) Indoor Pest	(F) Outdoor Pest
[ ]	[ ][ ][ ]	[ ][ ][ ]	[ ][ ][ ]	_____	_____
[ ]	[ ][ ][ ]	[ ][ ][ ]	[ ][ ][ ]	_____	_____
[ ]	[ ][ ][ ]	[ ][ ][ ]	[ ][ ][ ]	_____	_____
[ ]	[ ][ ][ ]	[ ][ ][ ]	[ ][ ][ ]	_____	_____
[ ]	[ ][ ][ ]	[ ][ ][ ]	[ ][ ][ ]	_____	_____
[ ]	[ ][ ][ ]	[ ][ ][ ]	[ ][ ][ ]	_____	_____

5

INTERVIEWER INSTRUCTION

WHEN MORE THAN 20 PRODUCTS ARE REPORTED, COMPLETE A PESTICIDE TABLE CONTINUATION SHEET FOR EACH ADDITIONAL PRODUCT AND RECORD THE TOTAL NUMBER OF TABLES BELOW. RECORD THE CASE IDENTIFICATION NUMBER ON EACH SHEET.

NUMBER OF PESTICIDE TABLES: ☐☐

SKIP: *IF THE RESPONDENT IS AN INDIVIDUAL APPLICATOR (NOT A BUSINESS) THEN SKIP TO Q.23 ON THE NEXT PAGE.*

18. Since your business varies with the time of the year, the next questions ask about year-round employees and seasonal employees. How many year-round employees does this business have who are pesticide applicators?

☐☐

19. How many persons does this business hire on a seasonal basis as pesticide applicators?

☐☐

20. How many of the year-round employees of this business are certified applicators, that is persons certified to apply restricted use pesticides?

☐☐

SKIP: *IF Q.19 = "00", SKIP TO Q.22.*

21. How many of the seasonal applicators are certified applicators, that is persons certified to apply restricted use pesticides?

☐☐

22. How many of the year-round applicators who are certified to apply restricted use pesticides regularly do pesticide applications?

☐☐

STOP. THANK RESPONDENT

23. **Are you certified to apply restricted use pesticides?**

YES 1
NO 2
DON'T KNOW 8
REFUSED 9

24. **Is the information you provided about pesticide usage for the entire business you work for or just what you yourself applied?**

BUSINESS 1
PERSONAL . . . . . 2 → **STOP. THANK RESPONDENT**

25. **How many persons, including yourself, who work for this business are certified to apply restricted use pesticides?**

[ ][ ]

26. **How many year-round employees does this business have who make pesticide applications?**

[ ][ ]

27. **How many persons does this business hire on a seasonal basis who make pesticide applications?**

[ ][ ]

28. **How many of the year-round employees who are certified to apply restricted use pesticides regularly do pesticide applications?**

[ ][ ]

STOP. THANK RESPONDENT

CARD B

SITE TREATED CODES - QUESTIONNAIRE

1 **RESIDENTIAL - Permanent single and multi-family housing.**
Examples: Single family homes, mobile homes, apartments, condominiums, retirement homes, common areas between buildings, vegetable gardens.

2 **RECREATION AREAS - Private and public recreation areas located both indoors and outdoors.**
Examples: Domed stadiums, athletic clubs, golf courses, ball fields, school playgrounds/recreational areas, etc.

3 **MEDICAL - Medical facilities and public health services.**
Examples: Hospitals, doctor's offices, nursing homes, health departments, etc.

4 **PUBLIC/PRIVATE SANITATION AND UTILITIES**
Examples: Government water treatment and sewage facilities. Electric, telephone, gas, and water utility right of ways.

5 **COMMERCIAL OFFICE/RETAIL BUSINESS/PUBLIC BUILDINGS**
Examples: Office buildings/retail businesses like banks, restaurants, hotels, convenience stores, etc. Public buildings including police departments, fire stations, community centers, courthouses, post offices, libraries, schools, prisons, etc.

6 **COMMERCIAL WHOLESALE/MANUFACTURING BUSINESS**
Examples: Furniture factory, potato chip factory, pharmaceutical company, etc. Includes commodity/food storage areas, transport vehicles, and facilities.

7 **COMMERCIAL - INDETERMINATE**

8 **AGRICULTURAL**
Examples: Field crops, livestock farms, fruit and nut orchards, seed crops, vegetables, shellfish production, bees, and forest products.

9 **OTHER**

DEFINITION FOR INDOOR/OUTDOOR APPLICATIONS

INDOOR For the purposes of this study we have defined indoor applications to include all living space and unoccupied areas such as basements, crawl spaces, and garages.

OUTDOOR Except as noted above.

Appendix B

List of Complete Active Ingredient Names

Complete Active Ingredient Names Ordered by Active Ingredient Code

AI Code	Active Ingredient (AI) Name
000701	ACROLEIN
004003	D-TRANS-ALLETHRIN
004004	S-BIOALLETHRIN
004401	AMITROLE
004901	MUSTARD OIL
005102	PICLORAM, SALT
005103	PICLORAM, ISOOCTYL ESTER
005501	AMMONIUM SYLFAMATE
006310	STREPTOMYCIN SESQUISULFATE
006315	HALOBROM
006321	CALCIUM OXYTETRACYCLINE
006400	BACILLUS THURINGIENSIS, BERLINER
006401	BACILLUS THURINGIENSIS, ISRAELENSIS
006402	BACILLUS THURINGIENSIS, KURSTAKI
006601	ESPESOL 3A
007001	ARSENIC TRIOXIDE
008101	BASIC COPPER SULFATE
008102	BASIC COPPER III - ZINC SULFATE COMPLEX
008711	TRIMETHYLBENZYL AMMONIUM RESIN
009001	LINDANE
009801	BENSULIDE
010501	DICOFOL
011001	BORIC ACID
011102	BORAX
011103	DISODIUM OCTABORATE TETRAHYDRATE
011104	SODIUM METABORATE
011107	DISODIUM OCTABORATE TETRAHYDRATE
011402	POLYBUTENE
011403	POLYISOBUTYLENE
011501	BUTOXYETHANOL
011901	BUTOXYPOLYPROPYLENE GLYCOL
012301	BROMACIL
012302	BROMACIL, LITHIUM SALT
012501	CACODYLIC ACID
012502	CACODYLIC ACID, SODIUM SALT
012701	TERBACIL
013505	SODIUM ARSENATE
013802	DSMA
013803	MSMA
013804	OAMA
013805	DDAMA
013806	CAMA
014503	NABAM
014504	MANCOZEB
014505	MANEB

2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

Complete Active Ingredient Names Ordered by Active Ingredient Code

AI Code	Active Ingredient (AI) Name	
014701	CALCIUM HYPOCHLORITE	
014703	SODIUM HYPOCHLORITE	
018101	CHLORMEQUAT CHLORIDE	
021901	CITRONELLA OILS	
022703	COPPER AMMONIUM CARBONATE	
023102	COPPER NAPHTENATE	
023104	COPPER RESONATE	
023304	COPPER OLEATE	
023401	COPPER HYDROXIDE	
023503	COPPER OXYCHLORIDE SULFATE	
024002	OXINE-COPPER	
024401	COPPER SULFATE PENTAHYDRATE	
024403	COPPER TRIETHANOLAMINE COMPLEX	
024405	CHELATES OF COPPER GLUCONATE	
024407	COPPER ETHYLENEDIAMINE COMPLEX	
025003	COAL TAR CRESOTE OILS	
025004	COAL TAR CREOSOTE	
025601	COPPER(I) OXIDE	
027301	CHLORONEB	
027401	DICHLOBENIL	
027501	DIENOCHLOR	
028501	HYDANTOIN	
028902	SODIUM DALAPON	
029801	DICAMBA	
029802	DICAMBA, DIMETHYLAMINE SALT	
029803	DICAMBA, DIETHANOLAMINE SALT	
029806	DICAMBA, SODIUM SALT	
030016	ACETIC ACID, (2,4-DICHLOROPHENOXY)-, COM	
030019	2,4-D	3
030025	ACETIC ACID	
030029	ACETIC ACID	
030033	ACETIC ACID	
030034	ACETIC ACID	
030053	ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 2-B	
030064	2-ETHYL-4-METHYLPENTYL 2,4-DICHL	
030501	MCPA	
030502	MCPA, SODIUM SALT	
030511	MCPA, DIETHANOLAMINE SALT	
030516	MCPA, DIMETHYLAMINE SALT	
030553	MCPA, BUTOXYETHYL ESTER	
030563	MCPA, ISOOCTYL ESTER	
031401	DICHLORPROP	
031419	PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-	
031453	PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-	
031463	PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-	

2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

Complete Active Ingredient Names Ordered by Active Ingredient Code

AI Code	Active Ingredient (AI) Name
031501	MECOPROP
031503	POTASSIUM 2-(2-METHYL-4-CHLOROPHENOXY)PROPIONATE
031516	PROPANOIC ACID
031519	PROPANOIC ACID, 2-(4-CHLORO-2-METHY_PHEN
031563	PROPANOIC ACID
031602	COTTONSEED OIL
031605	SOYBEAN OIL
031801	AMMONIUM SALTS OF C8-C18 AND C18' FATTY ACIDS
032201	ATRAZINE
032501	DISULFOTON
034001	METHOXYCHLOR
034401	NALED
034801	FERRIC DIMETHYLDITHIOCARBAMATE
034804	SODIUM DIMETHYLDITHIOCARBAMATE
034805	ZINC DIMETHYLIDITHIOCARBAMATE
034902	FERRIC SULFATE
035001	DIMETHOATE
035101	DAMINOZIDE
035201	DICROTOPHOS
035302	BROMOXYNIL OCTANOATE
035303	BROMOXYNIL BUTYRATE
035503	FLUOMETURON
035505	DIURON
035506	LINURON
035509	SIDURON
035602	DAZOMET
035603	2-(THIOCYANOMETHYLTHIO) BENZOTHIAZOLE
036101	TRIFLURALIN
036201	3-TRIFLUOROMETHYL-4-NITROPHENOL
037801	DIOXATHION
038903	ENDOTHALL, DISODIUM SALT
038904	ENDOTHALL, DIPOTASSIUM SALT
038905	ENDOTHALL, MONO(N,N-DIMETHYLCOCOAMINE) SALT
039002	POTASSIUM N-METHYLDITHIOCARBAMATE
039003	METAM-SODIUM
039105	COPPER ETHYLENEDIAMINETETRAACETATE
040502	LEMONGRASS OIL
040517	ORANGE OIL
041101	ETHOPROP
041401	EPTC
041405	BUTYLATE
041701	FONOFOS
042003	EDC
042203	ETHYLENE GLYCOL
042301	ETHYLENE OXIDE

2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

Complete Active Ingredient Names Ordered by Active Ingredient Code

AI Code	Active Ingredient (AI) Name
043801	GIBBERELLIC ACID
044301	DODINE
044901	HEXACHLOROPHENE
045901	HYDROGEN CHLORIDE
046701	IBA
046903	NONYLPHENOXYPOLYETHOXYETHANOL - IODINE COMPLEX
046904	POLYETHOXYPOLYPROPOXYETHANOL - IODINE COMPLEX
047201	DIPROPYL ISOCINCHOMERONATE
047802	PROPOXUR
050507	FERROUS SULFATE MONOHYDRATE
051503	MALEIC HYDRAZIDE, POTASSIUM SALT
052001	MERCURIC CHLORIDE
052201	MERCUROUS CHLORIDE
053001	METALDEHYDE
053201	METHYL BROMIDE
053301	FENTHION
053501	METHYL PARATHION
054101	CHINOMETHIONATE
055801	NAPHTHALENE
056001	NAD
056002	NAA
056004	AMMONIUM 1-NAPHTHALENEACETATE
056007	SODIUM 1-NAPHTHALENEACETATE
056502	PENTACHLORONITROBENZENE
056702	NICOTINE
056801	CARBARYL
057001	N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE
057201	PHORATE
057501	PARATHION
057701	MALATHION
057801	DIAZINON
057901	TRICHLORFON
058001	AZINPHOS-METHYL
058102	CARBOPHENOTHION
058201	CHLORDANE
058401	ETHION
058702	OXYDEMETON-METHYL
058802	SODIUM 5-CHLORO-2-(4-CHLORO-2-(3-(3,4-DICHLOROPHENYL
059001	TEMEPHOS
059101	CHLORPYRIFOS
059102	CHLORPYRIFOS-METHYL
059201	PHOSMET
060102	THIABENDAZOLE HYPOPHOSPHITE
061601	PARAQUAT DICHLORIDE
062201	2-BENZYL-4-CHLOROPHENOI

2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

Complete Active Ingredient Names Ordered by Active Ingredient Code

AI Code	Active Ingredient (AI) Name
063001	PCP
063301	DISODIUM CYANODITHIOIMIDOCARBONATE
063501	KEROSENE
063502	MINERAL OIL - INCLUDES PARAFFIN OIL FROM 063503
064103	O-PHENYLPHENOL
066003	PHENYLMERCURIC ACETATE
066501	ALUMINUM PHOSPHIDE
066504	MAGNESIUM PHOSPHIDE
067002	PINE OIL
067501	PIPERONYL BUTOXIDE
067701	DIPHACINONE
067703	PINDONE
067704	PINDONE SODIUM SALT
067705	DIPHACINONE, SODIUM SALT
067706	CALCIUM 2-ISOVALERYL-1,3-INDANDIONE
067707	CHLOROPHACINONE
068102	METHYLENEBIS(THIOCYANATE)
068103	METHYL MUSTARD OIL
068302	POTASSIUM DICHROMATE
068501	POTASSIUM PERMANGANATE
068603	PROPYLENE GLYCOL
069001	PYRETHRINS
069003	TETRAMETHRIN
069005	PHENOTHRIN
069104	ALKYL* DIMETHYL BENZYL AMMONIUM CHLORIDE
069105	ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORIDE*(50%C14,40%C12,10%C16)
069106	QUATERNARY AMMONIUM COMPOUNDS, ALKYLBENZ
069111	ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORIDE
069141	QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C1
069149	1-DECANAMINIUM, N-DECYL-N,N-DIMETHYL-, C
069154	ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORIDE*(68% C12)
069165	1-DECANAMINIUM, N,N-DIMETHYL-N-OCTYL-, C
069166	1-OCTANAMINIUM, N,N-DIMETHYL-N-OCTYL-, C
069183	POLY(OXY-1,2-ETHANEDIYL(DIMETHYLIMINO)-1
069189	QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C1
069201	AMINOPYRIDINE
071003	ROTENONE
071004	CUBE RESINS OTHER THAN ROTENONE
072602	SILICA GEL
072605	SILICON DIOXIDE
073301	SODIUM CHLORATE
075202	SODIUM FLUORIDE
076103	POTASSIUM NITRATE
076601	METHYL SALICYLATE
076702	CALCIUM POLYSULFIDE

2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

Complete Active Ingredient Names Ordered by Active Ingredient Code

AI Code	Active Ingredient (AI) Name
076901	STRYCHNINE
077401	NICLOSAMIDE
077501	SULFUR
077901	SULFAQUINOXALINE
078003	SULFURYL FLUORIDE
078701	CHLORTHAL DIMETHYL
078802	TRIALLATE
079021	POTASSIUM SOAPS OF FATTY ACIDS
079401	ENDOSULFAN
079501	SULFOTEPP
079701	DIPENTENE
079801	THIRAM
080301	DIETHYL TOLUAMIDE
080402	THYMOL
080501	TOXAPHENE
080801	AMETRYN
080803	ATRAZINE
080804	PROMETON
080807	SIMAZINE
080811	ANILAZINE
081201	TRICHLOROETHANE
081301	CAPTAN
081501	CHLOROPICRIN
081901	CHLOROTHALONIL
082001	2,4,5-T
083001	TRIBUTYLTIN OXIDE
083112	TRIBUTYLTIN FLUORIDE
083120	TRIBUTYLTIN METHACRYLATE
083701	TETRACHLORVINPHOS
083902	TRIS(HYDROXYMETHYL)NITROMETHANE
084001	DICHLORVOS
084301	BENFLURALIN
084701	ETRIDIAZOLE
086002	WARFARIN
086003	SODIUM WARFARIN
087801	ZINC CHLORIDE
088301	ZINC NAPHTHENATE
088601	ZINC PHOSPHIDE (ZN3P2)
090202	OXYCARBOXIN
090301	METHOMYL
090501	ALACHLOR
090601	CARBOFURAN
097003	PIPERALIN
097801	RESMETHRIN
098301	ALDICARB

2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

Complete Active Ingredient Names Ordered by Active Ingredient Code

AI Code	Active Ingredient (AI) Name	
098801	CHLORFLURENOL, METHYL ESTER	
098901	BENZISOTHIAZOLIN-3-ONE	
099101	BENOMYL	
099801	ETHEPHON	
100101	2-CHLORO-4-((1-CYANO-1-METHYLETHYL)AMINO)-6-(ETHYLAMINO)-S-TRIAZINE	
100501	METHIOCARB	
100601	FENAMIPHOS	
101101	METRIBUZIN	
101201	METHAMIDOPHOS	
101701	PROPYZAMIDE	
101801	DIBROMO-3-NITRILOPROPIONAMIDE	
102001	THIOPHANATE-METHYL	
103001	NAPROPAMIDE	
103201	MUSCALURE	
103301	ACEPHATE	
103401	THIOPHANATE	
103601	GLYPHOSATE, SALT	2
103801	OXAMYL	
103901	SODIUM BENTAZON	
104201	ORYZALIN	
104601	FENBUTATIN-OXIDE	
105001	TERBUFOS	
105101	EGG SOLIDS	
105201	BENDIOCARB	
105401	METHOPRENE	
105402	S-METHOPRENE	
105501	TEBUTHIURON	
105801	NORFLURAZON	
105901	FENITROTHION	
106701	FOSAMINE AMMONIUM	
106902	SODIUM ASULAM	
107103	3(2H)-ISOTHIAZOLONE, 5-CHLORO-2-METHYL-	
107104	METHYLISOTHIAZOLINONE	
107201	HEXAZINONE	
107502	2-PROPYNL(S-(E,E))	
107901	TRIFORINE	
108201	DIFLUBENZURON	
108501	PENDIMETHALIN	
108601	ANCYMIDOL(A-CYCLOPROPYL-A-(P-METHOXYPHENYL)-5-PYRIMIDINEMENE	
108801	METOLACHLOR	
109001	OXADIAZON	
109301	FENVALERATE	
109302	FLUVALINATE	
109303	ESFENVALERATE	
109401	ISOFENPHOS	

2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

Complete Active Ingredient Names Ordered by Active Ingredient Code

AI Code	Active Ingredient (AI) Name
109601	DIKEGULAC SODIUM
109701	PERMETHRIN, MIXED CIS,TRANS
109702	CYPERMETHRIN
109801	IPRODIONE
109901	TRIADIMEFON
110201	PRODIAMINE
110301	ERIOGLAUCINE
110302	TARTRAZINE
110401	DODEMORPH ACETATE
110601	ETHOFUMESATE
110902	DICLOFOP-METHYL
111401	PROFENOFOS
111601	OXYFLUORFEN
112001	3-(3-(4'BROMO-(1,1'BIPHENYL)-4-YL)-3-HYDROXY-1-PHENYLPROPL)-4-HYDROXYCOUMARIN
112602	TRINEXAPAC-ETHYL
112701	BRODIFACOUM
112802	BROMETHALIN
112900	FLURIDONE
113201	VINCLOZOLIN
113501	METALAXYL
113601	PROPETAMPHOS
114002	MEFLUIDIDE, DIETHANOLAMINE SALT
114402	SODIUM ACIFLUORFEN
114501	THIODICARB
115001	2-EEEBC
116001	TRICLOPYR
116004	TRICLOPYR 4
116801	CYTOKININ (AS KINETIN)
116901	N6-BENZYLADENINE
117401	CLOPYRALID, MONOETHANOLAMINE SALT
117403	CLOPYRALID
118401	HYDRAMETHYLNON
118601	2-CHLORSULFURON
119302	PROPAMOCARB HYDROCHLORIDE
121001	SETHOXYDIM
121501	TRALOMETHRIN
121601	CETOCHLOR
121701	SALANNIN
122001	SULFOMETURON METHYL
122010	METSULFURON-METHYL
122101	PROPICONAZOLE
122804	AVERMECTIN B1
122805	FLUAZIFOP-BUTYL
122809	FLUAZIFOP-R-BUTYL
123301	FOSETYL-AL

2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

Complete Active Ingredient Names Ordered by Active Ingredient Code

AI Code	Active Ingredient (AI) Name
124601	POE ISOOCTADECANOL
125301	FENOXYCARB
125401	CLOMAZONE
125601	PACLOBUTRAZOL
125701	FLURPRIMIDOL
125851	ISOXABEN
126901	ISAZOFOS
127901	FENPROPATHRIN
128001	AMIDOCHLOR
128501	SULFOSATE
128701	FENOXAPROP-ETHYL
128711	QUIZALOFOP-ETHYL
128825	BIFENTHRIN
128826	DICHLORO-5-ETHYL-5-METHYLHYDANTOIN
128829	IMAZAPYR, ISOPROPYLAMINE SALT
128831	CYFLUTHRIN
128838	LINALOOL
128840	IMAZAQUIN, MONOAMMONIUM SALT
128845	THIFENSULFURON METHYL
128857	MYCLOBUTANIL
128867	CYHALOTHRIN
128872	CARBENDAZIM
128879	TRIFLUMIZOLE
128887	TRIBENURON METHYL
128897	LAMBDA-CYHALOTHRIN
128901	CHLORIMURON-ETHYL
128923	IMAZETHAPYR, AMMONIUM SALT
128931	DICAMBA, DIGLYCOAMINE SALT
128946	BACILLUS THURINGIENSIS, SAN DIEGO
128966	(7S)-HYDROPRENE
128975	FLUTOLANIL
128992	OCTANESULFONAMIDE, N-ETHYL-1,1,2,2,3,3,4,4,5,5,6,6,7
128994	DITHIOPYR
129008	NICOSULFURON
129029	BERGAMOT OIL
129030	ALPHA-IONONE
129045	BENZYLDIETHYL METHYL
129056	METARHIZIUM ANISOPLIAE STRAIN ESF1
202901	CHOLECALCIFEROL
206600	FENARIMOL
208700	CHOLECALCIFEROL
417300	GLYPHOSATE
486300	HYDROPRENE
597501	TRANS-3,7-DIMETHYL-2,6-OCTADIEN-1-OL

2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

Appendix C

Expanded Versions of Table 12.

Table 12a. Not-for-hire Certified Applicators Pesticide Usage by Employer's Business Type, Pesticide Type, and Active Ingredient

Table 12b. For-hire Applicator Pesticide Usage by Pesticide Type and Active Ingredient

Appendix C contains two detailed versions of Table 12. Detailed Table 12a describes non-agricultural pesticide usage by not-for-hire certified applicators in the U.S. during 1993 by type of business of their employer, pesticide type, and active ingredient. Detailed Table 12b contains non-agricultural pesticide usage by for-hire applicators in the U.S. during 1993 by pesticide type and active ingredient.

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1] by Employer's Business Type, Pesticide Type, and Active Ingredient:

C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Total	All Types	All AIs[3]			29,578	6,803	100.0	6,133
	Herbicide	All AIs[3]			11,468	4,328	100.0	2,617
	Insecticide	All AIs[3]			7,204	1,722	100.0	1,613
	Fungicide	All AIs[3]			2,240	359	100.0	1,136
	Fumigant	All AIs[3]			1,851	1,213	100.0	32
	Other	All AIs[3]			255	66	100.0	492
	Multi Type	All AIs[3]			6,561	3,775	100.0	243
Golf Course	All Types	All AIs[3]			4,502	917	100.0	2,168
	Herbicide	All AIs[3]			1,097	197	100.0	824
		2,4-D	5	030019	203	54	18.5	125
		PENDIMETHALIN		108501	171	115	15.6	20
		GLYPHOSATE, SALT	4	103601	127	40	11.6	80
		PROPANOIC ACID, 2 (4-CHLORO 2-METHYLPHEN		031519	100	29	9.1	88
		SIMAZINE		080807	66	21	6.0	20
		ATRAZINE		032201	37	24	3.4	9
		SODIUM BENTAZON		103901	25	14	2.3	11
		ORYZALIN		104201	22	13	2.0	21

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60)

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Golf Course (Continued)	Herbicide (Continued)	BENSULIDE		009801	21	10	1.9	21
		SIDURON		035509	20	16	1.8	9
		TRICLOPYR	6	116004	18	12	1.6	13
		DICAMBA, DIMETHYLAMINE SALT		029802	17	5	1.5	90
		2-ETHYL-4-METHYLPENTYL 2,4-DICHLOROPHENO		030064	16	9	1.4	9
		ENDOTHALL, DIPOTASSIUM SALT		038904	15	14	1.3	5
		DITHIOPYR		128994	12	4	1.1	27
		MECOPROP		031501	12	9	1.1	10
		BENEFLURALIN		084301	12	6	1.0	18
		OXADIAZON		109001	10	6	0.9	16
		IMAZAPYR, ISOPROPYLAMINE SALT		128829	10	10	0.9	1
		PRODIAMINE		110201	8	3	0.7	13
		PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)		031463	6	3	0.6	7
		ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 2-B		030053	6	3	0.6	4
		PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)		031419	4	1	0.3	9
		ATRAZINE	*	080803	4	3	0.3	2
		ACETIC ACID, (2,4-DICHLOROPHENOXY)-, COM		030016	4	2	0.3	10
		PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)		031453	3	2	0.3	3

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Golf Course (Continued)	Herbicide (Continued)	MCPA, DIMETHYLAMINE SALT		030516	3	3	0.3	2
		TRIFLURALIN		036101	2	2	0.2	8
		ISOXABEN		125851	1	1	0.1	4
		PROMETON		080804	[10]	.	.	1
		DICHLOBENIL		027401			.	3
		PICLORAM, SALT	8 *	005102				1
		PICLORAM, SALT	9	005102	.	.	.	1
		Other RUPs[11]	*		14	7	1.3	18
		Other GUPs[11]			130	26	11.8	145
	Insecticide	All AIs[3]			607	142	100.0	291
		TRICHLORFON		057901	171	62	28.2	41
		CHLORPYRIFOS		059101	71	17	11.7	80
		FONOFOS		041701	51	26	8.4	11
		CARBARYL		056801	49	13	8.1	34
		BENDIOCARB		105201	43	33	7.1	6
		ACEPHATE		103301	43	16	7.1	13
		ISOFENPHOS		109401	29	12	4.8	28
		ISAZOFOS	*	126901	10	4	1.6	17

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Golf Course (Continued)	Insecticide (Continued)	FLUVALINATE	109302	1		0.1	5
		PERMETHRIN, MIXED CIS,TRANS	109701		·	0.1	2
		POTASSIUM SOAPS OF FATTY ACIDS	079021		·		2
		MALATHION	057701	·			4
		PYRETHRINS	069001	·	·	·	2
		Other RUPs[11]		129	105	21.3	23
		Other GUPs[11]		9	6	1.5	23
	Fungicide	All AIs[3]		1,988	344	100.0	885
		CHLOROTHALONIL	081901	810	175	40.8	139
		MANCOZEB	014504	321	90	16.2	68
		PENTACHLORONITROBENZENE	056502	141	29	7.1	37
		THIRAM	079801	138	69	6.9	25
		IPRODIONE	109801	90	19	4.5	96
		FOSETYL AL	123301	65	26	3.3	20
		PROPAMOCARB HYDROCHLORIDE	119302	58	19	2.9	35
		METALAXYL	113501	57	11	2.9	85
		VINCLOZOLIN	113201	53	18	2.7	35
		THIOPHANATE METHYL	102001	51	14	2.6	73

[*]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of codes 103601, 103604
[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of codes 116002, 116004
[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[8]Consists of codes 005102, 005104 (RUP)
[9]Consists of Codes 005102, 005104 (GUP)
[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60)

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Golf Course (Continued)	Fungicide (Continued)	CHLORONEB	027301	50	22	2.5	29
		TRIADIMEFON	109801	39	12	2.0	74
		ANILAZINE	080811	31	11	1.5	26
		PROPICONAZOLE	122101	26	6	1.3	56
		BENOMYL	099101	13	6	0.6	15
		FENARIMOL	206600	10	3	0.5	49
		SULFUR	077501	9	9	0.5	2
		Other GUPs[10]		26	17	1.3	21
	Fumigant	All AIs[3]				100.0	2
		ALUMINUM PHOSPHIDE *	066501			100.0	2
	Other	All AIs[3]		106	34	100.0	156
		MERCUROUS CHLORIDE	052201	13	4	12.7	29
		COPPER TRIETHANOLAMINE COMPLEX	024403	5	4	5.2	11
		N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE	057003		-		1
		Other RUPs[11] *		22	21	20.3	12
		Other GUPs[10]		65	23	61.8	103
	Multi-Type	All AIs[3]		703	696	100.0	10
		PIPERONYL BUTOXIDE	067501	3	2	0.4	5

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right of way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60)

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Golf Course (Continued)	Multi Type (Continued)	Other GUPs[11]			700	696	99.6	5
Nursery	All Types	All AIs[3]			240	100	100.0	243
	Herbicide	All AIs[3]			152	82	100.0	91
		GLYPHOSATE, SALT	4	103601	107	64	70.2	31
		2,4-D	5	030019	17	9	11.0	11
		ORYZALIN		104201	11	8	7.4	6
		TRICLOPYR	6	116004	4	4	2.4	2
		PROPANOIC ACID, 2-(4 CHLORO 2 METHYLPHEN		031519	3	3	1.9	6
		PENDIMETHALIN		108501	2	2	1.3	1
		ATRAZINE		032201	1	1	0.6	2
		BENEFLURALIN		084301	1	1	0.5	2
		MECOPROP		031501	1	1	0.4	1
		DICAMBA, DIMETHYLAMINE SALT		029802	1	1	0.4	6
		BENSULIDE		009801	-	-	0.3	2
		OXADIAZON		109001	-		0.3	4
		TRIFLURALIN		036101				1
		PROPANOIC ACID, 2 (2,4 DICHLOROPHENOXY)		031463	-	-	-	1
		2 ETHYL-4 METHYLPENTYL 2,4 DICHLOROPHENO		030064	-	-	-	1

[1]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[2]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[3]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of codes 103601, 103604
[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of codes 116002, 116004
[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[8]Consists of codes 005102, 005104 (RUP)
[9]Consists of Codes 005102, 005104 (GUP)
[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Nursery (Continued)	Herbicide (Continued)	PROMETON	080804	.	.		1
		Other GUPs[11]		5	4	3.3	13
	Insecticide	All AIs[3]		75	62	100.0	85
		ACEPHATE	103301	60	54	79.9	13
		POTASSIUM SOAPS OF FATTY ACIDS	079021	8	7	10.2	3
		MALATHION	057701	2	1	2.6	11
		CARBARYL	056801	1	1	1.7	4
		DIAZINON	057801	1	1	0.8	3
		FLUVALINATE	109302			0.4	6
		DICOFOL	010501			0.3	3
		BENDIOCARB	105201				1
		CHLORPYRIFOS	059101	.			1
		Other RUPs[11]		.		0.1	2
		Other GUPs[11]		3	2	3.9	38
	Fungicide	All AIs[3]		12	6	100.0	49
		SULFUR	077501	4	4	36.6	2
		CHLOROTHALONIL	081901	3	2	23.0	8
		MANCOZEB	014504	2	2	20.5	3

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60)

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Nursery (Continued)	Fungicide (Continued)	THIRAM	079801	1	1	7.1	3
		CHLORONEB	027301		·	3.6	1
		THIOPHANATE METHYL	102001	·		1.8	6
		BENOMYL	099101	·	·	1.5	3
		METALAXYL	113501	·		1.3	4
		IPRODIONE	109801	·	·	1.3	3
		VINCLOZOLIN	113201			1.1	2
		FOSETYL AL	123301	·	·	0.6	2
		TRIADIMEFON	109901			0.3	3
		PROPICONAZOLE	122101		·	0.2	1
		Other GUPs[11]				1.2	8
	Other	All AIs[3]		1	·	100.0	12
		METALDEHYDE	053001	·	·	40.8	1
		COPPER TRIETHANOLAMINE COMPLEX	024403		·	12.5	1
		Other RUPs[11]			·	14.6	1
		Other GUPs[11]		·		32.1	9
	Multi Type	All AIs[3]				100.0	6
		Other GUPs[11]		·		100.0	6

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Public/Government	All Types	All AIs[3]			13,419	4,292	100.0	2,518
	Herbicide	All AIs[3]			4,815	1,659	100.0	1,291
		GLYPHOSATE, SALT	4	103601	1,072	207	22.3	332
		SIMAZINE		080807	531	468	11.0	22
		2,4-D	5	030019	297	75	6.2	138
		FOSAMINE AMMONIUM		106701	191	101	4.0	19
		ORYZALIN		104201	187	66	3.9	84
		DIURON		035505	176	69	3.7	26
		2,4-D	7 *	030019	68	52	1.4	9
		TRICLOPYR	6	116004	65	31	1.3	51
		PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN		031519	45	12	0.9	64
		DICAMBA, DIMETHYLAMINE SALT		029802	35	18	0.7	72
		PICLORAM, SALT	8 *	005102	32	10	0.7	23
		ATRAZINE		032201	19	6	0.4	31
		PENDIMETHALIN		108501	19	15	0.4	8
		IMAZAPYR, ISOPROPYLAMINE SALT		128829	10	5	0.2	12
		PROMETON		080804	10	5	0.2	15
		SULFOMETURON METHYL		122001	9	4	0.2	25

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way, aquatic; industrial, institutional, structural and health-related; and public health

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Public/Government (Continued)	Herbicide (Continued)	ENDOTHALL, DIPOTASSIUM SALT	1	038904	9	5	0.2	10
		ACETIC ACID, (2,4 DICHLOROPHENOXY) , 2 B		030053	9	6	0.2	12
		TRIFLURALIN		036101	6	3	0.1	15
		BROMACIL, LITHIUM SALT		012302	5	3	0.1	9
		2 ETHYL 4 METHYLPENTYL 2,4 DICHLOROPHENO		030064	5	2	0.1	14
		DICHLOBENIL		027401	4	3	0.1	10
		ACETIC ACID, (2,4 DICHLOROPHENOXY) , COM		030016	4	2	0.1	7
		BENEFLURALIN		084301	4	2	0.1	12
		OXADIAZON		109001	3	1	0.1	18
		PICLORAM, SALT	9	005102	2	2		9
		ISOXABEN		125851	2	1	.	11
		MECOPROP		031501	1	1		8
		BENSULIDE		009801	1	1	.	2
		TEBUTHIURON		105501	1	1	.	3
		DITHIOPYR		128994	1		.	6
		PROPANOIC ACID, 2 (2,4 DICHLOROPHENOXY)		031453	1		.	5
		SODIUM BENTAZON		103901	1	.	.	3
		PROPANOIC ACID, 2 (2,4 DICHLOROPHENOXY)		031463	1			4

[1]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Public/Government (Continued)	Herbicide (Continued)	PRODIAMINE	110201	.		.	2
		DISODIUM OCTABORATE TETRAHYDRATE	011103	.			1
		PROPANOIC ACID, 2 (2,4 DICHLOROPHENOXY)-	031419	.		.	2
		MCPA, DIMETHYLAMINE SALT	030516	.	.		2
		Other RUPs[10]		3	2	0.1	5
		Other GUPs[11]		1,987	1,228	41.3	190
	Insecticide	All AIs[3]		5,475	1,644	100.0	792
		MALATHION	057701	3,727	1,326	68.1	73
		CHLORPYRIFOS	059101	120	70	2.2	77
		PERMETHRIN, MIXED CIS,TRANS	109701	68	37	1.2	34
		TRICHLORFON	057901	21	12	0.4	13
		ACEPHATE	103301	11	6	0.2	45
		BORIC ACID	011001	8	5	0.1	10
		CARBARYL	056801	5	2	0.1	28
		DIAZINON	057801	4	2	0.1	39
		PYRETHRINS	069001	2	2		68
		POTASSIUM SOAPS OF FATTY ACIDS	079021	2	1		10
		BENDIOCARB	105201	1	1		8

[1]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60)

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Public/Government (Continued)	Insecticide (Continued)	ISAZOFOS	*	126901	1	1	-	3
		CYPERMETHRIN		109702	1		-	10
		SILICA GEL		072602	1	-	-	8
		PROPOXUR		047802	1	1	-	15
		ISOFENPHOS		109401			-	2
		OXYDEMETON-METHYL	*	058702		-	-	2
		LAMBDA-CYHALOTHRIN		128897	-		-	1
		DICOFOL		010501		-	-	3
		FLUVALINATE		109302	-		-	9
		ESFENVALERATE		109303			-	1
		DICHLORVOS		084001			-	2
		PROPETAMPHOS	*	113601				1
		Other RUPs[10]	*		28	23	0.5	16
		Other GUPs[11]			1,474	593	26.9	314
	Fungicide	All AIs[3]			56	20	100.0	104
		CHLOROTHALONIL		081901	29	14	51.6	13
		IPRODIONE		109801	7	6	13.1	11
		PENTACHLORONITROBENZENE		056502	6	3	10.4	4

*Restricted Use Pesticide (RUP) Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right of way; aquatic; industrial, institutional, structural and health-related; and public health

[3]Totals may differ from the sum of the entries because of rounding

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Public/Government (Continued)	Fungicide (Continued)	MANCOZEB		014504	3	3	5.9	7
		METALAXYL		113501	2	1	4.5	12
		TRIADIMEFON		109901	2	1	2.9	9
		ANILAZINE		080811	1	1	1.8	2
		FOSETYL-AL		123301	1	1	1.8	1
		BENOMYL		099101	1	1	1.5	4
		VINCLOZOLIN		113201	1	1	1.3	3
		THIRAM		079801	1	1	1.1	3
		PROPAMOCARB HYDROCHLORIDE		119302	1		1.0	3
		THIOPHANATE METHYL		102001			0.9	10
		PROPICONAZOLE		122101			0.7	3
		FENARIMOL		206600			0.3	2
		SULFUR		077501				1
		Other GUPs[10]			1		1.3	16
	Fumigant	All AIs[7]			13	9	100.0	7
		METHYL BROMIDE	*	053201	1	1	10.3	1
		ALUMINUM PHOSPHIDE	*	066501			2.4	3
		Other GUPs[10]			9	9	87.2	3

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental, right-of-way; aquatic; industrial, institutional, structural and health-related; and public health

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005103 (RUP)

[9]Consists of Codes 005102, 005103 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60)

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Public/Government (Continued)	Other	All AIs[3]			66	28	100.0	185
		COPPER TRIETHANOLAMINE COMPLEX		024403	5	2	6.9	20
		N OCTYL BICYCLOHEPTENE DICARBOXIMIDE		057001	2	1	2.5	42
		MERCUROUS CHLORIDE		052201	1	1	1.9	4
		METALDEHYDE		053001	-	-	0.6	5
		Other RUPs[11]	*		10	10	14.7	11
		Other GUPs[11]			49	26	73.4	103
	Multi Type	All AIs[3]			2,996	2,451	100.0	139
		PIPERONYL BUTOXIDE		067501	484	330	16.2	118
		Other RUPs[11]	*		2,446	2,427	81.6	5
		Other GUPs[11]			65	35	2.2	16
Utility	All Types	All AIs[3]			3,701	2,978	100.0	112
	Herbicide	All AIs[3]			532	246	100.0	94
		2,4-D	5	030019	176	147	33.2	7
		TRICLOPYR	6	116004	104	70	19.6	13
		GLYPHOSATE, SALT	4	103601	98	57	18.4	16
		FOSAMINE AMMONIUM		106701	33	33	6.2	2
		DIURON		035505	17	16	3.2	2

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding

[4]Consists of codes 103601, 103604 [5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004 [7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP) [9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Utility (Continued)	Herbicide (Continued)	DICAMBA, DIMETHYLAMINE SALT		029802	11	7	2.1	8
		TEBUTHIURON		105501	10	5	1.9	7
		PENDIMETHALIN		108501	7	7	1.4	1
		PICLORAM, SALT	8 *	005102	7	5	1.2	3
		PROMETON		080804	5	3	1.0	5
		PICLORAM, SALT	9	005102	4	4	0.8	2
		PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)		031453	4	3	0.8	2
		2,4-D	7 *	030019	2	2	0.4	1
		BROMACIL, LITHIUM SALT		012302	2	2	0.4	2
		IMAZAPYR, ISOPROPYLAMINE SALT		128829	1	1	0.2	4
		ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 2-B		030053	1	1	0.1	1
		SIMAZINE		080807	1		0.1	4
		PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN		031519	1	1	0.1	2
		TRIFLURALIN		036101	1	1	0.1	1
		ATRAZINE		032201	-	-	0.1	1
		2-ETHYL-4-METHYLPENTYL 2,4-DICHLOROPHENO		030064	-		-	1
		OXADIAZON		109001				1
		Other GUPs[11]			46	31	8.6	8

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of codes 103601, 103604
[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of codes 116002, 116004
[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[8]Consists of codes 005102, 005104 (RUP)
[9]Consists of Codes 005102, 005104 (GUP)
[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Utility (Continued)	Insecticide	All AIs[3]			342	308	100.0	7
		MALATHION		057701	306	306	89.5	2
		Other GUPs[10]			36	32	10.5	5
	Fungicide	All AIs[3]			30	30	100.0	2
		METALAXYL		113501	-	-	-	1
		Other GUPs[11]			30	30	100.0	1
	Other	All AIs[3]			-	-	100.0	2
		METALDEHYDE		053001			99.6	1
		Other GUPs[11]			-	-	0.4	1
	Multi-Type	All AIs[3]			2,798	2,775	100.0	7
		Other RUPs[11]	*		2,675	2,675	95.6	5
		Other GUPs[11]			122	103	4.4	2
Food,Transportation,Other Commercial/Industrial	All Types	All AIs[3]			1,867	1,120	100.0	410
	Herbicide	All AIs[3]			335	204	100.0	61
		2,4-D	5	030019	192	185	57.3	9
		GLYPHOSATE, SALT	4	103601	114	84	33.9	21
		PROMETON		080803	7	7	2.0	2
		TRICLOPYR	6	116001	6	6	1.8	1

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Food,Transportation,Other Commercial/Industrial (Continued)	Herbicide (Continued)	SULFOMETURON METHYL		122001	3	3	1.0	1
		2,4-D	7 *	030019	2	2	0.5	1
		MCPA, DIMETHYLAMINE SALT		030516	2	2	0.5	1
		PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)		031463	2	2	0.5	1
		PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN		031519	1	1	0.4	4
		DICAMBA, DIMETHYLAMINE SALT		029802	1	1	0.3	3
		BROMACIL, LITHIUM SALT		012302	1	1	0.2	1
		ATRAZINE		032201	1	1	0.2	1
		PICLORAM, SALT	8 *	005102	.	.	0.1	1
		SODIUM BENTAZON		103901			0.1	2
		IMAZAPYR, ISOPROPYLAMINE SALT		128829		.	0.1	1
		2-ETHYL-4-METHYLPENTYL 2,4-DICHLOROPHENO		030064			0.1	1
		TEBUTHIURON		105501		.		1
		Other GUPs[10]			4	3	1.2	9
	Insecticide	All AIs[3]			154	108	100.0	379
		BENDIOCARB		105201	49	47	31.6	6
		PYRETHRINS		069001	14	9	8.8	49
		CHLORPYRIFOS		059101	8	6	5.0	25

[1]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[2]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[3]Includes turf and ornamental; right-of way; aquatic; industrial, institutional, structural and health-related; and public health
[4]Totals may differ from the sum of the entries because of rounding.
[4]Consists of codes 103601, 103604 [5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of codes 116002, 116004 [7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[8]Consists of codes 005102, 005104 (RUP) [9]Consists of Codes 005102, 005104 (GUP)
[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60)

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Food, Transportation, Other Commercial/Industrial (Continued)	Insecticide (Continued)	DICHLORVOS		084001	7	4	4.7	6
		MALATHION		057701	5	4	3.3	3
		DIAZINON		057801	5	3	3.0	10
		BORIC ACID		011001	3	2	1.9	5
		ESFENVALERATE		109303	2	2	1.1	1
		PROPOXUR		047802	1	1	0.6	2
		ACEPHATE		103301	1	1	0.6	6
		ISAZOFOS	*	126901	1	1	0.5	1
		CYPERMETHRIN		109702		.	0.3	3
		PROPETAMPHOS	*	113601			0.2	3
		PERMETHRIN, MIXED CIS,TRANS		109701		.	0.2	1
		SILICA GEL		072602		.	0.1	5
		TRICHLORFON		057901	.	.	.	1
		CARBARYL		056801			.	1
		FLUVALINATE		109302		.	.	1
		POTASSIUM SOAPS OF FATTY ACIDS		079021			.	1
		LAMBDA CYHALOTHRIN		128897		.	.	3
		Other RUPs[11]	*					1

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Food, Transportation, Other Commercial/Industrial (Continued)	Insecticide (Continued)	Other GUPs[11]		58	51	38.0	45
	Fungicide	All AIs[3]		16	8	100.0	32
		CHLOROTHALONIL	081901	6	4	36.9	7
		PENTACHLORONITROBENZENE	056502	4	4	27.3	2
		MANCOZEB	014504	2	2	15.1	2
		CHLORONEB	027301	1	1	4.0	1
		IPRODIONE	109801			2.9	2
		COPPER HYDROXIDE	023401	-		2.6	1
		THIOPHANATE-METHYL	102001			2.6	3
		PROPAMOCARB HYDROCHLORIDE	119302		-	2.3	1
		THIRAM	079801			1.9	2
		METALAXYL	113501			1.1	2
		PROPICONAZOLE	122101		-	0.9	1
		TRIADIMEFON	109901		-	0.6	4
		FENARIMOL	206600		-	0.5	2
		BENOMYL	099101		-	0.3	1
		Other GUPs[11]			-	1.0	1
	Fumigant	All AIs[3]		1,301	1,066	100.0	19

[1]Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of codes 103601, 103604
[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of codes 116002, 116004
[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[8]Consists of codes 005102, 005104 (RUP)
[9]Consists of Codes 005102, 005104 (GUP)
[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60)

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Food,Transportation,Other Commercial/Industrial (Continued)	Fumigant (Continued)	METHYL BROMIDE	*	053201	1,266	1,070	97.4	4
		ALUMINUM PHOSPHIDE	*	066501	33	19	2.6	10
		SULFURYL FLUORIDE	*	078003	1	1	0.1	2
		Other RUPs[11]	*		-	-	-	3
	Other	All AIs[3]			21	12	100.0	69
		N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	19	12	92.3	27
		METALDEHYDE		053001	-	-	0.3	1
		Other RUPs[11]	*		-	-	1.0	8
		Other GUPs[11]			1	1	6.4	33
	Multi Type	All AIs[3]			41	25	100.0	50
		PIPERONYL BUTOXIDE		067501	41	25	99.9	49
		Other GUPs[11]			-	-	0.1	1
Hospital,Other,Retired,Unknown	All Types	All AIs[3]			5,850	3,965	100.0	682
	Herbicide	All AIs[3]			4,537	3,902	100.0	256
		GLYPHOSATE, SALT	4	103601	660	536	14.6	51
		DISODIUM OCTABORATE TETRAHYDRATE		011103	128	128	2.8	2
		TRICLOPYR	6	116004	71	69	1.6	10
		DIURON		035505	47	30	1.0	4

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Hospital,Other,Refused,Unknown (Continued)	Herbicide (Continued)	SIMAZINE		080807	28	24	0.6	6
		SULFOMETURON METHYL		122001	21	20	0.5	5
		PICLORAM, SALT	8 *	005102	19	18	0.4	3
		2,4-D	5	030019	19	7	0.4	30
		PROPANOIC ACID, 2-(4-CHLORO-2 METHYLPHEN		031519	16	12	0.4	20
		2,4-D	7 *	030019	14	14	0.3	1
		SODIUM BENTAZON		103901	11	11	0.2	1
		ORYZALIN		104201	10	8	0.2	15
		FOSAMINE AMMONIUM		106701	9	9	0.2	1
		PENDIMETHALIN		108501	6	6	0.1	2
		DICHLOBENIL		027401	6	6	0.1	1
		BENEFLURALIN		084301	6	5	0.1	6
		TRIFLURALIN		036101	5	3	0.1	8
		IMAZAPYR, ISOPROPYLAMINE SALT		128829	4	4	0.1	1
		DICAMBA, DIMETHYLAMINE SALT		029802	2	1	-	18
		ATRAZINE		032201	2	1		4
		ACETIC ACID, (2,4 DICHLOROPHENOXY)-, COM		030016	1	1	-	2
		ACETIC ACID, (2,4 DICHLOROPHENOXY)-, 2 B		030053	1	1		2

*Restricted Use Pesticide (RUP) Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Hospital,Other,Refused,Unknown (Continued)	Herbicide (Continued)	2-ETHYL-4 METHYLPENTYL 2,4 DICHLOROPHENO		030064	·	·	·	2
		PROPANOIC ACID, 2 (2,4-DICHLOROPHENOXY)		031453		·	·	2
		PICLORAM, SALT	9	005102		·	·	3
		TEBUTHIURON		105501	·			1
		PROMETON		080804		·		1
		DITHIOPYR		128994	·	·	·	1
		PRODIAMINE		110201		·	·	1
		SIDURON		035509		·	·	2
		ISOXABEN		125851		·	·	1
		Other RUPs[11]	*		72	64	1.6	4
		Other GUPs[11]			3,379	3,340	74.5	45
	Insecticide	All AIs[3]			551	307	100.0	259
		CHLORPYRIFOS		059101	189	158	34.3	34
		ACEPHATE		103301	150	148	27.2	12
		DIAZINON		057801	78	73	14.1	17
		FONOFOS		041701	76	76	13.8	2
		TRICHLORFON		057901	24	18	4.3	7
		CARBARYL		056801	4	2	0.7	14

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right of way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (> 60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Hospital,Other,Refused,Unknown (Continued)	Insecticide (Continued)	POTASSIUM SOAPS OF FATTY ACIDS		079021	3	2	0.5	7
		ISAZOFOS	*	126801	2	2	0.4	2
		CYPERMETHRIN		109702	2	2	0.4	9
		ISOFENPHOS		109401	1	1	0.1	5
		PERMETHRIN, MIXED CIS,TRANS		109701	1	1	0.1	5
		MALATHION		057701	1	.	0.1	11
		FLUVALINATE		109302	.	.	0.1	4
		BORIC ACID		011001			.	4
		BENDIOCARB		105201		.	.	7
		SILICA GEL		072602				2
		PROPETAMPHOS	*	113601	.		.	4
		PYRETHRINS		069001				19
		PROPOXUR		047802			.	6
		DICHLORVOS		084001			.	3
		DICOFOL		010501		.		1
		ESFENVALERATE		109703		.	.	1
		Other RUPS[11]	*				0.1	4
		Other GUPS[11]			21	12	3.7	79

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right of way; aquatic; industrial, institutional, structural and health related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of codes 116002, 116004

[6]Consists of codes 005102, 005104 (RUP)

[7]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[8]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Hospital Other,Refused,Unknown (Continued)	Fungicide	All AIs[3]			138	65	100.0	64
		CHLOROTHALONIL		081901	49	30	35.7	9
		PENTACHLORONITROBENZENE		056502	10	7	7.0	2
		VINCLOZOLIN		113201	9	7	6.3	5
		IPRODIONE		109801	8	6	5.6	2
		METALAXYL		113501	6	5	4.4	9
		MANCOZEB		014504	3	3	2.4	3
		THIOPHANATE-METHYL		102001	2	2	1.3	5
		TRIADIMEFON		109901	1	1	1.0	5
		CHLORONEB		027301	1	1	0.7	1
		FOSETYL AL		123301	1	1	0.7	1
		PROPICONAZOLE		122101	-	-	0.3	3
		FENARIMOL		206600			0.1	2
		BENOMYL		099101			0.1	4
		Other GUPS[10]			47	43	34.3	13
	Fumigant	All AIs[3]			539	539	100.0	4
		METHYL BROMIDE	*	053201		-	0.1	2
		ALUMINUM PHOSPHIDE	*	066501			0.1	1

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of codes 103601, 103604
[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of codes 116002, 116004
[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)
[8]Consists of codes 005102, 005104 (RUP)
[9]Consists of Codes 005102, 005104 (GUP)
[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 12a. Not-for-hire Certified Applicators Pesticide Usage[1], Employer's Business Type, Pesticide Type, and Active Ingredient (Continued):

1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Site Category	Type of Ingredient	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Hospital,Other,Refused,Unknown (Continued)	Fumigant (Continued)	Other GUPs[11]		539	539	99.9	1
	Other	All AIs[3]		61	49	100.0	68
		COPPER TRIETHANOLAMINE COMPLEX	024403	7	5	11.2	5
		METALDEHYDE	053001	1	1	1.4	2
		N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE	057001	-	-	0.2	16
		Other RUPs[11] *		1	1	0.8	2
		Other GUPs[11]		53	49	86.4	43
	Multi Type	All AIs[3]		23	15	100.0	31
		PIPERONYL BUTOXIDE	067501	12	11	52.3	25
		Other GUPs[11]		11	10	47.7	6

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604

[5]Consists of Codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of Codes 030001, 030019, 030035, 030063 (RUP)

[8]Consists of codes 005102, 005104 (RUP)

[9]Consists of Codes 005102, 005104 (GUP)

[10]Usage amounts or standard errors greater than zero but less than 500 lbs. or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>.60).

Table 12b. For-hire Applicator Pesticide Usage[1] by Pesticide Type and Active Ingredient:

C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
All Types	Total[3]			39,618	5,345	100.0	18,427
Herbicide	Total[3]			15,993	4,150	100.0	4,933
	2,4-D	5	030019	2,499	562	15.6	658
	DIURON		035505	2,099	1,328	13.1	82
	PENDIMETHALIN		108501	1,628	515	10.2	161
	PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN		031519	1,243	406	7.8	466
	GLYPHOSATE, SALT	4	103601	1,234	267	7.7	689
	TRICLOPYR	6	116004	873	326	5.5	179
	MCPA, DIMETHYLAMINE SALT		030516	476	153	3.0	32
	2,4-D	7*	030019	326	150	2.0	20
	DICAMBA, DIMETHYLAMINE SALT		029802	276	67	1.7	429
	SIMAZINE		080807	261	164	1.6	60
	DISODIUM OCTABORATE TETRAHYDRATE		011103	236	61	1.5	108

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health
[3]Totals may differ from the sum of the entries because of rounding
[4]Consists of codes 103601, 103604. [5]Consists of codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of codes 116002, 116004. [7]Consists of codes 030001, 030019, 030035, 030063 (RUP).
[8]Consists of codes 005102, 005104 (RUP). [9]Consists of codes 005102, 005104 (GUP).
[10]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>0.60)

Table 12b. For-hire Applicator Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Herbicide (Continued)	PICLORAM, SALT	8 *	005102	193	79	1.2	38
	PROPHAMINE		110201	147	67	0.9	33
	ACETIC ACID, (2,4-DICHLOROPHENOXY) , 2-B		030053	129	55	0.8	71
	ORYZALIN		104201	124	33	0.8	225
	IMAZAPYR, ISOPROPYLAMINE SALT		128029	103	53	0.6	39
	ENDOTHALL, DIPOTASSIUM SALT		038904	97	53	0.6	19
	BENEFLURALIN		083301	90	34	0.6	141
	ATRAZINE		032201	82	59	0.5	52
	PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031453	81	46	0.5	33
	TEBUTHIURON		105501	77	33	0.5	25
	TRIFLURALIN		036101	43	15	0.3	149
	PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031419	42	17	0.3	38
	2-ETHYL-4-METHYLPENTYL 2,4-DICHLOROPHENO		030064	40	17	0.2	37
	SULFOMETURON METHYL		122001	39	22	0.2	35
	PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)		031463	39	21	0.2	33
	ATRAZINE	*	080803	38	14	0.2	31

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C
[2]Includes turf and ornamental; right-of way; aquatic; industrial, institutional, structural and health related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of codes 103601, 103604. [5]Consists of codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of codes 116002, 116004. [7]Consists of codes 030001, 030019, 030035, 030063 (RUP).
[8]Consists of codes 005102, 005104 (RUP). [9]Consists of codes 005102, 005104 (GUP)
[10]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>0.60).

Table 12b. For-hire Applicator Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Herbicide (Continued)	PICLORAM, SALT	9	005102	21	10	0.1	22
	MECOPROP		031501	21	14	0.1	26
	FOSAMINE AMMONIUM		106701	20	10	0.1	7
	DITHIOPYR		128994	16	9	0.1	26
	BROMACIL, LITHIUM SALT		012302	14	7	0.1	18
	PROMETON		080804	14	7	0.1	37
	SODIUM BENTAZON		103901	12	5	0.1	47
	BENSULIDE		009801	11	8	0.1	8
	ISOXABEN		125851	11	5	0.1	44
	OXADIAZON		109002	11	6	0.1	49
	SIDURON		035509	10	6	0.1	12
	DICHLOBENIL		027401	9	4	0.1	27
	ACETIC ACID, (2,4 DICHLOROPHENOXY), COM		030036	8	4	0.1	16
	Other RUPs[11]	*		54	25	0.3	36
	Other GUPs[11]			3,261	2,149	20.4	625
Insecticide	Total[3]			15,325	1,623	100.0	9,395

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of codes 103601, 103604.
[5]Consists of codes 030001, 030019, 030035, 030063 (GUP).
[6]Consists of codes 116002, 116004.
[7]Consists of codes 030001, 030019, 030035, 030063 (RUP).
[8]Consists of codes 005102, 005104 (RUP).
[9]Consists of codes 005102, 005104 (GUP).
[10]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>0.60).

Table 12b. For-hire Applicator Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Insecticide (Continued)	CHLORPYRIFOS	059101	7,394	985	48.2	1,923
	PERMETHRIN, MIXED CIS/TRANS	109701	2,320	798	15.1	194
	CYPERMETHRIN	109702	1,290	554	8.4	520
	DIAZINON	057801	951	175	6.2	626
	BORIC ACID	011001	426	192	2.8	247
	CARBARYL	056801	346	130	2.3	232
	BENDIOCARB	105201	331	157	2.2	376
	MALATHION	057701	274	101	1.8	160
	ACEPHATE	103301	162	33	1.1	342
	TRICHLORFON	057901	158	52	1.0	82
	ISOFENPHOS	109401	106	38	0.7	94
	POTASSIUM SOAPS OF FATTY ACIDS	079021	90	32	0.6	53
	PROPETAMPHOS *	113601	89	15	0.6	214
	LAMBDA CYHALOTHRIN	128897	44	24	0.3	79
	DICOFOL	010501	40	19	0.3	44
	SILICA GEL	072602	31	6	0.2	369

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of codes 103601, 103604. [5]Consists of codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of codes 116002, 116004. [7]Consists of codes 030001, 030019, 030035, 030063 (RUP)
[8]Consists of codes 005102, 005104 (RUP). [9]Consists of codes 005102, 005104 (GUP).
[10]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>0.60)

Table 12b. For-hire Applicator Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Insecticide (Continued)	ISAZOFOS	*	126901	28	9	0.2	48
	PYRETHRINS		069001	16	2	0.1	1,113
	PROPOXUR		047802	14	6	0.1	174
	OXYDEMETON METHYL	*	058702	12	7	0.1	23
	FLUVALINATE		109302	12	6	0.1	75
	EPONOFOS		041701	10	4	0.1	20
	DICHLORVOS		084001	9	3	0.1	46
	ESFENVALERATE		109303	9	6	0.1	62
	Other RUPs[10]	*		328	163	2.5	134
	Other GUPs[11]			288	303	5.1	2,346
Fungicide	Total[3]			960	557	100.0	837
	CHLOROTHALONIL		081901	120	40	12.5	147
	MANCOZEB		014504	36	11	3.7	61
	THIOPHANATE-METHYL		102001	34	11	3.5	74
	IPRODIONE		109801	33	11	3.4	54
	COPPER HYDROXIDE		023301	26	15	2.7	23

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram.
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of way; aquatic; industrial, institutional, structural and health-related; and public health.
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of codes 103601, 103604.
[5]Consists of codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of codes 116002, 116004.
[7]Consists of codes 030001, 030019, 030035, 030063 (RUP).
[8]Consists of codes 005102, 005104 (RUP).
[9]Consists of codes 005102, 005104 (GUP).
[10]Usage amounts or standard errors greater than zero but less tinan 500 pounds or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>0.60).

Table 12b. For-hire Applicator Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name	AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Fungicide (Continued)	TRIADIMEFON	109801	20	10	2.1	75
	PENTACHLORONITROBENZENE	056502	14	6	1.4	21
	SULFUR	077501	13	6	1.3	20
	FOSETYL-AL	123301	10	6	1.0	17
	ANILAZINE	080801	6	6	0.6	2
	METALAXYL	113501	5	2	0.5	66
	VINCLOZOLIN	113201	4	2	0.4	19
	THIRAM	079801	3	2	0.3	10
	BENOMYL	099101	2	1	0.2	42
	PROPICONAZOLE	122101	1	1	0.1	21
	PROPAMOCARB HYDROCHLORIDE	119302	1	1	0.1	4
	TEBUCONAZOLE	200600	1	[9]	0.1	34
	CHLORONEB	027301			-	2
	Other RUPs[10]	*	10	6	1.1	45
	Other GUPs[11]		622	553	64.8	130
Fumigant	Total[3]		1061	763	100.0	168

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram

[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.

[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health related; and public health

[3]Totals may differ from the sum of the entries because of rounding.

[4]Consists of codes 103601, 103604.

[5]Consists of codes 030001, 030019, 030035, 030063 (GUP)

[6]Consists of codes 116002, 116004

[7]Consists of codes 030001, 030019, 030035, 030063 (RUP).

[8]Consists of codes 005102, 005104 (RUP).

[9]Consists of codes 005102, 005104 (GUP).

[10]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.

[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>0.60).

Table 12b. For-hire Applicator Pesticide Usage[1] by Pesticide Type and Active Ingredient (Continued):

C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories[2]

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI (000)	Standard Error (000)	Percent of Total	Number of Observations
Fumigant (Continued)	SULFURYL FLUORIDE	*	078003	1,513	579	49.4	31
	METHYL BROMIDE	*	053201	1,443	422	47.1	44
	ALUMINUM PHOSPHIDE	*	066501	16	14	0.5	23
	Other RUPS[11]	*			.		1
	Other GUPS[11]			89	45	2.9	9
Other	Total[3]			850	477	100.0	1,929
	N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	31	6	3.7	658
	COPPER TRIETHANOLAMINE COMPLEX		024403	30	17	3.6	32
	METALDEHYDE		053001	12	7	1.4	43
	Other RUPS[11]	*		124	66	14.6	186
	Other GUPS[11]			653	472	76.8	1,010
Multi Type	Total[3]			3,428	2,803	100.0	1,225
	PIPERONYL BUTOXIDE		067501	90	15	2.6	1,186
	Other GUPS[11]			3,338	2,803	97.4	39

*Restricted Use Pesticide (RUP). Note that some AIs are contained in both RUPs and general use products, for example, 2,4-D and picloram
[1]Source questions Q12, Q14, and Q15 (see Appendix A). Reported product amounts were converted to pounds of active ingredient using the concentration of the active ingredient given in EPA's Product Label File located on the EPA mainframe computer in Research Triangle Park, N.C.
[2]Includes turf and ornamental; right-of-way; aquatic; industrial, institutional, structural and health-related; and public health
[3]Totals may differ from the sum of the entries because of rounding.
[4]Consists of codes 103601, 103604. [5]Consists of codes 030001, 030019, 030035, 030063 (GUP)
[6]Consists of codes 116002, 116004. [7]Consists of codes 030001, 030019, 030035, 030063 (RUP).
[8]Consists of codes 005102, 005104 (RUP). [9]Consists of codes 005102, 005104 (GUP).
[10]Usage amounts or standard errors greater than zero but less than 500 pounds or percents greater than zero but less than 0.05.
[11]Includes products that were of minor use (<10,000 pounds), used by fewer than 21 respondents, or with large standard errors (>0.60).

Appendix D

Expanded Version of Table 13. Pesticide Usage by Active Ingredient

Appendix D contains three uncensored versions of Table 13. The tables, which focus on non-agricultural pesticide usage by certified/commercial applicators in U.S. during 1993, list all active ingredients with positive nonagricultural pesticide usage (in pounds) reported in the C/CPAS survey. The active ingredients in Table 13A are listed from maximum to minimum usage estimates, Table 13B displays the data in numeric order by active ingredient code, and Table 13C provides an alphabetic listing by active ingredient name.

As in Table 13, usage estimates were computed from the source questions Q12, Q14, and Q15 for five certification areas (turf and ornamental; right-of way; aquatic; industrial, institutional, structural and health-related; and public health). Furthermore, it should be noted that some products, such as 2-4,D and picloram, are contained in both restricted use (RUP) and general use pesticides.

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
TOTAL				69,196,434	9,061,864	100.00	24,560
CHLORPYRIFOS		059101	Insecticide	7,778,765	998,620	11.24	2,140
MSMA		013803	Herbicide	6,465,603	3,895,760	9.34	170
ACROLEIN	*	000701	Multi-Type	5,102,187	3,612,055	7.37	6
MALATHION		057701	Insecticide	4,314,719	1,363,456	6.24	264
COPPER SULFATE PENTAHYDRATE		024401	Algaecide	4,185,885	3,498,732	6.05	49
GLYPHOSATE, SALT	2	103601	Herbicide	3,412,296	677,101	4.93	1,220
2,4-D	3	030019	Herbicide	3,403,153	634,582	4.92	978
METHYL BROMIDE	*	053201	Fumigant	2,710,834	1,155,808	3.92	51
PERMETHRIN, MIXED CIS,TRANS		109701	Insecticide	2,388,598	797,308	3.45	235
DIURON		035505	Herbicide	2,339,296	1,331,352	3.38	114
PENDIMETHALIN		108501	Herbicide	1,833,821	531,863	2.65	193
SULFURYL FLUORIDE	*	078003	Fumigant	1,513,496	579,359	2.19	33
PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN		031519	Herbicide	1,408,985	396,836	2.04	650
CYPERMETHRIN		109702	Insecticide	1,292,864	553,989	1.87	542
ENDOTHALL, MONO(N,N-DIMETHYLCOCOAMINE) SAL		038905	Herbicide	1,149,839	1,090,927	1.66	14
TRICLOPYR	4	116004	Herbicide	1,139,810	342,029	1.65	269
DIAZINON		057801	Insecticide	1,038,058	190,580	1.50	695
CHLOROTHALONIL		081901	Fungicide	1,016,722	181,528	1.47	323
SIMAZINE		080807	Herbicide	886,630	533,513	1.28	112
PIPERONYL BUTOXIDE		067501	Multi-Type	630,097	342,375	0.91	1,383
SODIUM HYPOCHLORITE		014703	Fungicide	628,178	554,781	0.91	5
BROMACIL		012301	Herbicide	589,125	427,585	0.85	59
NALED		034401	Insecticide	551,496	346,231	0.80	13
ETHYLENE OXIDE		042301	Fumigant	538,611	538,611	0.78	1
HALOBROM		006315	Bacteriocide	498,470	468,293	0.72	6
MCPA, DIMETHYLAMINE SALT		030516	Herbicide	480,212	153,322	0.69	37
BORIC ACID		011001	Insecticide	436,603	196,756	0.63	266
CYFLUTHRIN		128831	Insecticide	435,878	282,606	0.63	392
ACEPHATE		103301	Insecticide	425,884	159,587	0.62	431
BENDIOCARB		105201	Insecticide	424,529	167,215	0.61	404

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
2,4-D	3*	030019	Herbicide	411,199	149,518	0.59	32
CARBARYL		056801	Insecticide	405,881	132,499	0.59	313
MINERAL OIL - INCLUDES PARAFFIN OIL FROM 0		063502	Insecticide	384,221	332,462	0.56	29
TRICHLORFON		057901	Insecticide	374,409	112,767	0.54	144
MANCOZEB		014504	Fungicide	368,633	92,715	0.53	144
DISODIUM OCTABORATE TETRAHYDRATE		011103	Herbicide	364,404	141,613	0.53	111
ORYZALIN		104201	Herbicide	353,513	80,199	0.51	351
DICAMBA, DIMETHYLAMINE SALT		029802	Herbicide	343,301	69,915	0.50	676
FOSAMINE AMMONIUM		106701	Herbicide	252,881	106,931	0.37	29
PICLORAM, SALT	5*	005102	Herbicide	248,268	80,568	0.36	69
BENDIOCARB	*	105201	Insecticide	176,740	113,542	0.26	42
PENTACHLORONITROBENZENE		056502	Fungicide	174,942	30,619	0.25	66
BACILLUS THURINGIENSIS, ISRAELENSIS		006401	Insecticide	147,941	97,087	0.21	76
PRODIAMINE		110201	Herbicide	145,250	67,135	0.21	49
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 2-B		030053	Herbicide	145,178	55,606	0.21	90
RESMETHRIN		097801	Insecticide	144,544	112,475	0.21	99
THIRAM		079801	Fungicide	142,573	68,867	0.21	43
ATRAZINE		032201	Herbicide	142,472	79,143	0.21	100
IPRODIONE		109801	Fungicide	138,736	24,169	0.20	168
FONOFOS		041701	Insecticide	137,143	80,231	0.20	33
ISOFENPHOS		109401	Insecticide	136,364	38,974	0.20	129
CARBOFURAN	*	090601	Insecticide	134,943	134,943	0.20	1
CUBE RESINS OTHER THAN ROTENONE		071004	Insecticide	128,620	121,609	0.19	29
IMAZAPYR, ISOPROPYLAMINE SALT		128829	Herbicide	128,473	55,906	0.19	58
ENDOTHALL, DIPOTASSIUM SALT		038904	Herbicide	120,266	62,965	0.17	34
HEXAZINONE		107201	Herbicide	114,453	75,959	0.17	12
BENFLURALIN		084301	Herbicide	111,553	35,443	0.16	179
BACILLUS THURINGIENSIS, KURSTAKI		006402	Insecticide	102,448	76,286	0.15	49
POTASSIUM SOAPS OF FATTY ACIDS		079021	Insecticide	101,623	32,948	0.15	76
COAL TAR CREOSOTE	*	025004	Wood Preservative	100,515	60,729	0.15	6
METAM-SODIUM		039003	Fumigant	98,854	45,677	0.14	12

* Restricted Use Pesticide (RUP)
- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
SODIUM FLUORIDE	*	075202	Insecticide	98,126	59,148	0.14	6
PROPETAMPHOS	*	113601	Insecticide	89,344	15,101	0.13	222
PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031453	Herbicide	89,084	46,257	0.13	45
TEBUTHIURON		105501	Herbicide	88,661	33,056	0.13	37
THIOPHANATE-METHYL		102001	Fungicide	87,974	15,543	0.13	171
SODIUM METABORATE		011104	Insecticide	84,754	40,156	0.12	16
FOSETYL-AL		123301	Fungicide	76,568	26,799	0.11	41
SULFOMETURON METHYL		122001	Herbicide	72,542	27,730	0.10	66
METALAXYL		113501	Fungicide	71,080	10,907	0.10	179
ROTENONE		071003	Insecticide	68,686	60,966	0.10	30
VINCLOZOLIN		113201	Fungicide	66,072	19,096	0.10	64
TRICLOPYR	4*	116004	Herbicide	64,790	44,299	0.09	8
SODIUM CHLORATE		073301	Herbicide	64,245	31,876	0.09	17
TRIADIMEFON		109901	Fungicide	62,634	15,784	0.09	170
2-ETHYL-4-METHYLPENTYL 2,4-DICHL		030064	Herbicide	60,976	20,178	0.09	65
FENITROTHION		105901	Insecticide	60,603	59,607	0.09	4
PROPAMOCARB HYDROCHLORIDE		119302	Fungicide	60,013	18,936	0.09	43
TRIFLURALIN		036101	Herbicide	56,846	15,506	0.08	182
METHOXYCHLOR		034001	Insecticide	53,203	38,306	0.08	28
CHLORONEB		027301	Fungicide	52,366	22,540	0.08	34
N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	Synergist	52,275	14,336	0.08	744
BORAX		011102	Multi-Type	51,264	36,344	0.07	5
NORFLURAZON		105801	Herbicide	50,684	49,878	0.07	3
FENVALERATE		109301	Insecticide	50,573	35,791	0.07	112
ALUMINUM PHOSPHIDE	*	066501	Fumigant	50,225	23,238	0.07	39
SODIUM BENTAZON		103901	Herbicide	48,720	11,865	0.07	64
FENAMIPHOS		100601	Nematicide	48,576	23,683	0.07	11
MCPA		030501	Herbicide	48,035	34,684	0.07	5
COPPER TRIETHANOLAMINE COMPLEX		024403	Algaecide	47,327	20,910	0.07	69
PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031463	Herbicide	46,700	21,025	0.07	46
PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031419	Herbicide	45,420	16,775	0.07	49

* Restricted Use Pesticide (RUP)
- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
LAMBDA-CYHALOTHRIN		128897	Insecticide	44,326	23,818	0.06	81
LINDANE	*	009001	Insecticide	42,903	33,153	0.06	33
ACETIC ACID		030025	Herbicide	42,708	24,772	0.06	14
METOLACHLOR		108801	Herbicide	42,277	32,013	0.06	29
ISAZOFOS	*	126901	Insecticide	42,018	11,045	0.06	71
ATRAZINE	*	080803	Herbicide	41,350	14,671	0.06	33
DIAZINON	*	057801	Insecticide	41,265	28,149	0.06	11
DICOFOL		010501	Insecticide	40,534	18,833	0.06	51
CHLORDANE		058201	Other	39,683	28,191	0.06	3
3(2H)-ISOTHIAZOLONE, 5-CHLORO-2-METHYL-		107103	Bacteriocide	38,299	37,570	0.06	3
COPPER ETHYLENEDIAMINE COMPLEX		024407	Herbicide	38,045	25,063	0.05	11
ANILAZINE		080811	Fungicide	37,579	12,073	0.05	30
CARBOPHENOTHION		058102	Other	36,046	36,046	0.05	1
PROMETON		080804	Herbicide	35,361	12,712	0.05	62
TEMEPHOS		059001	Insecticide	35,193	29,925	0.05	19
MECOPROP		031501	Herbicide	34,678	16,656	0.05	45
PICLORAM, ISOOCTYL ESTER	*	005103	Herbicide	34,090	23,308	0.05	8
BENSULIDE		009801	Herbicide	33,773	12,619	0.05	33
SILICA GEL		072602	Insecticide	32,265	7,635	0.05	184
PYRETHRINS		069001	Insecticide	31,885	10,005	0.05	1,251
ZINC DIMETHYLDITHIOCARBAMATE		034805	Fungicide	30,375	28,670	0.04	3
SIDURON		035509	Herbicide	30,096	17,963	0.04	23
DITHIOPYR		128994	Herbicide	28,733	10,266	0.04	60
PROPICONAZOLE		122101	Fungicide	28,047	5,765	0.04	85
PICLORAM, SALT	5	005102	Herbicide	27,626	11,659	0.04	37
FLURPRIMIDOL		125701	Growth Regulator	26,802	24,601	0.04	21
COPPER HYDROXIDE		023401	Fungicide	26,475	14,828	0.04	24
COPPER(I) OXIDE		025601	Antifoulant	26,255	20,826	0.04	12
SULFUR		077501	Fungicide	26,110	11,684	0.04	25
COPPER NAPHTENATE		023102	Wood Preservative	25,444	16,557	0.04	27
OXADIAZON		109001	Herbicide	24,614	8,947	0.04	88

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
PROPANOIC ACID		031563	Herbicide	24,175	15,243	0.03	19
METHOPRENE		105401	Insecticide	23,824	15,362	0.03	105
BROMACIL, LITHIUM SALT		012302	Herbicide	21,906	7,525	0.03	30
ETHOPROP	*	041101	Nematicide	21,065	20,173	0.03	6
DICLOFOP-METHYL	*	110902	Herbicide	[1] 20,386	9,261	0.03	14
POTASSIUM 2-(2-METHYL-4-CHLOROPHENOXY)PROP		031503	Herbicide	20,205	9,326	0.03	18
TETRACHLORVINPHOS		083701	Insecticide	19,880	14,789	0.03	3
DICHLOBENIL		027401	Herbicide	18,384	9,239	0.03	41
ETRIDIAZOLE		084701	Fungicide	17,982	11,316	0.03	31
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, COM		030016	Herbicide	16,726	5,204	0.02	35
ATRAZINE		080803	Herbicide	16,707	9,384	0.02	11
DICHLORVOS		084001	Insecticide	16,669	5,285	0.02	57
BENOMYL		099101	Fungicide	16,345	6,212	0.02	69
CUBE RESINS OTHER THAN ROTENONE	*	071004	Insecticide	15,577	15,106	0.02	5
PROPOXUR		047802	Insecticide	15,573	6,149	0.02	197
GIBBERELLIC ACID		043801	Growth Regulator	15,121	15,121	0.02	1
MERCUROUS CHLORIDE		052201	Other	14,735	4,201	0.02	33
MANEB		014505	Fungicide	14,673	9,682	0.02	5
TRIBUTYLTIN METHACRYLATE	*	083120	Antifoulant	13,625	11,191	0.02	13
ISOXABEN		125851	Herbicide	13,479	5,383	0.02	60
CHLORTHAL DIMETHYL		078701	Herbicide	13,309	6,761	0.02	17
METALDEHYDE		053001	Molluscicide	13,297	7,279	0.02	53
FLUVALINATE		109302	Insecticide	13,164	6,192	0.02	100
OXYDEMETON-METHYL	*	058702	Insecticide	12,246	6,694	0.02	25
BORAX	*	011102	Multi-Type	11,673	11,467	0.02	2
METHYLISOTHIAZOLINONE		107104	Bacteriocide	11,656	11,434	0.02	3
2-CHLORSULFURON		118601	Herbicide	11,562	8,004	0.02	16
ESFENVALERATE		109303	Insecticide	10,974	6,303	0.02	67
SODIUM BENTAZON	*	103901	Herbicide	10,897	8,690	0.02	2
FENARIMOL		206600	Fungicide	10,509	2,822	0.02	89
3-TRIFLUOROMETHYL-4-NITROPHENOL	*	036201	Rodenticide	9,816	9,816	0.01	2

* Restricted Use Pesticide (RUP)
- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
COPPER RESONATE		023104	Fungicide	9,763	6,360	0.01	9
DICAMBA		029801	Herbicide	9,739	4,578	0.01	59
HYDROPRENE		486300	Insecticide	9,338	3,918	0.01	48
PROPANOIC ACID		031516	Herbicide	9,089	4,484	0.01	11
THIOPHANATE		103401	Fungicide	9,005	6,297	0.01	6
DIMETHOATE		035001	Insecticide	8,883	2,490	0.01	62
FENOXYCARB		125301	Insecticide	8,389	2,649	0.01	164
CHLOROPICRIN	*	081501	Fungicide	8,177	5,194	0.01	13
ROTENONE	*	071003	Insecticide	7,788	7,553	0.01	5
BROMOXYNIL OCTANOATE		035302	Herbicide	7,708	5,805	0.01	6
LINALOOL		128838	Insecticide	7,663	5,559	0.01	26
PIPERONYL BUTOXIDE	*	067501	Multi-Type	7,619	7,552	0.01	2
MERCURIC CHLORIDE		052001	Other	7,367	2,100	0.01	33
LINDANE		009001	Insecticide	7,237	4,242	0.01	41
CACODYLIC ACID, SODIUM SALT		012502	Herbicide	7,163	5,223	0.01	5
ETHOFUMESATE		110601	Herbicide	6,871	5,056	0.01	11
CALCIUM HYPOCHLORITE		014701	Bacteriocide	6,590	5,954	0.01	3
POTASSIUM DICHROMATE	*	068302	Wood Preservative	6,582	4,119	0.01	4
MEFLUIDIDE, DIETHANOLAMINE SALT		114002	Herbicide	6,573	2,004	0.01	61
METSULFURON-METHYL		122010	Herbicide	6,509	3,375	0.01	24
CLOPYRALID		117403	Herbicide	6,458	1,793	0.01	59
MCPA, ISOOCTYL ESTER		030563	Herbicide	6,317	3,359	0.01	5
PARAQUAT DICHLORIDE	*	061601	Herbicide	5,866	3,972	0.01	14
CHINOMETHIONATE		054101	Insecticide	5,610	1,978	0.01	34
PROPYZAMIDE	*	101701	Herbicide	5,588	3,500	0.01	9
SODIUM ASULAM		106902	Herbicide	5,387	5,207	0.01	5
ISOFENPHOS	*	109401	Insecticide	5,379	2,881	0.01	8
POE ISOOCTADECANOL		124601	Insecticide	5,305	4,599	0.01	6
ERIOGLAUCINE		110301	Wood Preservative	5,158	3,769	0.01	14
SODIUM 5-CHLORO-2-(4-CHLORO-2-(3-(3,4-DICH		058802	Insecticide	5,076	5,076	0.01	1
SILICON DIOXIDE		072605	Insecticide	4,729	4,728	0.01	2

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
PACLOBUTRAZOL		125601	Growth Regulator	4,589	2,032	0.01	21
DICHLORPROP		031401	Herbicide	4,562	2,924	0.01	9
PROPETAMPHOS		113601	Insecticide	4,344	2,943	0.01	43
DIFLUBENZURON	*	108201	Insecticide	4,253	3,595	0.01	4
DISULFOTON	*	032501	Insecticide	4,147	1,487	0.01	24
IMAZAQUIN, MONOAMMONIUM SALT		128840	Herbicide	3,864	892	0.01	38
CLOPYRALID, MONOETHANOLAMINE SALT		117401	Herbicide	3,715	2,221	0.01	8
CHLORPYRIFOS-METHYL		059102	Insecticide	3,635	3,635	0.01	1
BASIC COPPER SULFATE		008101	Fungicide	3,573	3,188	0.01	4
SETHOXYDIM		121001	Herbicide	3,424	1,441	-	54
BUTYLATE		041405	Other	3,387	3,387	-	1
SODIUM DALAPON		028902	Herbicide	3,326	3,326	-	1
CAPTAN		081301	Fungicide	3,282	1,900	-	24
FENOXAPROP-ETHYL		128701	Herbicide	3,147	1,188	-	81
PROPYLENE GLYCOL		068603	Bacteriocide	3,065	1,994	-	6
TRICLOPYR		116001	Herbicide	3,003	1,791	-	10
METRIBUZIN		101101	Herbicide	2,856	1,407	-	11
FLUTOLANIL		128975	Fungicide	2,706	1,470	-	9
POLY(OXY-1,2-ETHANEDIYL(DIMETHYLIMINO)-1		069183	Bacteriocide	2,573	1,861	-	3
DIENOCHLOR		027501	Insecticide	2,554	1,202	-	53
AVERMECTIN B1		122804	Insecticide	2,431	1,623	-	129
HEXACHLOROPHENE		044901	Other	2,347	2,347	-	1
TRALOMETHRIN		121501	Insecticide	2,332	1,470	-	39
PCP	*	063001	Fungicide	2,306	2,306	-	1
DICAMBA, DIGLYCOAMINE SALT		128931	Herbicide	2,233	2,170	-	2
THIABENDAZOLE HYPOPHOSPHITE		060102	Fungicide	2,132	613	-	12
(7S)-HYDROPRENE		128966	Insecticide	2,118	613	-	104
FENPROPATHRIN		127901	Insecticide	2,105	2,024	-	6
FLUOMETURON		035503	Herbicide	2,038	2,038	-	1
FENBUTATIN-OXIDE		104601	Insecticide	1,939	1,882	-	39
MCPA, DIETHANOLAMINE SALT		030511	Herbicide	1,910	1,910	-	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORID		069105	Bacteriocide	1,897	1,611	-	5
OXYFLUORFEN		111601	Herbicide	1,805	1,014	-	12
FLUAZIFOP-R-BUTYL		122809	Herbicide	1,738	1,194	-	43
PERMETHRIN, MIXED CIS,TRANS	*	109701	Insecticide	1,614	1,614	-	2
ESPESOL 3A		006601	Other	1,575	1,392	-	6
POLYBUTENE		011402	Insecticide	1,574	566	-	18
D-TRANS-ALLETHRIN		004003	Insecticide	1,558	348	-	279
MCPA, BUTOXYETHYL ESTER		030553	Herbicide	1,557	1,557	-	1
HYDRAMETHYLNON		118401	Insecticide	1,507	447	-	277
TRIBUTYLTIN FLUORIDE	*	083112	Antifoulant	1,507	1,255	-	11
FENTHION		053301	Insecticide	1,499	1,333	-	3
BIFENTHRIN		128825	Insecticide	1,441	884	-	30
AMITROLE		004401	Herbicide	1,394	1,330	-	3
FLURIDONE		112900	Herbicide	1,363	749	-	14
SULFOSATE		128501	Herbicide	1,297	1,274	-	3
ZINC PHOSPHIDE (ZN3P2)	*	088601	Rodenticide	1,283	480	-	73
DICROTOPHOS	*	035201	Insecticide	1,258	762	-	24
CACODYLIC ACID		012501	Herbicide	1,230	895	-	5
AMMONIUM SYLFAMATE		005501	Other	1,187	1,187	-	1
COPPER OLEATE		023304	Fungicide	1,153	1,142	-	9
COPPER(I) OXIDE	*	025601	Antifoulant	1,141	915	-	2
DIKEGULAC SODIUM		109601	Growth Regulator	1,131	810	-	6
TRINEXAPAC-ETHYL		112602	Herbicide	1,105	416	-	12
S-METHOPRENE		105402	Insecticide	1,029	392	-	185
DIPENTENE		079701	Insecticide	1,008	492	-	12
BACILLUS THURINGIENSIS, SAN DIEGO		128946	Insecticide	999	999	-	2
ENDOTHALL, DISODIUM SALT		038903	Growth Regulator	975	943	-	3
PHENYLMERCURIC ACETATE		066003	Bacteriocide	955	387	-	12
DAZOMET		035602	Fungicide	918	918	-	1
2,4,5-T		082001	Other	888	888	-	1
TRIS(HYDROXYMETHYL)NITROMETHANE		083902	Bacteriocide	814	814	-	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
TRICHLOROETHANE		081201	Other	769	769	-	1
COPPER ETHYLENEDIAMINETETRAACETATE		039105	Other	726	726	-	1
ALKYL* DIMETHYL BENZYL AMMONIUM CHLORIDE		069104	Bacteriocide	726	346	-	10
MALEIC HYDRAZIDE, POTASSIUM SALT		051503	Herbicide	720	611	-	4
FERRIC DIMETHYLDITHIOCARBAMATE		034801	Fungicide	700	700	-	1
NAPHTHALENE		055801	Insecticide	673	480	-	12
COAL TAR CREOSOTE		025004	Wood Preservative	648	648	-	1
POTASSIUM PERMANGANATE		068501	Bacteriocide	623	623	-	1
OXINE-COPPER		024002	Fungicide	586	390	-	4
QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C1		069141	Bacteriocide	565	565	-	1
ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORID		069111	Bacteriocide	548	301	-	7
AMITROLE	*	004401	Herbicide	544	334	-	6
TARTRAZINE		110302	Herbicide	522	381	-	14
TRIFORINE		107901	Fungicide	484	210	-	45
DISULFOTON		032501	Insecticide	476	210	-	20
BENZISOTHIAZOLIN-3-ONE		098901	Bacteriocide	473	473	-	1
OXAMYL		103801	Nematicide	467	286	-	13
NAPROPAMIDE		103001	Herbicide	449	213	-	11
KEROSENE		063501	Other	408	408	-	2
BASIC COPPER III - ZINC SULFATE COMPLEX		008102	Fungicide	403	368	-	3
S-BIOALLETHRIN		004004	Insecticide	382	228	-	7
NICLOSAMIDE	*	077401	Molluscicide	348	348	-	1
ACETIC ACID		030033	Other	329	329	-	1
2-PROPYNL(S-(E,E))		107502	Multi-Type	310	106	-	21
CHLORPYRIFOS	*	059101	Insecticide	304	304	-	1
POLYISOBUTYLENE		011403	Other	285	246	-	2
FERROUS SULFATE MONOHYDRATE		050507	Herbicide	282	282	-	1
WARFARIN		086002	Rodenticide	279	271	-	7
MAGNESIUM PHOSPHIDE	*	066504	Fumigant	275	216	-	4
AZINPHOS-METHYL	*	058001	Insecticide	272	272	-	1
CHLORFLURENOL, METHYL ESTER		098801	Herbicide	263	126	-	11

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
SODIUM FLUORIDE		075202	Insecticide	260	260	-	1
SALANNIN		121701	Insecticide	231	213	-	12
DAMINOZIDE		035101	Growth Regulator	220	173	-	4
HYDANTOIN		028501	Bacteriocide	216	216	-	1
PINDONE SODIUM SALT		067704	Rodenticide	213	201	-	6
ETHION		058401	Insecticide	208	159	-	7
ACETIC ACID		030034	Herbicide	201	201	-	1
DICAMBA, DIETHANOLAMINE SALT		029803	Herbicide	198	194	-	4
TRIMETHYLBENZYL AMMONIUM RESIN		008711	Bacteriocide	194	194	-	1
POTASSIUM N-METHYLDITHIOCARBAMATE		039002	Bacteriocide	188	188	-	2
FENAMIPHOS	*	100601	Nematicide	188	188	-	1
DSMA		013802	Herbicide	187	173	-	3
ACETIC ACID		030029	Other	183	183	-	1
ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORID		069154	Bacteriocide	178	171	-	3
DICAMBA, SODIUM SALT		029806	Herbicide	169	169	-	1
O-PHENYLPHENOL		064103	Bacteriocide	166	166	-	2
POLYETHOXYPOLYPROPOXYETHANOL - IODINE COMP		046904	Bacteriocide	164	164	-	1
LINURON		035506	Herbicide	163	163	-	1
PHENOTHRIN		069005	Insecticide	162	52	-	69
2-BENZYL-4-CHLOROPHENOI		062201	Bacteriocide	160	160	-	2
DIETHYL TOLUAMIDE		080301	Insect Repellant	160	142	-	3
TRIALLATE		078802	Herbicide	159	159	-	1
NONYLPHENOXYPOLYETHOXYETHANOL - IODINE COM		046903	Bacteriocide	158	158	-	1
DISODIUM CYANODITHIOIMIDOCARBONATE		063301	Bacteriocide	137	137	-	2
SODIUM DIMETHYLDITHIOCARBAMATE		034804	Bacteriocide	130	130	-	1
GLYPHOSATE		417300	Herbicide	126	126	-	1
DIPROPYL ISOCINCHOMERONATE		047201	Insecticide	126	112	-	3
SIMAZINE	*	080807	Herbicide	125	125	-	1
QUATERNARY AMMONIUM COMPOUNDS, ALKYLBENZ		069106	Bacteriocide	122	67	-	7
METALDEHYDE	*	053001	Molluscicide	116	116	-	1
METOLACHLOR	*	108801	Herbicide	112	112	-	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
METHOMYL		090301	Insecticide	109	36	-	25
OXAMYL	*	103801	Nematicide	109	109	-	1
COPPER OXYCHLORIDE SULFATE		023503	Fungicide	105	105	-	1
FENTHION	*	053301	Insecticide	99	69	-	5
AMMONIUM SALTS OF C8-C18 AND C18' FATTY AC		031801	Rodenticide	84	50	-	4
DICHLORO-5-ETHYL-5-METHYLHYDANTOIN		128826	Bacteriocide	83	83	-	1
PARATHION	*	057501	Other	83	83	-	1
PHOSMET		059201	Insecticide	80	79	-	3
AMINOPYRIDINE	*	069201	Bird Repellant	77	21	-	60
ENDOSULFAN		079401	Insecticide	75	50	-	4
CYHALOTHRIN		128867	Insecticide	64	64	-	1
ETHEPHON		099801	Growth Regulator	62	39	-	5
METHIOCARB	*	100501	Insecticide	60	58	-	3
AMMONIUM 1-NAPHTHALENEACETATE		056004	Growth Regulator	58	37	-	6
BUTOXYPOLYPROPYLENE GLYCOL		011901	Insecticide	53	52	-	2
1-DECANAMINIUM, N,N-DIMETHYL-N-OCTYL-, C		069165	Bacteriocide	51	47	-	3
AMIDOCHLOR		128001	Herbicide	50	50	-	1
ZINC NAPHTHENATE		088301	Wood Preservative	49	44	-	4
DIBROMO-3-NITRILOPROPIONAMIDE		101801	Bacteriocide	46	46	-	1
DIPHACINONE		067701	Rodenticide	46	22	-	166
CALCIUM OXYTETRACYCLINE		006321	Fungicide	46	46	-	1
TOXAPHENE		080501	Other	44	44	-	1
DISODIUM OCTABORATE TETRAHYDRATE		011107	Fungicide	44	44	-	1
BROMOXYNIL BUTYRATE		035303	Herbicide	43	43	-	1
STREPTOMYCIN SESQUISULFATE		006310	Bacteriocide	42	13	-	10
STRYCHNINE		076901	Rodenticide	41	12	-	21
CALCIUM 2-ISOVALERYL-1,3-INDANDIONE		067706	Rodenticide	40	30	-	5
METHIOCARB		100501	Insecticide	38	29	-	5
OXYDEMETON-METHYL		058702	Insecticide	37	24	-	7
CALCIUM POLYSULFIDE		076702	Fungicide	35	26	-	5
COPPER AMMONIUM CARBONATE		022703	Fungicide	33	31	-	2

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
EGG SOLIDS		105101	Repellant	31	31	-	1
CHLOROPHACINONE		067707	Rodenticide	30	21	-	24
ZINC PHOSPHIDE (ZN3P2)		088601	Rodenticide	30	17	-	5
METHAMIDOPHOS	*	101201	Insecticide	29	29	-	1
BRODIFACOUM		112701	Rodenticide	29	5	-	329
TETRAMETHRIN		069003	Insecticide	29	20	-	10
AZINPHOS-METHYL		058001	Insecticide	29	29	-	1
SODIUM ARSENATE		013505	Insecticide	28	28	-	2
OCTANESULFONAMIDE, N-ETHYL-1,1,2,2,3,3,4,4		128992	Insecticide	28	15	-	30
CHLORMEQUAT CHLORIDE		018101	Growth Regulator	26	24	-	3
1-DECANAMINIUM, N-DECYL-N,N-DIMETHYL-, C		069149	Bacteriocide	26	23	-	3
1-OCTANAMINIUM, N,N-DIMETHYL-N-OCTYL-, C		069166	Bacteriocide	25	23	-	3
PINE OIL		067002	Bacteriocide	24	13	-	8
CHOLECALCIFEROL		202901	Rodenticide	23	12	-	34
BUTOXYETHANOL		011501	Insecticide	22	22	-	1
METHYL PARATHION		053501	Insecticide	22	22	-	1
ENDOSULFAN	*	079401	Insecticide	21	21	-	1
3-(3-(4'BROMO-(1,1'BIPHENYL)-4-YL)-3-HYDROXY-1-PHE		112001	Rodenticide	21	5	-	219
FLUAZIFOP-BUTYL		122805	Other	16	13	-	3
METHYLENEBIS(THIOCYANATE)		068102	Bacteriocide	14	14	-	1
DAMA		013804	Herbicide	13	12	-	2
MANCOZEB	*	014504	Fungicide	12	12	-	1
SULFOTEPP		079501	Insecticide	12	12	-	1
BROMETHALIN		112802	Rodenticide	11	4	-	64
METHYL PARATHION	*	053501	Insecticide	11	11	-	1
ALDICARB	*	098301	Insecticide	10	10	-	1
DIPHACINONE	*	067701	Rodenticide	9	4	-	12
DIOXATHION	*	037801	Other	8	8	-	1
NICOTINE		056702	Insecticide	8	7	-	2
CHLOROPHACINONE	*	067707	Rodenticide	7	2	-	25
SULFAQUINOXALINE		077901	Other	7	6	-	3

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name	AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
POTASSIUM NITRATE	076103	Repellant	6	6	-	2
ARSENIC TRIOXIDE	007001	Insecticide	4	4	-	1
PINDONE	067703	Rodenticide	4	3	-	10
PIPERALIN	097003	Fungicide	4	4	-	1
CAMA	013806	Herbicide	4	4	-	2
DODINE	044301	Fungicide	3	3	-	1
MUSCALURE	103201	Insect Attractant	3	1	-	25
LEMONGRASS OIL	040502	Insecticide	3	3	-	1
ZINC CHLORIDE	087801	Herbicide	3	3	-	1
CETOCHLOR	121601	Herbicide	2	2	-	1
COTTONSEED OIL	031602	Other	2	2	-	1
BENZYLDIETHYL METHYL	129045	Repellant	2	1	-	4
EDC	042003	Fungicide	2	1	-	2
DIPHACINONE, SODIUM SALT	067705	Rodenticide	2	1	-	11
TRIFLUMIZOLE	128879	Fungicide	2	2	-	1
CITRONELLA OILS	021901	Insecticide	2	2	-	1
HYDROGEN CHLORIDE	045901	Other	1	1	-	1
ETHYLENE GLYCOL	042203	Other	1	1	-	1
SOYBEAN OIL	031605	Insecticide	1	1	-	1
CHOLECALCIFEROL	208700	Other	1	1	-	4
SODIUM ACIFLUORFEN	114402	Herbicide	1	1	-	2
THYMOL	080402	Bacteriocide	1	1	-	4
TRIBUTYLTIN OXIDE	083001	Antifoulant	1	1	-	1
FERRIC SULFATE	034902	Soil Acidifier	1	1	-	1
METARHIZIUM ANISOPLIAE STRAIN ESF1	129056	Insecticide	1	-	-	10
2-EEEBC	115001	Fungicide	1	1	-	2
SODIUM 1-NAPHTHALENEACETATE	056007	Growth Regulator	-	-	-	1
CHELATES OF COPPER GLUCONATE	024405	Bacteriocide	-	-	-	1
MUSTARD OIL	004901	Repellant	-	-	-	1
IBA	046701	Growth Regulator	-		-	5
QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C1	069189	Other	-	-	-	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13A: Pesticide Usage by Active Ingredient Ordered by Estimated Total Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
OXYCARBOXIN		090202	Other	-	-	-	1
BERGAMOT OIL		129029	Repellant	-	-	-	1
BRODIFACOUM	*	112701	Rodenticide	-	-	-	1
SODIUM WARFARIN		086003	Rodenticide	-	-	-	1
CYTOKININ (AS KINETIN)		116801	Growth Regulator	-	-	-	1
TRANS-3,7-DIMETHYL-2,6-OCTADIEN-1-OL		597501	Insect Attractant	-	-	-	1
ORANGE OIL		040517	Repellant	-	-	-	1
ANCYMIDOL(A-CYCLOPROPYL-A-(P-METHOXYPHENYL		108601	Growth Regulator	-	-	-	1
NAA		056002	Growth Regulator	-	-	-	1
BACILLUS THURINGIENSIS, BERLINER		006400	Insecticide	-	-	-	1
ALPHA-IONONE		129030	Repellant	-	-	-	1
CARBENDAZIM		128872	Fungicide	-	-	-	1
NAD		056001	Growth Regulator	-	-	-	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
TOTAL				69,196,434	9,061,864	100.00	24,560
ACROLEIN	*	000701	Multi-Type	5,102,187	3,612,055	7.37	6
D-TRANS-ALLETHRIN		004003	Insecticide	1,558	348	-	279
S-BIOALLETHRIN		004004	Insecticide	382	228	-	7
AMITROLE	*	004401	Herbicide	544	334	-	6
AMITROLE		004401	Herbicide	1,394	1,330	-	3
MUSTARD OIL		004901	Repellant	-	-	-	1
PICLORAM, SALT	5*	005102	Herbicide	248,268	80,568	0.36	69
PICLORAM, SALT	5	005102	Herbicide	27,626	11,659	0.04	37
PICLORAM, ISOOCTYL ESTER	*	005103	Herbicide	34,090	23,308	0.05	8
AMMONIUM SYLFAMATE		005501	Other	1,187	1,187	-	1
STREPTOMYCIN SESQUISULFATE		006310	Bacteriocide	42	13	-	10
HALOBROM		006315	Bacteriocide	498,470	468,293	0.72	6
CALCIUM OXYTETRACYCLINE		006321	Fungicide	46	46	-	1
BACILLUS THURINGIENSIS, BERLINER		006400	Insecticide	-	-	-	1
BACILLUS THURINGIENSIS, ISRAELENSIS		006401	Insecticide	147,941	97,087	0.21	76
BACILLUS THURINGIENSIS, KURSTAKI		006402	Insecticide	102,448	76,286	0.15	49
ESPESOL 3A		006601	Other	1,575	1,392	-	6
ARSENIC TRIOXIDE		007001	Insecticide	4	4	-	1
BASIC COPPER SULFATE		008101	Fungicide	3,573	3,188	0.01	4
BASIC COPPER III - ZINC SULFATE COMPLEX		008102	Fungicide	403	368	-	3
TRIMETHYLBENZYL AMMONIUM RESIN		008711	Bacteriocide	194	194	-	1
LINDANE	*	009001	Insecticide	42,903	33,153	0.06	33
LINDANE		009001	Insecticide	7,237	4,242	0.01	41
BENSULIDE		009801	Herbicide	33,773	12,619	0.05	33
DICOFOL		010501	Insecticide	40,534	18,833	0.06	51
BORIC ACID		011001	Insecticide	436,603	196,756	0.63	266
BORAX	*	011102	Multi-Type	11,673	11,467	0.02	2
BORAX		011102	Multi-Type	51,264	36,344	0.07	5
DISODIUM OCTABORATE TETRAHYDRATE		011103	Herbicide	364,404	141,613	0.53	111
SODIUM METABORATE		011104	Insecticide	84,754	40,156	0.12	16

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
DISODIUM OCTABORATE TETRAHYDRATE		011107	Fungicide	44	44	-	1
POLYBUTENE		011402	Insecticide	1,574	566	-	18
POLYISOBUTYLENE		011403	Other	285	246	-	2
BUTOXYETHANOL		011501	Insecticide	22	22	-	1
BUTOXYPOLYPROPYLENE GLYCOL		011901	Insecticide	53	52	-	2
BROMACIL		012301	Herbicide	589,125	427,585	0.85	59
BROMACIL, LITHIUM SALT		012302	Herbicide	21,906	7,525	0.03	30
CACODYLIC ACID		012501	Herbicide	1,230	895	-	5
CACODYLIC ACID, SODIUM SALT		012502	Herbicide	7,163	5,223	0.01	5
SODIUM ARSENATE		013505	Insecticide	28	28	-	2
DSMA		013802	Herbicide	187	173	-	3
MSMA		013803	Herbicide	6,465,603	3,895,760	9.34	170
OAMA		013804	Herbicide	13	12	-	2
DDAMA		013805	Herbicide	13	12	-	2
CAMA		013806	Herbicide	4	4	-	2
NABAM		014503	Fungicide	130	130	-	1
MANCOZEB	*	014504	Fungicide	12	12	-	1
MANCOZEB		014504	Fungicide	368,633	92,715	0.53	144
MANEB		014505	Fungicide	14,673	9,682	0.02	5
CALCIUM HYPOCHLORITE		014701	Bacteriocide	6,590	5,954	0.01	3
SODIUM HYPOCHLORITE		014703	Fungicide	628,178	554,781	0.91	5
CHLORMEQUAT CHLORIDE		018101	Growth Regulator	26	24	-	3
CITRONELLA OILS		021901	Insecticide	2	2	-	1
COPPER AMMONIUM CARBONATE		022703	Fungicide	33	31	-	2
COPPER NAPHTENATE		023102	Wood Preservative	25,444	16,557	0.04	27
COPPER RESONATE		023104	Fungicide	9,763	6,360	0.01	9
COPPER OLEATE		023304	Fungicide	1,153	1,142	-	9
COPPER HYDROXIDE		023401	Fungicide	26,475	14,828	0.04	24
COPPER OXYCHLORIDE SULFATE		023503	Fungicide	105	105	-	1
OXINE-COPPER		024002	Fungicide	586	390	-	4
COPPER SULFATE PENTAHYDRATE		024401	Algaecide	4,185,885	3,498,732	6.05	49

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
COPPER TRIETHANOLAMINE COMPLEX		024403	Algaecide	47,327	20,910	0.07	69
CHELATES OF COPPER GLUCONATE		024405	Bacteriocide	-	-	-	1
COPPER ETHYLENEDIAMINE COMPLEX		024407	Herbicide	38,045	25,063	0.05	11
COAL TAR CREOSOTE	*	025004	Wood Preservative	100,515	60,729	0.15	6
COAL TAR CREOSOTE		025004	Wood Preservative	648	648	-	1
COPPER(I) OXIDE	*	025601	Antifoulant	1,141	915	-	2
COPPER(I) OXIDE		025601	Antifoulant	26,255	20,826	0.04	12
CHLORONEB		027301	Fungicide	52,366	22,540	0.08	34
DICHLOBENIL		027401	Herbicide	18,384	9,239	0.03	41
DIENOCHLOR		027501	Insecticide	2,554	1,202	-	53
HYDANTOIN		028501	Bacteriocide	216	216	-	1
SODIUM DALAPON		028902	Herbicide	3,326	3,326	-	1
DICAMBA		029801	Herbicide	9,739	4,578	0.01	59
DICAMBA, DIMETHYLAMINE SALT		029802	Herbicide	343,301	69,915	0.50	676
DICAMBA, DIETHANOLAMINE SALT		029803	Herbicide	198	194	-	4
DICAMBA, SODIUM SALT		029806	Herbicide	169	169	-	1
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, COM		030016	Herbicide	16,726	5,204	0.02	35
2,4-D	3*	030019	Herbicide	411,199	149,518	0.59	32
2,4-D	3	030019	Herbicide	3,403,153	634,582	4.92	978
ACETIC ACID		030025	Herbicide	42,708	24,772	0.06	14
ACETIC ACID		030029	Other	183	183	-	1
ACETIC ACID		030033	Other	329	329	-	1
ACETIC ACID		030034	Herbicide	201	201	-	1
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 2-B		030053	Herbicide	145,178	55,606	0.21	90
2-ETHYL-4-METHYLPENTYL 2,4-DICHL		030064	Herbicide	60,976	20,178	0.09	65
MCPA		030501	Herbicide	48,035	34,684	0.07	5
MCPA, DIETHANOLAMINE SALT		030511	Herbicide	1,910	1,910	-	1
MCPA, DIMETHYLAMINE SALT		030516	Herbicide	480,212	153,322	0.69	37
MCPA, BUTOXYETHYL ESTER		030553	Herbicide	1,557	1,557	-	1
MCPA, ISOOCTYL ESTER		030563	Herbicide	6,317	3,359	0.01	5
DICHLORPROP		031401	Herbicide	4,562	2,924	0.01	9

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name	AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-	031419	Herbicide	45,420	16,775	0.07	49
PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-	031453	Herbicide	89,084	46,257	0.13	45
PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-	031463	Herbicide	46,700	21,025	0.07	46
MECOPROP	031501	Herbicide	34,678	16,656	0.05	45
POTASSIUM 2-(2-METHYL-4-CHLOROPHENOXY)PROP	031503	Herbicide	20,205	9,326	0.03	18
PROPANOIC ACID	031516	Herbicide	9,089	4,484	0.01	11
PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN	031519	Herbicide	1,408,985	396,836	2.04	650
PROPANOIC ACID	031563	Herbicide	24,175	15,243	0.03	19
COTTONSEED OIL	031602	Other	2	2	-	1
SOYBEAN OIL	031605	Insecticide	1	1	-	1
AMMONIUM SALTS OF C8-C18 AND C18' FATTY AC	031801	Rodenticide	84	50	-	4
ATRAZINE	032201	Herbicide	142,472	79,143	0.21	100
DISULFOTON *	032501	Insecticide	4,147	1,487	0.01	24
DISULFOTON	032501	Insecticide	476	210	-	20
METHOXYCHLOR	034001	Insecticide	53,203	38,306	0.08	28
NALED	034401	Insecticide	551,496	346,231	0.80	13
FERRIC DIMETHYLDITHIOCARBAMATE	034801	Fungicide	700	700	-	1
SODIUM DIMETHYLDITHIOCARBAMATE	034804	Bacteriocide	130	130	-	1
ZINC DIMETHYLIDITHIOCARBAMATE	034805	Fungicide	30,375	28,670	0.04	3
FERRIC SULFATE	034902	Soil Acidifier	1	1	-	1
DIMETHOATE	035001	Insecticide	8,883	2,490	0.01	62
DAMINOZIDE	035101	Growth Regulator	220	173	-	4
DICROTOPHOS *	035201	Insecticide	1,258	762	-	24
BROMOXYNIL OCTANOATE	035302	Herbicide	7,708	5,805	0.01	6
BROMOXYNIL BUTYRATE	035303	Herbicide	43	43	-	1
FLUOMETURON	035503	Herbicide	2,038	2,038	-	1
DIURON	035505	Herbicide	2,339,296	1,331,352	3.38	114
LINURON	035506	Herbicide	163	163	-	1
SIDURON	035509	Herbicide	30,096	17,963	0.04	23
DAZOMET	035602	Fungicide	918	918	-	1
2-(THIOCYANOMETHYLTHIO) BENZOTHIAZOLE	035603	Bacteriocide	14	14	-	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
TRIFLURALIN		036101	Herbicide	56,846	15,506	0.08	182
3-TRIFLUOROMETHYL-4-NITROPHENOL	*	036201	Rodenticide	9,816	9,816	0.01	2
DIOXATHION	*	037801	Other	8	8	-	1
ENDOTHALL, DISODIUM SALT		038903	Growth Regulator	975	943	-	3
ENDOTHALL, DIPOTASSIUM SALT		038904	Herbicide	120,266	62,965	0.17	34
ENDOTHALL, MONO(N,N-DIMETHYLCOCOAMINE) SAL		038905	Herbicide	1,149,839	1,090,927	1.66	14
POTASSIUM N-METHYLDITHIOCARBAMATE		039002	Bacteriocide	188	188	-	2
METAM-SODIUM		039003	Fumigant	98,854	45,677	0.14	12
COPPER ETHYLENEDIAMINETETRAACETATE		039105	Other	726	726	-	1
LEMONGRASS OIL		040502	Insecticide	3	3	-	1
ORANGE OIL		040517	Repellant	-	-	-	1
ETHOPROP	*	041101	Nematicide	21,065	20,173	0.03	6
BUTYLATE		041405	Other	3,387	3,387	-	1
FONOFOS		041701	Insecticide	137,143	80,231	0.20	33
EDC		042003	Fungicide	2	1	-	2
ETHYLENE GLYCOL		042203	Other	1	1	-	1
ETHYLENE OXIDE		042301	Fumigant	538,611	538,611	0.78	1
GIBBERELLIC ACID		043801	Growth Regulator	15,121	15,121	0.02	1
DODINE		044301	Fungicide	3	3	-	1
HEXACHLOROPHENE		044901	Other	2,347	2,347	-	1
HYDROGEN CHLORIDE		045901	Other	1	1	-	1
IBA		046701	Growth Regulator	-	-	-	5
NONYLPHENOXYPOLYETHOXYETHANOL - IODINE COM		046903	Bacteriocide	158	158	-	1
POLYETHOXYPOLYPROPOXYETHANOL - IODINE COMP		046904	Bacteriocide	164	164	-	1
DIPROPYL ISOCINCHOMERONATE		047201	Insecticide	126	112	-	3
PROPOXUR		047802	Insecticide	15,573	6,149	0.02	197
FERROUS SULFATE MONOHYDRATE		050507	Herbicide	282	282	-	1
MALEIC HYDRAZIDE, POTASSIUM SALT		051503	Herbicide	720	611	-	4
MERCURIC CHLORIDE		052001	Other	7,367	2,100	0.01	33
MERCUROUS CHLORIDE		052201	Other	14,735	4,201	0.02	33
METALDEHYDE	*	053001	Molluscicide	116	116	-	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
METALDEHYDE		053001	Molluscicide	13,297	7,279	0.02	53
METHYL BROMIDE	*	053201	Fumigant	2,710,834	1,155,808	3.92	51
FENTHION	*	053301	Insecticide	99	69	-	5
FENTHION		053301	Insecticide	1,499	1,333	-	3
METHYL PARATHION	*	053501	Insecticide	11	11	-	1
METHYL PARATHION		053501	Insecticide	22	22	-	1
CHINOMETHIONATE		054101	Insecticide	5,610	1,978	0.01	34
NAPHTHALENE		055801	Insecticide	673	480	-	12
NAD		056001	Growth Regulator	-	-	-	1
NAA		056002	Growth Regulator	-	-	-	1
AMMONIUM 1-NAPHTHALENEACETATE		056004	Growth Regulator	58	37	-	6
SODIUM 1-NAPHTHALENEACETATE		056007	Growth Regulator	-	-	-	1
PENTACHLORONITROBENZENE		056502	Fungicide	174,942	30,619	0.25	66
NICOTINE		056702	Insecticide	8	7	-	2
CARBARYL		056801	Insecticide	405,881	132,499	0.59	313
N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	Synergist	52,275	14,336	0.08	744
PARATHION	*	057501	Other	83	83	-	1
MALATHION		057701	Insecticide	4,314,719	1,363,456	6.24	264
DIAZINON	*	057801	Insecticide	41,265	28,149	0.06	11
DIAZINON		057801	Insecticide	1,038,058	190,580	1.50	695
TRICHLORFON		057901	Insecticide	374,409	112,767	0.54	144
AZINPHOS-METHYL	*	058001	Insecticide	272	272	-	1
AZINPHOS-METHYL		058001	Insecticide	29	29	-	1
CARBOPHENOTHION		058102	Other	36,046	36,046	0.05	1
CHLORDANE		058201	Other	39,683	28,191	0.06	3
ETHION		058401	Insecticide	208	159	-	7
OXYDEMETON-METHYL	*	058702	Insecticide	12,246	6,694	0.02	25
OXYDEMETON-METHYL		058702	Insecticide	37	24	-	7
SODIUM 5-CHLORO-2-(4-CHLORO-2-(3-(3,4-DICH		058802	Insecticide	5,076	5,076	0.01	1
TEMEPHOS		059001	Insecticide	35,193	29,925	0.05	19
CHLORPYRIFOS	*	059101	Insecticide	304	304	-	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
CHLORPYRIFOS		059101	Insecticide	7,778,765	998,620	11.24	2,140
CHLORPYRIFOS-METHYL		059102	Insecticide	3,635	3,635	0.01	1
PHOSMET		059201	Insecticide	80	79	-	3
THIABENDAZOLE HYPOPHOSPHITE		060102	Fungicide	2,132	613	-	12
PARAQUAT DICHLORIDE	*	061601	Herbicide	5,866	3,972	0.01	14
2-BENZYL-4-CHLOROPHENOI		062201	Bacteriocide	160	160	-	2
PCP	*	063001	Fungicide	2,306	2,306	-	1
DISODIUM CYANODITHIOIMIDOCARBONATE		063301	Bacteriocide	137	137	-	2
KEROSENE		063501	Other	408	408	-	2
MINERAL OIL - INCLUDES PARAFFIN OIL FROM O		063502	Insecticide	384,221	332,462	0.56	29
O-PHENYLPHENOL		064103	Bacteriocide	166	166	-	2
PHENYLMERCURIC ACETATE		066003	Bacteriocide	955	387	-	12
ALUMINUM PHOSPHIDE	*	066501	Fumigant	50,225	23,238	0.07	39
MAGNESIUM PHOSPHIDE	*	066504	Fumigant	275	216	-	4
PINE OIL		067002	Bacteriocide	24	13	-	8
PIPERONYL BUTOXIDE	*	067501	Multi-Type	7,619	7,552	0.01	2
PIPERONYL BUTOXIDE		067501	Multi-Type	630,097	342,375	0.91	1,383
DIPHACINONE	*	067701	Rodenticide	9	4	-	12
DIPHACINONE		067701	Rodenticide	46	22	-	166
PINDONE		067703	Rodenticide	4	3	-	10
PINDONE SODIUM SALT		067704	Rodenticide	213	201	-	6
DIPHACINONE, SODIUM SALT		067705	Rodenticide	2	1	-	11
CALCIUM 2-ISOVALERYL-1,3-INDANDIONE		067706	Rodenticide	40	30	-	5
CHLOROPHACINONE	*	067707	Rodenticide	7	2	-	25
CHLOROPHACINONE		067707	Rodenticide	30	21	-	24
METHYLENEBIS(THIOCYANATE)		068102	Bacteriocide	14	14	-	1
POTASSIUM DICHROMATE	*	068302	Wood Preservative	6,582	4,119	0.01	4
POTASSIUM PERMANGANATE		068501	Bacteriocide	623	623	-	1
PROPYLENE GLYCOL		068603	Bacteriocide	3,065	1,994	-	6
PYRETHRINS		069001	Insecticide	31,885	10,005	0.05	1,251
TETRAMETHRIN		069003	Insecticide	29	20	-	10

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
PHENOTHRIN		069005	Insecticide	162	52	-	69
ALKYL* DIMETHYL BENZYL AMMONIUM CHLORIDE		069104	Bacteriocide	726	346	-	10
ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORID		069105	Bacteriocide	1,897	1,611	-	5
QUATERNARY AMMONIUM COMPOUNDS, ALKYLBENZ		069106	Bacteriocide	122	67	-	7
ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORID		069111	Bacteriocide	548	301	-	7
QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C1		069141	Bacteriocide	565	565	-	1
1-DECANAMINIUM, N-DECYL-N,N-DIMETHYL-, C		069149	Bacteriocide	26	23	-	3
ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORID		069154	Bacteriocide	178	171	-	3
1-DECANAMINIUM, N,N-DIMETHYL-N-OCTYL-, C		069165	Bacteriocide	51	47	-	3
1-OCTANAMINIUM, N,N-DIMETHYL-N-OCTYL-, C		069166	Bacteriocide	25	23	-	3
POLY(OXY-1,2-ETHANEDIYL(DIMETHYLIMINO)-1		069183	Bacteriocide	2,573	1,861	-	3
QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C1		069189	Other	-	-	-	1
AMINOPYRIDINE	*	069201	Bird Repellant	77	21	-	60
ROTENONE	*	071003	Insecticide	7,788	7,553	0.01	5
ROTENONE		071003	Insecticide	68,686	60,966	0.10	30
CUBE RESINS OTHER THAN ROTENONE	*	071004	Insecticide	15,577	15,106	0.02	5
CUBE RESINS OTHER THAN ROTENONE		071004	Insecticide	128,620	121,609	0.19	29
SILICA GEL		072602	Insecticide	32,265	7,635	0.05	184
SILICON DIOXIDE		072605	Insecticide	4,729	4,728	0.01	2
SODIUM CHLORATE		073301	Herbicide	64,245	31,876	0.09	17
SODIUM FLUORIDE	*	075202	Insecticide	98,126	59,148	0.14	6
SODIUM FLUORIDE		075202	Insecticide	260	260	-	1
POTASSIUM NITRATE		076103	Repellant	6	6	-	2
METHYL SALICYLATE		076601	Bacteriocide	-	-	-	1
CALCIUM POLYSULFIDE		076702	Fungicide	35	26	-	5
STRYCHNINE		076901	Rodenticide	41	12	-	21
NICLOSAMIDE	*	077401	Molluscicide	348	348		1
SULFUR		077501	Fungicide	26,110	11,684	0.04	25
SULFAQUINOXALINE		077901	Other	7	6	-	3
SULFURYL FLUORIDE	*	078003	Fumigant	1,513,496	579,359	2.19	33
CHLORTHAL DIMETHYL		078701	Herbicide	13,309	6,761	0.02	17

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
TRIALLATE		078802	Herbicide	159	159	-	1
POTASSIUM SOAPS OF FATTY ACIDS		079021	Insecticide	101,623	32,948	0.15	76
ENDOSULFAN	*	079401	Insecticide	21	21	-	1
ENDOSULFAN		079401	Insecticide	75	50	-	4
SULFOTEPP		079501	Insecticide	12	12	-	1
DIPENTENE		079701	Insecticide	1,008	492	-	12
THIRAM		079801	Fungicide	142,573	68,867	0.21	43
DIETHYL TOLUAMIDE		080301	Insect Repellant	160	142	-	3
THYMOL		080402	Bacteriocide	1	1	-	4
TOXAPHENE		080501	Other	44	44	-	1
ATRAZINE	*	080803	Herbicide	41,350	14,671	0.06	33
ATRAZINE		080803	Herbicide	16,707	9,384	0.02	11
PROMETON		080804	Herbicide	35,361	12,712	0.05	62
SIMAZINE	*	080807	Herbicide	125	125	-	1
SIMAZINE		080807	Herbicide	886,630	533,513	1.28	112
ANILAZINE		080811	Fungicide	37,579	12,073	0.05	30
TRICHLOROETHANE		081201	Other	769	769	-	1
CAPTAN		081301	Fungicide	3,282	1,900	-	24
CHLOROPICRIN	*	081501	Fungicide	8,177	5,194	0.01	13
CHLOROTHALONIL		081901	Fungicide	1,016,722	181,528	1.47	323
2,4,5-T		082001	Other	888	888	-	1
TRIBUTYLTIN OXIDE		083001	Antifoulant	1	1	-	1
TRIBUTYLTIN FLUORIDE	*	083112	Antifoulant	1,507	1,255	-	11
TRIBUTYLTIN METHACRYLATE	*	083120	Antifoulant	13,625	11,191	0.02	13
TETRACHLORVINPHOS		083701	Insecticide	19,880	14,789	0.03	3
TRIS(HYDROXYMETHYL)NITROMETHANE		083902	Bacteriocide	814	814	-	1
DICHLORVOS		084001	Insecticide	16,669	5,285	0.02	57
BENFLURALIN		084301	Herbicide	111,553	35,443	0.16	179
ETRIDIAZOLE		084701	Fungicide	17,982	11,316	0.03	31
WARFARIN		086002	Rodenticide	279	271	-	7
SODIUM WARFARIN		086003	Rodenticide	-	-	-	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
ZINC CHLORIDE		087801	Herbicide	3	3	-	1
ZINC NAPHTHENATE		088301	Wood Preservative	49	44	-	4
ZINC PHOSPHIDE (ZN3P2)	*	088601	Rodenticide	1,283	480	-	73
ZINC PHOSPHIDE (ZN3P2)		088601	Rodenticide	30	17	-	5
OXYCARBOXIN		090202	Other	-	-	-	1
METHOMYL		090301	Insecticide	109	36	-	25
CARBOFURAN	*	090601	Insecticide	134,943	134,943	0.20	1
PIPERALIN		097003	Fungicide	4	4	-	1
RESMETHRIN		097801	Insecticide	144,544	112,475	0.21	99
ALDICARB	*	098301	Insecticide	10	10	-	1
CHLORFLURENOL, METHYL ESTER		098801	Herbicide	263	126	-	11
BENZISOTHIAZOLIN-3-ONE		098901	Bacteriocide	473	473	-	1
BENOMYL		099101	Fungicide	16,345	6,212	0.02	69
ETHEPHON		099801	Growth Regulator	62	39	-	5
METHIOCARB	*	100501	Insecticide	60	58	-	3
METHIOCARB		100501	Insecticide	38	29	-	5
FENAMIPHOS	*	100601	Nematicide	188	188	-	1
FENAMIPHOS		100601	Nematicide	48,576	23,683	0.07	11
METRIBUZIN		101101	Herbicide	2,856	1,407	-	11
METHAMIDOPHOS	*	101201	Insecticide	29	29	-	1
PROPYZAMIDE	*	101701	Herbicide	5,588	3,500	0.01	9
DIBROMO-3-NITRILOPROPIONAMIDE		101801	Bacteriocide	46	46	-	1
THIOPHANATE-METHYL		102001	Fungicide	87,974	15,543	0.13	171
NAPROPAMIDE		103001	Herbicide	449	213	-	11
MUSCALURE		103201	Insect Attractant	3	1	-	25
ACEPHATE		103301	Insecticide	425,884	159,587	0.62	431
THIOPHANATE		103401	Fungicide	9,005	6,297	0.01	6
GLYPHOSATE, SALT	2	103601	Herbicide	3,412,296	677,101	4.93	1,220
OXAMYL	*	103801	Nematicide	109	109	-	1
OXAMYL		103801	Nematicide	467	286	-	13
SODIUM BENTAZON	*	103901	Herbicide	10,897	8,690	0.02	2

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
SODIUM BENTAZON		103901	Herbicide	48,720	11,865	0.07	64
ORYZALIN		104201	Herbicide	353,513	80,199	0.51	351
FENBUTATIN-OXIDE		104601	Insecticide	1,939	1,882	-	39
EGG SOLIDS		105101	Repellant	31	31	-	1
BENDIOCARB	*	105201	Insecticide	176,740	113,542	0.26	42
BENDIOCARB		105201	Insecticide	424,529	167,215	0.61	404
METHOPRENE		105401	Insecticide	23,824	15,362	0.03	105
S-METHOPRENE		105402	Insecticide	1,029	392	-	185
TEBUTHIURON		105501	Herbicide	88,661	33,056	0.13	37
NORFLURAZON		105801	Herbicide	50,684	49,878	0.07	3
FENITROTHION		105901	Insecticide	60,603	59,607	0.09	4
FOSAMINE AMMONIUM		106701	Herbicide	252,881	106,931	0.37	29
SODIUM ASULAM		106902	Herbicide	5,387	5,207	0.01	5
3(2H)-ISOTHIAZOLONE, 5-CHLORO-2-METHYL-		107103	Bacteriocide	38,299	37,570	0.06	3
METHYLISOTHIAZOLINONE		107104	Bacteriocide	11,656	11,434	0.02	3
HEXAZINONE		107201	Herbicide	114,453	75,959	0.17	12
2-PROPYNL(S-(E,E))		107502	Multi-Type	310	106	-	21
TRIFORINE		107901	Fungicide	484	210	-	45
DIFLUBENZURON	*	108201	Insecticide	4,253	3,595	0.01	4
PENDIMETHALIN		108501	Herbicide	1,833,821	531,863	2.65	193
ANCYMIDOL(A-CYCLOPROPYL-A-(P-METHOXYPHENYL		108601	Growth Regulator	-	-	-	1
METOLACHLOR	*	108801	Herbicide	112	112	-	1
METOLACHLOR		108801	Herbicide	42,277	32,013	0.06	29
OXADIAZON		109001	Herbicide	24,614	8,947	0.04	88
FENVALERATE		109301	Insecticide	50,573	35,791	0.07	112
FLUVALINATE		109302	Insecticide	13,164	6,192	0.02	100
ESFENVALERATE		109303	Insecticide	10,974	6,303	0.02	67
ISOFENPHOS	*	109401	Insecticide	5,379	2,881	0.01	8
ISOFENPHOS		109401	Insecticide	136,364	38,974	0.20	129
DIKEGULAC SODIUM		109601	Growth Regulator	1,131	810	-	6
PERMETHRIN, MIXED CIS,TRANS	*	109701	Insecticide	1,614	1,614	-	2

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
PERMETHRIN, MIXED CIS,TRANS		109701	Insecticide	2,388,598	797,308	3.45	235
CYPERMETHRIN		109702	Insecticide	1,292,864	553,989	1.87	542
IPRODIONE		109801	Fungicide	138,736	24,169	0.20	168
TRIADIMEFON		109901	Fungicide	62,634	15,784	0.09	170
PRODIAMINE		110201	Herbicide	145,250	67,135	0.21	49
ERIOGLAUCINE		110301	Wood Preservative	5,158	3,769	0.01	14
TARTRAZINE		110302	Herbicide	522	381	-	14
ETHOFUMESATE		110601	Herbicide	6,871	5,056	0.01	11
DICLOFOP-METHYL	*	110902	Herbicide	20,386	9,261	0.03	14
OXYFLUORFEN		111601	Herbicide	1,805	1,014	-	12
3-(3-(4'BROMO-(1,1'BIPHENYL) 4-YL)-3-HYDROXY-1-PHE		112001	Rodenticide	21	5	-	219
TRINEXAPAC-ETHYL		112602	Herbicide	1,105	416	-	12
BRODIFACOUM	*	112701	Rodenticide	-	-	-	1
BRODIFACOUM		112701	Rodenticide	29	5	-	329
BROMETHALIN		112802	Rodenticide	11	4	-	64
FLURIDONE		112900	Herbicide	1,363	749	-	14
VINCLOZOLIN		113201	Fungicide	66,072	19,096	0.10	64
METALAXYL		113501	Fungicide	71,080	10,907	0.10	179
PROPETAMPHOS	*	113601	Insecticide	89,344	15,101	0.13	222
PROPETAMPHOS		113601	Insecticide	4,344	2,943	0.01	43
MEFLUIDIDE, DIETHANOLAMINE SALT		114002	Herbicide	6,573	2,004	0.01	61
SODIUM ACIFLUORFEN		114402	Herbicide	1	1	-	2
2-EEEBC		115001	Fungicide	1	1	-	2
TRICLOPYR		116001	Herbicide	3,003	1,791	-	10
TRICLOPYR	4*	116004	Herbicide	64,790	44,299	0.09	8
TRICLOPYR	4	116004	Herbicide	1,139,810	342,029	1.65	269
CYTOKININ (AS KINETIN)		116801	Growth Regulator	-	-	-	1
CLOPYRALID, MONOETHANOLAMINE SALT		117401	Herbicide	3,715	2,221	0.01	8
CLOPYRALID		117403	Herbicide	6,458	1,793	0.01	59
HYDRAMETHYLNON		118401	Insecticide	1,507	447	-	277
2-CHLORSULFURON		118601	Herbicide	11,562	8,004	0.02	16

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name	AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
PROPAMOCARB HYDROCHLORIDE	119302	Fungicide	60,013	18,936	0.09	43
SETHOXYDIM	121001	Herbicide	3,424	1,441	·	54
TRALOMETHRIN	121501	Insecticide	2,332	1,470	·	39
CETOCHLOR	121601	Herbicide	2	2		1
SALANNIN	121701	Insecticide	231	213	·	12
SULFOMETURON METHYL	122001	Herbicide	72,542	27,730	0.10	66
METSULFURON-METHYL	122010	Herbicide	6,509	3,375	0.01	24
PROPICONAZOLE	122101	Fungicide	28,047	5,765	0.04	85
AVERMECTIN B1	122804	Insecticide	2,431	1,623	-	129
FLUAZIFOP-BUTYL	122805	Other	16	13	-	3
FLUAZIFOP-R-BUTYL	122809	Herbicide	1,738	1,194	-	43
FOSETYL-AL	123301	Fungicide	76,568	26,799	0.11	41
POE ISOOCTADECANOL	124601	Insecticide	5,305	4,599	0.01	6
FENOXYCARB	125301	Insecticide	8,389	2,649	0.01	164
PACLOBUTRAZOL	125601	Growth Regulator	4,589	2,032	0.01	21
FLURPRIMIDOL	125701	Growth Regulator	26,802	24,601	0.04	21
ISOXABEN	125851	Herbicide	13,479	5,383	0.02	60
ISAZOFOS *	126901	Insecticide	42,018	11,045	0.06	71
FENPROPATHRIN	127901	Insecticide	2,105	2,024	-	6
AMIDOCHLOR	128001	Herbicide	50	50	-	1
SULFOSATE	128501	Herbicide	1,297	1,274	-	3
FENOXAPROP-ETHYL	128701	Herbicide	3,147	1,188	-	81
BIFENTHRIN	128825	Insecticide	1,441	884	-	30
DICHLORO-5-ETHYL-5-METHYLHYDANTOIN	128826	Bacteriocide	83	83	-	1
IMAZAPYR, ISOPROPYLAMINE SALT	128829	Herbicide	128,473	55,906	0.19	58
CYFLUTHRIN	128831	Insecticide	435,878	282,606	0.63	392
LINALOOL	128838	Insecticide	7,663	5,559	0.01	26
IMAZAQUIN, MONOAMMONIUM SALT	128840	Herbicide	3,864	892	0.01	38
CYHALOTHRIN	128867	Insecticide	64	64	·	1
CARBENDAZIM	128872	Fungicide	-	-	·	1
TRIFLUMIZOLE	128879	Fungicide	2	2	-	1

* Restricted Use Pesticide (RUP)
· Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13B: Pesticide Usage by Active Ingredient Ordered BY ACTIVE INGREDIENT CODE
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name	AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
LAMBDA-CYHALOTHRIN	128897	Insecticide	44,326	23,818	0.06	81
DICAMBA, DIGLYCOAMINE SALT	128931	Herbicide	2,233	2,170	.	2
BACILLUS THURINGIENSIS, SAN DIEGO	128946	Insecticide	999	999	-	2
(7S)-HYDROPRENE	128966	Insecticide	2,118	613	-	104
FLUTOLANIL	128975	Fungicide	2,706	1,470	.	9
OCTANESULFONAMIDE, N-ETHYL-1,1,2,2,3,3,4,4	128992	Insecticide	28	15	.	30
DITHIOPYR	128994	Herbicide	28,733	10,266	0.04	60
BERGAMOT OIL	129029	Repellant	-	-	.	1
ALPHA-IONONE	129030	Repellant	-	-	.	1
BENZYLDIETHYL METHYL	129045	Repellant	2	1	.	4
METARHIZIUM ANISOPLIAE STRAIN ESF1	129056	Insecticide	1	-	.	10
CHOLECALCIFEROL	202901	Rodenticide	23	12	.	34
FENARIMOL	206600	Fungicide	10,509	2,822	0.02	89
CHOLECALCIFEROL	208700	Other	1	1	.	4
GLYPHOSATE	417300	Herbicide	126	126	-	1
HYDROPRENE	486300	Insecticide	9,338	3,918	0.01	48
TRANS-3,7-DIMETHYL-2,6-OCTADIEN-1-OL	597501	Insect Attractant	-	.	.	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
TOTAL				69,196,434	9,061,864	100.00	24,560
2,4,5-T		082001	Other	888	888	-	1
2,4-D	3*	030019	Herbicide	411,199	149,518	0.59	32
2,4-D	3	030019	Herbicide	3,403,153	634,582	4.92	978
ACEPHATE		103301	Insecticide	425,884	159,587	0.62	431
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, COM		030016	Herbicide	16,726	5,204	0.02	35
ACROLEIN	*	000701	Multi-Type	5,102,187	3,612,055	7.37	6
ALDICARB	*	098301	Insecticide	10	10	-	1
ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORID		069111	Bacteriocide	548	301	-	7
ALKYL* DIMETHYL BENZYL AMMONIUM CHLORIDE		069104	Bacteriocide	726	346	-	10
D-TRANS-ALLETHRIN		004003	Insecticide	1,558	348	-	279
ALPHA-IONONE		129030	Repellant	-	-	-	1
ALUMINUM PHOSPHIDE	*	066501	Fumigant	50,225	23,238	0.07	39
AMIDOCHLOR		128001	Herbicide	50	50	-	1
AMINOPYRIDINE	*	069201	Bird Repellant	77	21	-	60
AMITROLE	*	004401	Herbicide	544	334	-	6
AMITROLE		004401	Herbicide	1,394	1,330	-	3
AMMONIUM 1-NAPHTHALENEACETATE		056004	Growth Regulator	58	37	-	6
AMMONIUM SALTS OF C8-C18 AND C18' FATTY AC		031801	Rodenticide	84	50	-	4
AMMONIUM SYLFAMATE		005501	Other	1,187	1,187	-	1
ANCYMIDOL(A-CYCLOPROPYL-A-(P-METHOXYPHENYL		108601	Growth Regulator	-	-	-	1
ANILAZINE		080811	Fungicide	37,579	12,073	0.05	30
ARSENIC TRIOXIDE		007001	Insecticide	4	4	-	1
ATRAZINE	*	080803	Herbicide	41,350	14,671	0.06	33
ATRAZINE		080803	Herbicide	16,707	9,384	0.02	11
AVERMECTIN B1		122804	Insecticide	2,431	1,623	-	129
AZINPHOS-METHYL	*	058001	Insecticide	272	272	-	1
AZINPHOS-METHYL		058001	Insecticide	29	29	-	1
BACILLUS THURINGIENSIS, BERLINER		006400	Insecticide	-	-	-	1
BACILLUS THURINGIENSIS, ISRAELENSIS		006401	Insecticide	147,941	97,087	0.21	76
BACILLUS THURINGIENSIS, KURSTAKI		006402	Insecticide	102,448	76,286	0.15	49

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
BACILLUS THURINGIENSIS, SAN DIEGO		128946	Insecticide	999	999	-	2
BASIC COPPER III - ZINC SULFATE COMPLEX		008102	Fungicide	403	368	-	3
BASIC COPPER SULFATE		008101	Fungicide	3,573	3,188	0.01	4
BENDIOCARB	*	105201	Insecticide	176,740	113,542	0.26	42
BENDIOCARB		105201	Insecticide	424,529	167,215	0.61	404
BENFLURALIN		084301	Herbicide	111,553	35,443	0.16	179
BENOMYL		099101	Fungicide	16,345	6,212	0.02	69
BENSULIDE		009801	Herbicide	33,773	12,619	0.05	33
BENZISOTHIAZOLIN-3-ONE		098901	Bacteriocide	473	473	-	1
2-(THIOCYANOMETHYLTHIO) BENZOTHIAZOLE		035603	Bacteriocide	14	14	-	1
2-BENZYL-4-CHLOROPHENOI		062201	Bacteriocide	160	160	-	2
BENZYLDIETHYL METHYL		129045	Repellant	2	1	-	4
BERGAMOT OIL		129029	Repellant	-	-	-	1
BIFENTHRIN		128825	Insecticide	1,441	884	-	30
S-BIOALLETHRIN		004004	Insecticide	382	228	-	7
BORAX	*	011102	Multi-Type	11,673	11,467	0.02	2
BORAX		011102	Multi-Type	51,264	36,344	0.07	5
BORIC ACID		011001	Insecticide	436,603	196,756	0.63	266
BRODIFACOUM	*	112701	Rodenticide	-	-	-	1
BRODIFACOUM		112701	Rodenticide	29	5	-	329
BROMACIL		012301	Herbicide	589,125	427,585	0.85	59
BROMETHALIN		112802	Rodenticide	11	4	-	64
3-(3-(4'BROMO-(1,1'BIPHENYL)-4-YL)-3-HYDROXY-1-PHE		112001	Rodenticide	21	5	-	219
BROMOXYNIL BUTYRATE		035303	Herbicide	43	43	-	1
BROMOXYNIL OCTANOATE		035302	Herbicide	7,708	5,805	0.01	6
BUTOXYETHANOL		011501	Insecticide	22	22	-	1
BUTOXYPOLYPROPYLENE GLYCOL		011901	Insecticide	53	52	-	2
BUTYLATE		041405	Other	3,387	3,387	-	1
CACODYLIC ACID		012501	Herbicide	1,230	895	-	5
CACODYLIC ACID, SODIUM SALT		012502	Herbicide	7,163	5,223	0.01	5
CALCIUM 2-ISOVALERYL-1,3-INDANDIONE		067706	Rodenticide	40	30	-	5

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
CALCIUM HYPOCHLORITE		014701	Bacteriocide	6,590	5,954	0.01	3
CALCIUM OXYTETRACYCLINE		006321	Fungicide	46	46	-	1
CALCIUM POLYSULFIDE		076702	Fungicide	35	26	-	5
CAMA		013806	Herbicide	4	4	-	2
CAPTAN		081301	Fungicide	3,282	1,900	-	24
CARBARYL		056801	Insecticide	405,881	132,499	0.59	313
CARBENDAZIM		128872	Fungicide	-	-	-	1
CARBOFURAN	*	090601	Insecticide	134,943	134,943	0.20	1
CARBOPHENOTHION		058102	Other	36,046	36,046	0.05	1
CETOCHLOR		121601	Herbicide	2	2	-	1
CHELATES OF COPPER GLUCONATE		024405	Bacteriocide	-	-	-	1
CHINOMETHIONATE		054101	Insecticide	5,610	1,978	0.01	34
CHLORDANE		058201	Other	39,683	28,191	0.06	3
CHLORFLURENOL, METHYL ESTER		098801	Herbicide	263	126	-	11
CHLORMEQUAT CHLORIDE		018101	Growth Regulator	26	24	-	3
CHLORONEB		027301	Fungicide	52,366	22,540	0.08	34
CHLOROPHACINONE	*	067707	Rodenticide	7	2	-	25
CHLOROPHACINONE		067707	Rodenticide	30	21	-	24
CHLOROPICRIN	*	081501	Fungicide	8,177	5,194	0.01	13
CHLOROTHALONIL		081901	Fungicide	1,016,722	181,528	1.47	323
CHLORPYRIFOS	*	059101	Insecticide	304	304	-	1
CHLORPYRIFOS		059101	Insecticide	7,778,765	998,620	11.24	2,140
CHLORPYRIFOS-METHYL		059102	Insecticide	3,635	3,635	0.01	1
2-CHLORSULFURON		118601	Herbicide	11,562	8,004	0.02	16
CHLORTHAL DIMETHYL		078701	Herbicide	13,309	6,761	0.02	17
CHOLECALCIFEROL		202901	Rodenticide	23	12	-	34
CHOLECALCIFEROL		208700	Other	1	1	-	4
CITRONELLA OILS		021901	Insecticide	2	2	-	1
CLOPYRALID		117403	Herbicide	6,458	1,793	0.01	59
CLOPYRALID, MONOETHANOLAMINE SALT		117401	Herbicide	3,715	2,221	0.01	8
COAL TAR CREOSOTE	*	025004	Wood Preservative	100,515	60,729	0.15	6

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
COAL TAR CREOSOTE		025004	Wood Preservative	648	648	-	1
COPPER AMMONIUM CARBONATE		022703	Fungicide	33	31	-	2
COPPER ETHYLENEDIAMINE COMPLEX		024407	Herbicide	38,045	25,063	0.05	11
COPPER ETHYLENEDIAMINETETRAACETATE		039105	Other	726	726	-	1
COPPER HYDROXIDE		023401	Fungicide	26,475	14,828	0.04	24
COPPER NAPHTENATE		023102	Wood Preservative	25,444	16,557	0.04	27
COPPER OLEATE		023304	Fungicide	1,153	1,142	-	9
COPPER OXYCHLORIDE SULFATE		023503	Fungicide	105	105	-	1
COPPER RESONATE		023104	Fungicide	9,763	6,360	0.01	9
COPPER SULFATE PENTAHYDRATE		024401	Algaecide	4,185,885	3,498,732	6.05	49
COPPER TRIETHANOLAMINE COMPLEX		024403	Algaecide	47,327	20,910	0.07	69
COPPER(I) OXIDE	*	025601	Antifoulant	1,141	915	-	2
COPPER(I) OXIDE		025601	Antifoulant	26,255	20,826	0.04	12
COTTONSEED OIL		031602	Other	2	2	-	1
CUBE RESINS OTHER THAN ROTENONE	*	071004	Insecticide	15,577	15,106	0.02	5
CUBE RESINS OTHER THAN ROTENONE		071004	Insecticide	128,620	121,609	0.19	29
CYFLUTHRIN		128831	Insecticide	435,878	282,606	0.63	392
LAMBDA-CYHALOTHRIN		128897	Insecticide	44,326	23,818	0.06	81
CYPERMETHRIN		109702	Insecticide	1,292,864	553,989	1.87	542
CYTOKININ (AS KINETIN)		116801	Growth Regulator	-	-	-	1
DAMINOZIDE		035101	Growth Regulator	220	173	-	4
DAZOMET		035602	Fungicide	918	918	-	1
DDAMA		013805	Herbicide	13	12	-	2
1-DECANAMINIUM, N,N-DIMETHYL-N-OCTYL-, C		069165	Bacteriocide	51	47	-	3
1-DECANAMINIUM, N-DECYL-N,N-DIMETHYL-, C		069149	Bacteriocide	26	23	-	3
DIAZINON	*	057801	Insecticide	41,265	28,149	0.06	11
DIAZINON		057801	Insecticide	1,038,058	190,580	1.50	695
DIBROMO-3-NITRILOPROPIONAMIDE		101801	Bacteriocide	46	46	-	1
DICAMBA		029801	Herbicide	9,739	4,578	0.01	59
DICAMBA, DIETHANOLAMINE SALT		029803	Herbicide	198	194	-	4
DICAMBA, DIGLYCOAMINE SALT		128931	Herbicide	2,233	2,170	-	2

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
DICAMBA, DIMETHYLAMINE SALT		029802	Herbicide	343,301	69,915	0.50	676
DICAMBA, SODIUM SALT		029806	Herbicide	169	169	-	1
DICHLOBENIL		027401	Herbicide	18,384	9,239	0.03	41
DICHLORO-5-ETHYL-5-METHYLHYDANTOIN		128826	Bacteriocide	83	83	-	1
DICHLORPROP		031401	Herbicide	4,562	2,924	0.01	9
DICHLORVOS		084001	Insecticide	16,669	5,285	0.02	57
DICLOFOP-METHYL	*	110902	Herbicide	20,386	9,261	0.03	14
DICOFOL		010501	Insecticide	40,534	18,833	0.06	51
DICROTOPHOS	*	035201	Insecticide	1,258	762	-	24
DIENOCHLOR		027501	Insecticide	2,554	1,202	-	53
DIETHYL TOLUAMIDE		080301	Insect Repellant	160	142	-	3
DIFLUBENZURON	*	108201	Insecticide	4,253	3,595	0.01	4
DIKEGULAC SODIUM		109601	Growth Regulator	1,131	810	-	6
DIMETHOATE		035001	Insecticide	8,883	2,490	0.01	62
DIOXATHION	*	037801	Other	8	8	-	1
DIPENTENE		079701	Insecticide	1,008	492	-	12
DIPHACINONE	*	067701	Rodenticide	9	4	-	12
DIPHACINONE		067701	Rodenticide	46	22	-	166
DIPHACINONE, SODIUM SALT		067705	Rodenticide	2	1	-	11
DIPROPYL ISOCINCHOMERONATE		047201	Insecticide	126	112	-	3
ATRAZINE		032201	Herbicide	142,472	79,143	0.21	100
DISODIUM CYANODITHIOIMIDOCARBONATE		063301	Bacteriocide	137	137	-	2
DISODIUM OCTABORATE TETRAHYDRATE		011103	Herbicide	364,404	141,613	0.53	111
DISULFOTON	*	032501	Insecticide	4,147	1,487	0.01	24
DISULFOTON		032501	Insecticide	476	210	-	20
DITHIOPYR		128994	Herbicide	28,733	10,266	0.04	60
DIURON		035505	Herbicide	2,339,296	1,331,352	3.38	114
DODINE		044301	Fungicide	3	3	-	1
DSMA		013802	Herbicide	187	173	-	3
EDC		042003	Fungicide	2	1	-	2
2-EEEBC		115001	Fungicide	1	1	-	2

* Restricted Use Pesticide (RUP)
- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
EGG SOLIDS		105101	Repellant	31	31	-	1
ENDOSULFAN	*	079401	Insecticide	21	21	-	1
ENDOSULFAN		079401	Insecticide	75	50	-	4
ENDOTHALL, DIPOTASSIUM SALT		038904	Herbicide	120,266	62,965	0.17	34
ENDOTHALL, DISODIUM SALT		038903	Growth Regulator	975	943	-	3
ENDOTHALL, MONO(N,N-DIMETHYLCOCOAMINE) SAL		038905	Herbicide	1,149,839	1,090,927	1.66	14
ERIOGLAUCINE		110301	Wood Preservative	5,158	3,769	0.01	14
ESFENVALERATE		109303	Insecticide	10,974	6,303	0.02	67
ESPESOL 3A		006601	Other	1,575	1,392	-	6
ETHEPHON		099801	Growth Regulator	62	39	-	5
ETHION		058401	Insecticide	208	159	-	7
ETHOFUMESATE		110601	Herbicide	6,871	5,056	0.01	11
ETHOPROP	*	041101	Nematicide	21,065	20,173	0.03	6
2-ETHYL-4-METHYLPENTYL 2,4-DICHL		030064	Herbicide	60,976	20,178	0.09	65
ETHYLENE GLYCOL		042203	Other	1	1	-	1
ETHYLENE OXIDE		042301	Fumigant	538,611	538,611	0.78	1
ETRIDIAZOLE		084701	Fungicide	17,982	11,316	0.03	31
FENAMIPHOS	*	100601	Nematicide	188	188	-	1
FENAMIPHOS		100601	Nematicide	48,576	23,683	0.07	11
FENARIMOL		206600	Fungicide	10,509	2,822	0.02	89
FENBUTATIN-OXIDE		104601	Insecticide	1,939	1,882	-	39
FENITROTHION		105901	Insecticide	60,603	59,607	0.09	4
FENOXAPROP-ETHYL		128701	Herbicide	3,147	1,188	-	81
FENOXYCARB		125301	Insecticide	8,389	2,649	0.01	164
FENPROPATHRIN		127901	Insecticide	2,105	2,024	-	6
FENTHION	*	053301	Insecticide	99	69	-	5
FENTHION		053301	Insecticide	1,499	1,333	-	3
FERRIC DIMETHYLDITHIOCARBAMATE		034801	Fungicide	700	700	-	1
FERRIC SULFATE		034902	Soil Acidifier	1	1	-	1
FERROUS SULFATE MONOHYDRATE		050507	Herbicide	282	282	-	1
FLUAZIFOP-BUTYL		122805	Other	16	13	-	3

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
FLUAZIFOP-R-BUTYL		122809	Herbicide	1,738	1,194	-	43
FLUOMETURON		035503	Herbicide	2,038	2,038	-	1
FLURIDONE		112900	Herbicide	1,363	749	-	14
FLURPRIMIDOL		125701	Growth Regulator	26,802	24,601	0.04	21
FLUTOLANIL		128975	Fungicide	2,706	1,470	-	9
FLUVALINATE		109302	Insecticide	13,164	6,192	0.02	100
FONOFOS		041701	Insecticide	137,143	80,231	0.20	33
FOSAMINE AMMONIUM		106701	Herbicide	252,881	106,931	0.37	29
FOSETYL-AL		123301	Fungicide	76,568	26,799	0.11	41
FENVALERATE		109301	Insecticide	50,573	35,791	0.07	112
GIBBERELLIC ACID		043801	Growth Regulator	15,121	15,121	0.02	1
GLYPHOSATE		417300	Herbicide	126	126	-	1
GLYPHOSATE, SALT	2	103601	Herbicide	3,412,296	677,101	4.93	1,220
HALOBROM		006315	Bacteriocide	498,470	468,293	0.72	6
HEXACHLOROPHENE		044901	Other	2,347	2,347	-	1
HEXAZINONE		107201	Herbicide	114,453	75,959	0.17	12
HYDANTOIN		028501	Bacteriocide	216	216	-	1
HYDRAMETHYLNON		118401	Insecticide	1,507	447	-	277
HYDROGEN CHLORIDE		045901	Other	1	1	-	1
(7S)-HYDROPRENE		128966	Insecticide	2,118	613	-	104
HYDROPRENE		486300	Insecticide	9,338	3,918	0.01	48
IBA		046701	Growth Regulator	-	-	-	5
IMAZAPYR, ISOPROPYLAMINE SALT		128829	Herbicide	128,473	55,906	0.19	58
IMAZAQUIN, MONOAMMONIUM SALT		128840	Herbicide	3,864	892	0.01	38
IPRODIONE		109801	Fungicide	138,736	24,169	0.20	168
ISAZOFOS	*	126901	Insecticide	42,018	11,045	0.06	71
ISOFENPHOS	*	109401	Insecticide	5,379	2,881	0.01	8
ISOFENPHOS		109401	Insecticide	136,364	38,974	0.20	129
3(2H)-ISOTHIAZOLONE, 5-CHLORO-2-METHYL-		107103	Bacteriocide	38,299	37,570	0.06	3
ISOXABEN		125851	Herbicide	13,479	5,383	0.02	60
KEROSENE		063501	Other	408	408	-	2

* Restricted Use Pesticide (RUP)
- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
LEMONGRASS OIL		040502	Insecticide	3	3	-	1
LINALOOL		128838	Insecticide	7,663	5,559	0.01	26
LINDANE	*	009001	Insecticide	42,903	33,153	0.06	33
LINDANE		009001	Insecticide	7,237	4,242	0.01	41
LINURON		035506	Herbicide	163	163	-	1
BROMACIL, LITHIUM SALT		012302	Herbicide	21,906	7,525	0.03	30
MAGNESIUM PHOSPHIDE	*	066504	Fumigant	275	216	-	4
MALATHION		057701	Insecticide	4,314,719	1,363,456	6.24	264
MALEIC HYDRAZIDE, POTASSIUM SALT		051503	Herbicide	720	611	-	4
MANCOZEB	*	014504	Fungicide	12	12	-	1
MANCOZEB		014504	Fungicide	368,633	92,715	0.53	144
MANEB		014505	Fungicide	14,673	9,682	0.02	5
MCPA		030501	Herbicide	48,035	34,684	0.07	5
MCPA, BUTOXYETHYL ESTER		030553	Herbicide	1,557	1,557	-	1
MCPA, DIETHANOLAMINE SALT		030511	Herbicide	1,910	1,910	-	1
MCPA, DIMETHYLAMINE SALT		030516	Herbicide	480,212	153,322	0.69	37
MCPA, ISOOCTYL ESTER		030563	Herbicide	6,317	3,359	0.01	5
MECOPROP		031501	Herbicide	34,678	16,656	0.05	45
MEFLUIDIDE, DIETHANOLAMINE SALT		114002	Herbicide	6,573	2,004	0.01	61
MERCURIC CHLORIDE		052001	Other	7,367	2,100	0.01	33
MERCUROUS CHLORIDE		052201	Other	14,735	4,201	0.02	33
METALAXYL		113501	Fungicide	71,080	10,907	0.10	179
METALDEHYDE	*	053001	Molluscicide	116	116	-	1
METALDEHYDE		053001	Molluscicide	13,297	7,279	0.02	53
METAM-SODIUM		039003	Fumigant	98,854	45,677	0.14	12
METARHIZIUM ANISOPLIAE STRAIN ESF1		129056	Insecticide	1	-	-	10
METHAMIDOPHOS	*	101201	Insecticide	29	29	-	1
METHIOCARB	*	100501	Insecticide	60	58	-	3
METHIOCARB		100501	Insecticide	38	29	-	5
METHOMYL		090301	Insecticide	109	36	-	25
METHOPRENE		105401	Insecticide	23,824	15,362	0.03	105

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
S-METHOPRENE		105402	Insecticide	1,029	392	-	185
METHOXYCHLOR		034001	Insecticide	53,203	38,306	0.08	28
METHYL BROMIDE	*	053201	Fumigant	2,710,834	1,155,808	3.92	51
METHYL PARATHION	*	053501	Insecticide	11	11	-	1
METHYL PARATHION		053501	Insecticide	22	22	-	1
METHYL SALICYLATE		076601	Bacteriocide	-	-	-	1
METHYLENEBIS(THIOCYANATE)		068102	Bacteriocide	14	14	-	1
METHYLISOTHIAZOLINONE		107104	Bacteriocide	11,656	11,434	0.02	3
METOLACHLOR	*	108801	Herbicide	112	112	-	1
METOLACHLOR		108801	Herbicide	42,277	32,013	0.06	29
METRIBUZIN		101101	Herbicide	2,856	1,407	-	11
METSULFURON-METHYL		122010	Herbicide	6,509	3,375	0.01	24
MINERAL OIL - INCLUDES PARAFFIN OIL FROM O		063502	Insecticide	384,221	332,462	0.56	29
MSMA		013803	Herbicide	6,465,603	3,895,760	9.34	170
MUSCALURE		103201	Insect Attractant	3	1	-	25
MUSTARD OIL		004901	Repellant	-	-	-	1
NAA		056002	Growth Regulator	-	-	-	1
NABAM		014503	Fungicide	130	130	-	1
NAD		056001	Growth Regulator	-	-	-	1
NALED		034401	Insecticide	551,496	346,231	0.80	13
NAPHTHALENE		055801	Insecticide	673	480	-	12
NAPROPAMIDE		103001	Herbicide	449	213	-	11
NICLOSAMIDE	*	077401	Molluscicide	348	348	-	1
NICOTINE		056702	Insecticide	8	7	-	2
NONYLPHENOXYPOLYETHOXYETHANOL - IODINE COM		046903	Bacteriocide	158	158	-	1
NORFLURAZON		105801	Herbicide	50,684	49,878	0.07	3
OAMA		013804	Herbicide	13	12	-	2
1-OCTANAMINIUM, N,N-DIMETHYL-N-OCTYL-, C		069166	Bacteriocide	25	23	-	3
OCTANESULFONAMIDE, N-ETHYL-1,1,2,2,3,3,4,4		128992	Insecticide	28	15	-	30
N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	Synergist	52,275	14,336	0.08	744
ORANGE OIL		040517	Repellant	-	-	-	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
ORYZALIN		104201	Herbicide	353,513	80,199	0.51	351
OXADIAZON		109001	Herbicide	24,614	8,947	0.04	88
OXAMYL	*	103801	Nematicide	109	109	-	1
OXAMYL		103801	Nematicide	467	286	-	13
OXINE-COPPER		024002	Fungicide	586	390	-	4
OXYCARBOXIN		090202	Other	-	-	-	1
OXYDEMETON-METHYL	*	058702	Insecticide	12,246	6,694	0.02	25
OXYDEMETON-METHYL		058702	Insecticide	37	24	-	7
OXYFLUORFEN		111601	Herbicide	1,805	1,014	-	12
PACLOBUTRAZOL		125601	Growth Regulator	4,589	2,032	0.01	21
PARAQUAT DICHLORIDE	*	061601	Herbicide	5,866	3,972	0.01	14
PARATHION	*	057501	Other	83	83	-	1
PCP	*	063001	Fungicide	2,306	2,306	-	1
PENDIMETHALIN		108501	Herbicide	1,833,821	531,863	2.65	193
PENTACHLORONITROBENZENE		056502	Fungicide	174,942	30,619	0.25	66
PERMETHRIN, MIXED CIS,TRANS	*	109701	Insecticide	1,614	1,614	-	2
PERMETHRIN, MIXED CIS,TRANS		109701	Insecticide	2,388,598	797,308	3.45	235
PHENOTHRIN		069005	Insecticide	162	52	-	69
PHENYLMERCURIC ACETATE		066003	Bacteriocide	955	387	-	12
O-PHENYLPHENOL		064103	Bacteriocide	166	166	-	2
PHOSMET		059201	Insecticide	80	79	-	3
PICLORAM, ISOOCTYL ESTER	*	005103	Herbicide	34,090	23,308	0.05	8
PICLORAM, SALT	5*	005102	Herbicide	248,268	80,568	0.36	69
PICLORAM, SALT	5	005102	Herbicide	27,626	11,659	0.04	37
PINDONE		067703	Rodenticide	4	3	-	10
PINDONE SODIUM SALT		067704	Rodenticide	213	201	-	6
PINE OIL		067002	Bacteriocide	24	13	-	8
PIPERALIN		097003	Fungicide	4	4	-	1
PIPERONYL BUTOXIDE	*	067501	Multi-Type	7,619	7,552	0.01	2
PIPERONYL BUTOXIDE		067501	Multi-Type	630,097	342,375	0.91	1,383
POE ISOOCTADECANOL		124601	Insecticide	5,305	4,599	0.01	6

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
POLY(OXY-1,2-ETHANEDIYL(DIMETHYLIMINO)-1		069183	Bacteriocide	2,573	1,861	-	3
POLYBUTENE		011402	Insecticide	1,574	566	-	18
POLYETHOXYPOLYPROPOXYETHANOL - IODINE COMP		046904	Bacteriocide	164	164	-	1
POLYISOBUTYLENE		011403	Other	285	246	-	2
POTASSIUM 2-(2-METHYL-4-CHLOROPHENOXY)PROP		031503	Herbicide	20,205	9,326	0.03	18
POTASSIUM DICHROMATE	*	068302	Wood Preservative	6,582	4,119	0.01	4
POTASSIUM N-METHYLDITHIOCARBAMATE		039002	Bacteriocide	188	188	-	2
POTASSIUM NITRATE		076103	Repellant	6	6	-	2
POTASSIUM PERMANGANATE		068501	Bacteriocide	623	623	-	1
POTASSIUM SOAPS OF FATTY ACIDS		079021	Insecticide	101,623	32,948	0.15	76
PRODIAMINE		110201	Herbicide	145,250	67,135	0.21	49
PROMETON		080804	Herbicide	35,361	12,712	0.05	62
PROPAMOCARB HYDROCHLORIDE		119302	Fungicide	60,013	18,936	0.09	43
PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031463	Herbicide	46,700	21,025	0.07	46
PROPETAMPHOS	*	113601	Insecticide	89,344	15,101	0.13	222
PROPETAMPHOS		113601	Insecticide	4,344	2,943	0.01	43
PROPICONAZOLE		122101	Fungicide	28,047	5,765	0.04	85
PROPOXUR		047802	Insecticide	15,573	6,149	0.02	197
PROPYLENE GLYCOL		068603	Bacteriocide	3,065	1,994	-	6
2-PROPYNL(S-(E,E))		107502	Multi-Type	310	106	-	21
PROPYZAMIDE	*	101701	Herbicide	5,588	3,500	0.01	9
PYRETHRINS		069001	Insecticide	31,885	10,005	0.05	1,251
QUATERNARY AMMONIUM COMPOUNDS, ALKYLBENZ		069106	Bacteriocide	122	67	-	7
QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C1		069141	Bacteriocide	565	565	-	1
RESMETHRIN		097801	Insecticide	144,544	112,475	0.21	99
ROTENONE	*	071003	Insecticide	7,788	7,553	0.01	5
ROTENONE		071003	Insecticide	68,686	60,966	0.10	30
SALANNIN		121701	Insecticide	231	213	-	12
SETHOXYDIM		121001	Herbicide	3,424	1,441	-	54
SIDURON		035509	Herbicide	30,096	17,963	0.04	23
SILICA GEL		072602	Insecticide	32,265	7,635	0.05	184

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
SILICON DIOXIDE		072605	Insecticide	4,729	4,728	0.01	2
SIMAZINE	*	080807	Herbicide	125	125	-	1
SIMAZINE		080807	Herbicide	886,630	533,513	1.28	112
SODIUM 1-NAPHTHALENEACETATE		056007	Growth Regulator	-	-	-	1
SODIUM 5-CHLORO-2-(4-CHLORO-2-(3-(3,4-DICH		058802	Insecticide	5,076	5,076	0.01	1
SODIUM ACIFLUORFEN		114402	Herbicide	1	1	-	2
SODIUM ARSENATE		013505	Insecticide	28	28	-	2
SODIUM ASULAM		106902	Herbicide	5,387	5,207	0.01	5
SODIUM BENTAZON	*	103901	Herbicide	10,897	8,690	0.02	2
SODIUM BENTAZON		103901	Herbicide	48,720	11,865	0.07	64
SODIUM CHLORATE		073301	Herbicide	64,245	31,876	0.09	17
SODIUM DALAPON		028902	Herbicide	3,326	3,326	-	1
SODIUM DIMETHYLDITHIOCARBAMATE		034804	Bacteriocide	130	130	-	1
SODIUM FLUORIDE	*	075202	Insecticide	98,126	59,148	0.14	6
SODIUM FLUORIDE		075202	Insecticide	260	260	-	1
SODIUM HYPOCHLORITE		014703	Fungicide	628,178	554,781	0.91	5
SODIUM METABORATE		011104	Insecticide	84,754	40,156	0.12	16
SODIUM WARFARIN		086003	Rodenticide	-	-	-	1
SOYBEAN OIL		031605	Insecticide	1	1	-	1
STREPTOMYCIN SESQUISULFATE		006310	Bacteriocide	42	13	-	10
STRYCHNINE		076901	Rodenticide	41	12		21
SULFAQUINOXALINE		077901	Other	7	6	-	3
SULFOMETURON METHYL		122001	Herbicide	72,542	27,730	0.10	66
SULFOSATE		128501	Herbicide	1,297	1,274	-	3
SULFOTEPP		079501	Insecticide	12	12	-	1
SULFUR		077501	Fungicide	26,110	11,684	0.04	25
SULFURYL FLUORIDE	*	078003	Fumigant	1,513,496	579,359	2.19	33
TARTRAZINE		110302	Herbicide	522	381	-	14
TEBUTHIURON		105501	Herbicide	88,661	33,056	0.13	37
TEMEPHOS		059001	Insecticide	35,193	29,925	0.05	19
TETRACHLORVINPHOS		083701	Insecticide	19,880	14,789	0.03	3

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
TETRAMETHRIN		069003	Insecticide	29	20	-	10
THIABENDAZOLE HYPOPHOSPHITE		060102	Fungicide	2,132	613	-	12
THIOPHANATE		103401	Fungicide	9,005	6,297	0.01	6
THIOPHANATE-METHYL		102001	Fungicide	87,974	15,543	0.13	171
THIRAM		079801	Fungicide	142,573	68,867	0.21	43
THYMOL		080402	Bacteriocide	1	1	-	4
TOXAPHENE		080501	Other	44	44	-	1
TRALOMETHRIN		121501	Insecticide	2,332	1,470	-	39
TRANS-3,7-DIMETHYL-2,6-OCTADIEN-1-OL		597501	Insect Attractant	-	-	-	1
TRIADIMEFON		109901	Fungicide	62,634	15,784	0.09	170
TRIALLATE		078802	Herbicide	159	159	-	1
TRIBUTYLTIN FLUORIDE	*	083112	Antifoulant	1,507	1,255	-	11
TRIBUTYLTIN METHACRYLATE	*	083120	Antifoulant	13,625	11,191	0.02	13
TRIBUTYLTIN OXIDE		083001	Antifoulant	1	1	-	1
TRICHLORFON		057901	Insecticide	374,409	112,767	0.54	144
TRICHLOROETHANE		081201	Other	769	769	-	1
TRICLOPYR	4*	116004	Herbicide	64,790	44,299	0.09	8
TRICLOPYR	4	116004	Herbicide	1,139,810	342,029	1.65	269
TRICLOPYR		116001	Herbicide	3,003	1,791	-	10
TRIFLUMIZOLE		128879	Fungicide	2	2	-	1
3-TRIFLUOROMETHYL-4-NITROPHENOL	*	036201	Insecticide	9,816	9,816	0.01	2
TRIFLURALIN		036101	Herbicide	56,846	15,506	0.08	182
TRIFORINE		107901	Fungicide	484	210	-	45
TRIMETHYLBENZYL AMMONIUM RESIN		008711	Bacteriocide	194	194	-	1
TRINEXAPAC-ETHYL		112602	Herbicide	1,105	416	-	12
TRIS(HYDROXYMETHYL)NITROMETHANE		083902	Bacteriocide	814	814	-	1
VINCLOZOLIN		113201	Fungicide	66,072	19,096	0.10	64
WARFARIN		086002	Rodenticide	279	271	-	7
ZINC CHLORIDE		087801	Herbicide	3	3	-	1
ZINC DIMETHYLDITHIOCARBAMATE		034805	Fungicide	30,375	28,670	0.04	3
ZINC NAPHTHENATE		088301	Wood Preservative	49	44	-	4

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

DETAILED TABLE 13C: Pesticide Usage by Active Ingredient Ordered Alphabetically by Name of Active Ingredient
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
ZINC PHOSPHIDE (ZN3P2)	*	088601	Rodenticide	1,283	480	-	73
ZINC PHOSPHIDE (ZN3P2)		088601	Rodenticide	30	17	-	5

* Restricted Use Pesticide (RUP)
- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 103604,103601
4 Consists of AI codes 005102,005104
5 Consists of AI codes 116002,116004

Appendix E

Expanded Version of Table 14. Pesticide Usage by Pesticide Type and Active Ingredient

Appendix E contains an uncensored version of Table 14. The table, which focuses on non-agricultural pesticide usage by certified/commercial applicators in U.S. during 1993, list all active ingredients with positive nonagricultural pesticide usage (in pounds) reported in the C/CPAS survey by type of pesticide.

As in Table 14, usage estimates were computed from the source questions Q12, Q14, and Q15 for five certification areas (turf and ornamental; right-of way; aquatic; industrial, institutional, structural and health-related; and public health). Furthermore, it should be noted that some products, such as 2-4,D and picloram, are contained in both restricted use (RUP) and general use pesticides.

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
	TOTAL	*		69,196,434	9,061,864	100.00	24,560
Herbicide	TOTAL	*		27,460,953	6,227,151	100.00	7,550
Herbicide	MSMA		013803	6,465,603	3,895,760	23.54	170
Herbicide	GLYPHOSATE, SALT	2	103601	3,412,296	677,101	12.43	1,220
Herbicide	2,4-D	3	030019	3,403,153	634,582	12.39	978
Herbicide	DIURON		035505	2,339,296	1,331,352	8.52	114
Herbicide	PENDIMETHALIN		108501	1,833,821	531,863	6.68	193
Herbicide	PROPANOIC ACID, 2-(4-CHLORO-2-METHYLPHEN		031519	1,408,985	396,836	5.13	650
Herbicide	ENDOTHALL, MONO(N,N-DIMETHYLCOCOAMINE) SAL		038905	1,149,839	1,090,927	4.19	14
Herbicide	TRICLOPYR	4	116004	1,139,810	342,029	4.15	269
Herbicide	SIMAZINE		080807	886,630	533,513	3.23	112
Herbicide	BROMACIL		012301	589,125	427,585	2.15	59
Herbicide	MCPA, DIMETHYLAMINE SALT		030516	480,212	153,322	1.75	37
Herbicide	2,4-D	3*	030019	411,199	149,518	1.50	32
Herbicide	DISODIUM OCTABORATE TETRAHYDRATE		011103	364,404	141,613	1.33	111
Herbicide	ORYZALIN		104201	353,513	80,199	1.29	351
Herbicide	DICAMBA, DIMETHYLAMINE SALT		029802	343,301	69,915	1.25	676
Herbicide	FOSAMINE AMMONIUM		106701	252,881	106,931	0.92	29
Herbicide	PICLORAM, SALT	5*	005102	248,268	80,568	0.90	69
Herbicide	PRODIAMINE		110201	145,250	67,135	0.53	49
Herbicide	ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 2-B		030053	145,178	55,606	0.53	90
Herbicide	ATRAZINE		032201	142,472	79,143	0.52	100
Herbicide	IMAZAPYR, ISOPROPYLAMINE SALT		128829	128,473	55,906	0.47	58
Herbicide	ENDOTHALL, DIPOTASSIUM SALT		038904	120,266	62,965	0.44	34
Herbicide	HEXAZINONE		107201	114,453	75,959	0.42	12
Herbicide	BENFLURALIN		084301	111,553	35,443	0.41	179
Herbicide	PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031453	89,084	46,257	0.32	45
Herbicide	TEBUTHIURON		105501	88,661	33,056	0.32	37
Herbicide	SULFOMETURON METHYL		122001	72,542	27,730	0.26	66
Herbicide	TRICLOPYR	4*	116004	64,790	44,299	0.24	8
Herbicide	SODIUM CHLORATE		073301	64,245	31,876	0.23	17

* Restricted Use Pesticide (RUP)
- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Herbicide	2-ETHYL-4-METHYLPENTYL 2,4-DICHL		030064	60,976	20,178	0.22	65
Herbicide	TRIFLURALIN		036101	56,846	15,506	0.21	182
Herbicide	NORFLURAZON		105801	50,684	49,878	0.18	3
Herbicide	SODIUM BENTAZON		103901	48,720	11,865	0.18	64
Herbicide	MCPA		030501	48,035	34,684	0.17	5
Herbicide	PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031463	46,700	21,025	0.17	46
Herbicide	PROPANOIC ACID, 2-(2,4-DICHLOROPHENOXY)-		031419	45,420	16,775	0.17	49
Herbicide	ACETIC ACID		030025	42,708	24,772	0.16	14
Herbicide	METOLACHLOR		108801	42,277	32,013	0.15	29
Herbicide	ATRAZINE	*	080803	41,350	14,671	0.15	33
Herbicide	COPPER ETHYLENEDIAMINE COMPLEX		024407	38,045	25,063	0.14	11
Herbicide	PROMETON		080804	35,361	12,712	0.13	62
Herbicide	MECOPROP		031501	34,678	16,656	0.13	45
Herbicide	PICLORAM, ISOOCTYL ESTER	*	005103	34,090	23,308	0.12	8
Herbicide	BENSULIDE		009801	33,773	12,619	0.12	33
Herbicide	SIDURON		035509	30,096	17,963	0.11	23
Herbicide	DITHIOPYR		128994	28,733	10,266	0.10	60
Herbicide	PICLORAM, SALT	5	005102	27,626	11,659	0.10	37
Herbicide	OXADIAZON		109001	24,614	8,947	0.09	88
Herbicide	PROPANOIC ACID		031563	24,175	15,243	0.09	19
Herbicide	BROMACIL, LITHIUM SALT		012302	21,906	7,525	0.08	30
Herbicide	DICLOFOP-METHYL	*	110902	20,386	9,261	0.07	14
Herbicide	POTASSIUM 2-(2-METHYL-4-CHLOROPHENOXY)PROP		031503	20,205	9,326	0.07	18
Herbicide	DICHLOBENIL		027401	18,384	9,239	0.07	41
Herbicide	ACETIC ACID, (2,4-DICHLOROPHENOXY)-, COM		030016	16,726	5,204	0.06	35
Herbicide	ATRAZINE		080803	16,707	9,384	0.06	11
Herbicide	ISOXABEN		125851	13,479	5,383	0.05	60
Herbicide	CHLORTHAL DIMETHYL		078701	13,309	6,761	0.05	17
Herbicide	2-CHLORSULFURON		118601	11,562	8,004	0.04	16
Herbicide	SODIUM BENTAZON	*	103901	10,897	8,690	0.04	2
Herbicide	DICAMBA		029801	9,739	4,578	0.04	59

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Herbicide	AMITROLE	*	004401	544	334	-	6
Herbicide	TARTRAZINE		110302	522	381	-	14
Herbicide	NAPROPAMIDE		103001	449	213	-	11
Herbicide	FERROUS SULFATE MONOHYDRATE		050507	282	282	-	1
Herbicide	CHLORFLURENOL, METHYL ESTER		098801	263	126	-	11
Herbicide	ACETIC ACID		030034	201	201	-	1
Herbicide	DICAMBA, DIETHANOLAMINE SALT		029803	198	194	-	4
Herbicide	DSMA		013802	187	173	-	3
Herbicide	DICAMBA, SODIUM SALT		029806	169	169	-	1
Herbicide	LINURON		035506	163	163	-	1
Herbicide	TRIALLATE		078802	159	159	-	1
Herbicide	GLYPHOSATE		417300	126	126	-	1
Herbicide	SIMAZINE	*	080807	125	125	-	1
Herbicide	METOLACHLOR	*	108801	112	112	-	1
Herbicide	AMIDOCHLOR		128001	50	50	-	1
Herbicide	BROMOXYNIL BUTYRATE		035303	43	43	-	1
Herbicide	DDAMA		013805	13	12	-	2
Herbicide	CAMA		013806	4	4	-	2
Herbicide	ZINC CHLORIDE		087801	3	3	-	1
Herbicide	CETOCHLOR		121601	2	2	-	1
Herbicide	SODIUM ACIFLUORFEN		114402	1	1	-	2
Insecticide	TOTAL	*		22,529,003	1,956,115	100.00	11,008
Insecticide	CHLORPYRIFOS		059101	7,778,765	998,620	34.53	2,140
Insecticide	MALATHION		057701	4,314,719	1,363,456	19.15	264
Insecticide	PERMETHRIN, MIXED CIS,TRANS		109701	2,388,598	797,308	10.60	235
Insecticide	CYPERMETHRIN		109702	1,292,864	553,989	5.74	542
Insecticide	DIAZINON		057801	1,038,058	190,580	4.61	695
Insecticide	NALED		034401	551,496	346,231	2.45	13
Insecticide	BORIC ACID		011001	436,603	196,756	1.94	266
Insecticide	CYFLUTHRIN		128831	435,878	282,606	1.93	392
Insecticide	ACEPHATE		103301	425,884	159,587	1.89	431

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Insecticide	BENDIOCARB		105201	424,529	167,215	1.88	404
Insecticide	CARBARYL		056801	405,881	132,499	1.80	313
Insecticide	MINERAL OIL - INCLUDES PARAFFIN OIL FROM 0		063502	384,221	332,462	1.71	29
Insecticide	TRICHLORFON		057901	374,409	112,767	1.66	144
Insecticide	BENDIOCARB	*	105201	176,740	113,542	0.78	42
Insecticide	BACILLUS THURINGIENSIS, ISRAELENSIS		006401	147,941	97,087	0.66	76
Insecticide	RESMETHRIN		097801	144,544	112,475	0.64	99
Insecticide	FONOFOS		041701	137,143	80,231	0.61	33
Insecticide	ISOFENPHOS		109401	136,364	38,974	0.61	129
Insecticide	CARBOFURAN	*	090601	134,943	134,943	0.60	1
Insecticide	CUBE RESINS OTHER THAN ROTENONE		071004	128,620	121,609	0.57	29
Insecticide	BACILLUS THURINGIENSIS, KURSTAKI		006402	102,448	76,286	0.45	49
Insecticide	POTASSIUM SOAPS OF FATTY ACIDS		079021	101,623	32,948	0.45	76
Insecticide	SODIUM FLUORIDE	*	075202	98,126	59,148	0.44	6
Insecticide	PROPETAMPHOS	*	113601	89,344	15,101	0.40	222
Insecticide	SODIUM METABORATE		011104	84,754	40,156	0.38	16
Insecticide	ROTENONE		071003	68,686	60,966	0.30	30
Insecticide	FENITROTHION		105901	60,603	59,607	0.27	4
Insecticide	METHOXYCHLOR		034001	53,203	38,306	0.24	28
Insecticide	FENVALERATE		109301	50,573	35,791	0.22	112
Insecticide	LAMBDA-CYHALOTHRIN		128897	44,326	23,818	0.20	81
Insecticide	LINDANE	*	009001	42,903	33,153	0.19	33
Insecticide	ISAZOFOS	*	126901	42,018	11,045	0.19	71
Insecticide	DIAZINON	*	057801	41,265	28,149	0.18	11
Insecticide	DICOFOL		010501	40,534	18,833	0.18	51
Insecticide	TEMEPHOS		059001	35,193	29,925	0.16	19
Insecticide	SILICA GEL		072602	32,265	7,635	0.14	184
Insecticide	PYRETHRINS		069001	31,885	10,005	0.14	1,251
Insecticide	METHOPRENE		105401	23,824	15,362	0.11	105
Insecticide	TETRACHLORVINPHOS		083701	19,880	14,789	0.09	3
Insecticide	DICHLORVOS		084001	16,669	5,285	0.07	57

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Insecticide	CUBE RESINS OTHER THAN ROTENONE	*	071004	15,577	15,106	0.07	5
Insecticide	PROPOXUR		047802	15,573	6,149	0.07	197
Insecticide	FLUVALINATE		109302	13,164	6,192	0.06	100
Insecticide	OXYDEMETON-METHYL	*	058702	12,246	6,694	0.05	25
Insecticide	ESFENVALERATE		109303	10,974	6,303	0.05	67
Insecticide	HYDROPRENE		486300	9,338	3,918	0.04	48
Insecticide	DIMETHOATE		035001	8,883	2,490	0.04	62
Insecticide	FENOXYCARB		125301	8,389	2,649	0.04	164
Insecticide	ROTENONE	*	071003	7,788	7,553	0.03	5
Insecticide	LINALOOL		128838	7,663	5,559	0.03	26
Insecticide	LINDANE		009001	7,237	4,242	0.03	41
Insecticide	CHINOMETHIONATE		054101	5,610	1,978	0.02	34
Insecticide	ISOFENPHOS	*	109401	5,379	2,881	0.02	8
Insecticide	POE ISOOCTADECANOL		124601	5,305	4,599	0.02	6
Insecticide	SODIUM 5-CHLORO-2-(4-CHLORO-2-(3-(3,4-DICH		058802	5,076	5,076	0.02	1
Insecticide	SILICON DIOXIDE		072605	4,729	4,728	0.02	2
Insecticide	PROPETAMPHOS		113601	4,344	2,943	0.02	43
Insecticide	DIFLUBENZURON	*	108201	4,253	3,595	0.02	4
Insecticide	DISULFOTON	*	032501	4,147	1,487	0.02	24
Insecticide	CHLORPYRIFOS-METHYL		059102	3,635	3,635	0.02	1
Insecticide	DIENOCHLOR		027501	2,554	1,202	0.01	53
Insecticide	AVERMECTIN B1		122804	2,431	1,623	0.01	129
Insecticide	TRALOMETHRIN		121501	2,332	1,470	0.01	39
Insecticide	(7S)-HYDROPRENE		128966	2,118	613	0.01	104
Insecticide	FENPROPATHRIN		127901	2,105	2,024	0.01	6
Insecticide	FENBUTATIN-OXIDE		104601	1,939	1,882	0.01	39
Insecticide	PERMETHRIN, MIXED CIS,TRANS	*	109701	1,614	1,614	0.01	2
Insecticide	POLYBUTENE		011402	1,574	566	0.01	18
Insecticide	D-TRANS-ALLETHRIN		004003	1,558	348	0.01	279
Insecticide	HYDRAMETHYLNON		118401	1,507	447	0.01	277
Insecticide	FENTHION		053301	1,499	1,333	0.01	3

* Restricted Use Pesticide (RUP)
- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Insecticide	BIFENTHRIN		128825	1,441	884	0.01	30
Insecticide	DICROTOPHOS	*	035201	1,258	762	0.01	24
Insecticide	S-METHOPRENE		105402	1,029	392	-	185
Insecticide	DIPENTENE		079701	1,008	492	-	12
Insecticide	BACILLUS THURINGIENSIS, SAN DIEGO		128946	999	999	-	2
Insecticide	NAPHTHALENE		055801	673	480	-	12
Insecticide	DISULFOTON		032501	476	210	-	20
Insecticide	3-TRIFLUOROMETHYL-4-NITROPHENOL	*	036201	436	436	-	1
Insecticide	S-BIOALLETHRIN		004004	382	228	-	7
Insecticide	CHLORPYRIFOS	*	059101	304	304	-	1
Insecticide	AZINPHOS-METHYL	*	058001	272	272	-	1
Insecticide	SODIUM FLUORIDE		075202	260	260	-	1
Insecticide	SALANNIN		121701	231	213	-	12
Insecticide	ETHION		058401	208	159	-	7
Insecticide	PHENOTHRIN		069005	162	52	-	69
Insecticide	DIPROPYL ISOCINCHOMERONATE		047201	126	112	-	3
Insecticide	METHOMYL		090301	109	36	-	25
Insecticide	FENTHION	*	053301	99	69	-	5
Insecticide	PHOSMET		059201	80	79	-	3
Insecticide	ENDOSULFAN		079401	75	50	-	4
Insecticide	CYHALOTHRIN		128867	64	64	-	1
Insecticide	METHIOCARB	*	100501	60	58	-	3
Insecticide	BUTOXYPOLYPROPYLENE GLYCOL		011901	53	52	-	2
Insecticide	METHIOCARB		100501	38	29	-	5
Insecticide	OXYDEMETON-METHYL		058702	37	24	-	7
Insecticide	METHAMIDOPHOS	*	101201	29	29	-	1
Insecticide	TETRAMETHRIN		069003	29	20	-	10
Insecticide	AZINPHOS-METHYL		058001	29	29	-	1
Insecticide	SODIUM ARSENATE		013505	28	28	-	2
Insecticide	OCTANESULFONAMIDE, N-ETHYL-1,1,2,2,3,3,4,4		128992	28	15	-	30
Insecticide	BUTOXYETHANOL		011501	22	22	-	1

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Insecticide	METHYL PARATHION		053501	22	22	-	1
Insecticide	ENDOSULFAN	*	079401	21	21	-	1
Insecticide	SULFOTEPP		079501	12	12	-	1
Insecticide	METHYL PARATHION	*	053501	11	11	-	1
Insecticide	ALDICARB	*	098301	10	10	-	1
Insecticide	NICOTINE		056702	8	7	-	2
Insecticide	ARSENIC TRIOXIDE		007001	4	4	-	1
Insecticide	LEMONGRASS OIL		040502	3	3	-	1
Insecticide	CITRONELLA OILS		021901	2	2	-	1
Insecticide	SOYBEAN OIL		031605	1	1	-	1
Insecticide	METARHIZIUM ANISOPLIAE STRAIN ESF1		129056	1	-	-	10
Insecticide	ESPESOL 3A		006601	-	-	-	1
Insecticide	BACILLUS THURINGIENSIS, BERLINER		006400	-	-	-	1
Fungicide	TOTAL	*		3,200,189	521,671	100.00	1,973
Fungicide	CHLOROTHALONIL		081901	1,016,722	181,528	31.77	323
Fungicide	SODIUM HYPOCHLORITE		014703	628,178	554,781	19.63	5
Fungicide	MANCOZEB		014504	368,633	92,715	11.52	144
Fungicide	PENTACHLORONITROBENZENE		056502	174,942	30,619	5.47	66
Fungicide	THIRAM		079801	142,573	68,867	4.46	43
Fungicide	IPRODIONE		109801	138,736	24,169	4.34	168
Fungicide	THIOPHANATE-METHYL		102001	87,974	15,543	2.75	171
Fungicide	FOSETYL-AL		123301	76,568	26,799	2.39	41
Fungicide	METALAXYL		113501	71,080	10,907	2.22	179
Fungicide	VINCLOZOLIN		113201	66,072	19,096	2.06	64
Fungicide	TRIADIMEFON		109901	62,634	15,784	1.96	170
Fungicide	PROPAMOCARB HYDROCHLORIDE		119302	60,013	18,936	1.88	43
Fungicide	CHLORONEB		027301	52,366	22,540	1.64	34
Fungicide	ANILAZINE		080811	37,579	12,073	1.17	30
Fungicide	ZINC DIMETHYLIDITHIOCARBAMATE		034805	30,375	28,670	0.95	3
Fungicide	PROPICONAZOLE		122101	28,047	5,765	0.88	85
Fungicide	COPPER HYDROXIDE		023401	26,475	14,828	0.83	24

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Fungicide	SULFUR		077501	26,110	11,684	0.82	25
Fungicide	ETRIDIAZOLE		084701	17,982	11,316	0.56	31
Fungicide	BENOMYL		099101	16,345	6,212	0.51	69
Fungicide	MANEB		014505	14,673	9,682	0.46	5
Fungicide	FENARIMOL		206600	10,509	2,822	0.33	89
Fungicide	COPPER RESONATE		023104	9,763	6,360	0.31	9
Fungicide	THIOPHANATE		103401	9,005	6,297	0.28	6
Fungicide	CHLOROPICRIN	*	081501	8,177	5,194	0.26	13
Fungicide	BASIC COPPER SULFATE		008101	3,573	3,188	0.11	4
Fungicide	CAPTAN		081301	3,282	1,900	0.10	24
Fungicide	FLUTOLANIL		128975	2,706	1,470	0.08	9
Fungicide	PCP	*	063001	2,306	2,306	0.07	1
Fungicide	THIABENDAZOLE HYPOPHOSPHITE		060102	2,132	613	0.07	12
Fungicide	COPPER OLEATE		023304	1,153	1,142	0.04	9
Fungicide	DAZOMET		035602	918	918	0.03	1
Fungicide	FERRIC DIMETHYLDITHIOCARBAMATE		034801	700	700	0.02	1
Fungicide	OXINE-COPPER		024002	586	390	0.02	4
Fungicide	TRIFORINE		107901	484	210	0.02	45
Fungicide	BASIC COPPER III - ZINC SULFATE COMPLEX		008102	403	368	0.01	3
Fungicide	NABAM		014503	130	130	-	1
Fungicide	COPPER OXYCHLORIDE SULFATE		023503	105	105	-	1
Fungicide	CALCIUM OXYTETRACYCLINE		006321	46	46	-	1
Fungicide	DISODIUM OCTABORATE TETRAHYDRATE		011107	44	44	-	1
Fungicide	CALCIUM POLYSULFIDE		076702	35	26	-	5
Fungicide	COPPER AMMONIUM CARBONATE		022703	33	31	-	2
Fungicide	MANCOZEB	*	014504	12	12	-	1
Fungicide	PIPERALIN		097003	4	4	-	1
Fungicide	DODINE		044301	3	3	-	1
Fungicide	EDC		042003	2	1	-	2
Fungicide	TRIFLUMIZOLE		128879	2	2	-	1
Fungicide	2-EEEBC		115001	1	1	-	2

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Fungicide	CARBENDAZIM		128872	·	-	-	1
Fumigant	TOTAL	*		4,912,295	1,446,796	100.00	140
Fumigant	METHYL BROMIDE	*	053201	2,710,834	1,155,808	55.18	51
Fumigant	SULFURYL FLUORIDE	*	078003	1,513,496	579,359	30.81	33
Fumigant	ETHYLENE OXIDE		042301	538,611	538,611	10.96	1
Fumigant	METAM-SODIUM		039003	98,854	45,677	2.01	12
Fumigant	ALUMINUM PHOSPHIDE	*	066501	50,225	23,238	1.02	39
Fumigant	MAGNESIUM PHOSPHIDE	*	066504	275	216	0.01	4
Other	TOTAL	*		1,104,961	469,205	100.00	2,421
Other	HALOBROM		006315	498,470	468,293	45.11	6
Other	COAL TAR CREOSOTE	*	025004	100,515	60,729	9.10	6
Other	N-OCTYL BICYCLOHEPTENEDICARBOXIMIDE		057001	52,275	14,336	4.73	744
Other	FENAMIPHOS		100601	48,576	23,683	4.40	11
Other	COPPER TRIETHANOLAMINE COMPLEX		024403	47,327	20,910	4.28	69
Other	CHLORDANE		058201	39,683	28,191	3.59	3
Other	3(2H)-ISOTHIAZOLONE, 5-CHLORO-2-METHYL-		107103	38,299	37,570	3.47	3
Other	CARBOPHENOTHION		058102	36,046	36,046	3.26	1
Other	FLURPRIMIDOL		125701	26,802	24,601	2.43	21
Other	COPPER(I) OXIDE		025601	26,255	20,826	2.38	12
Other	COPPER NAPHTENATE		023102	25,444	16,557	2.30	27
Other	ETHOPROP	*	041101	21,065	20,173	1.91	6
Other	GIBBERELLIC ACID		043801	15,121	15,121	1.37	1
Other	MERCUROUS CHLORIDE		052201	14,735	4,201	1.33	33
Other	TRIBUTYLTIN METHACRYLATE	*	083120	13,625	11,191	1.23	13
Other	METALDEHYDE		053001	13,297	7,279	1.20	53
Other	METHYLISOTHIAZOLINONE		107104	11,656	11,434	1.05	3
Other	3-TRIFLUOROMETHYL-4-NITROPHENOL	*	036201	9,380	9,380	0.85	1
Other	MERCURIC CHLORIDE		052001	7,367	2,100	0.67	33
Other	CALCIUM HYPOCHLORITE		014701	6,590	5,954	0.60	3
Other	POTASSIUM DICHROMATE	*	068302	6,582	4,119	0.60	4
Other	ERIOGLAUCINE		110301	5,158	3,769	0.47	14

* Restricted Use Pesticide (RUP)
· Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Other	PACLOBUTRAZOL		125601	4,589	2,032	0.42	21
Other	BUTYLATE		041405	3,387	3,387	0.31	1
Other	PROPYLENE GLYCOL		068603	3,065	1,994	0.28	6
Other	POLY(OXY-1,2-ETHANEDIYL(DIMETHYLIMINO)-1		069183	2,573	1,861	0.23	3
Other	HEXACHLOROPHENE		044901	2,347	2,347	0.21	1
Other	ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORID		069105	1,897	1,611	0.17	5
Other	ESPESOL 3A		006601	1,575	1,392	0.14	5
Other	TRIBUTYLTIN FLUORIDE	*	083112	1,507	1,255	0.14	11
Other	ZINC PHOSPHIDE (ZN3P2)	*	088601	1,283	480	0.12	73
Other	AMMONIUM SULFAMATE		005501	1,187	1,187	0.11	1
Other	COPPER(I) OXIDE	*	025601	1,141	915	0.10	2
Other	DIKEGULAC SODIUM		109601	1,131	810	0.10	6
Other	ENDOTHALL, DISODIUM SALT		038903	975	943	0.09	3
Other	PHENYLMERCURIC ACETATE		066003	955	387	0.09	12
Other	2,4,5-T		082001	888	888	0.08	1
Other	TRIS(HYDROXYMETHYL)NITROMETHANE		083902	814	814	0.07	1
Other	TRICHLOROETHANE		081201	769	769	0.07	1
Other	COPPER ETHYLENEDIAMINETETRAACETATE		039105	726	726	0.07	1
Other	ALKYL* DIMETHYL BENZYL AMMONIUM CHLORIDE		069104	726	346	0.07	10
Other	COAL TAR CREOSOTE		025004	648	648	0.06	1
Other	POTASSIUM PERMANGANATE		068501	623	623	0.06	1
Other	QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C1		069141	565	565	0.05	1
Other	ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORID		069111	548	301	0.05	7
Other	BENZISOTHIAZOLIN-3-ONE		098901	473	473	0.04	1
Other	OXAMYL		103801	467	286	0.04	13
Other	KEROSENE		063501	408	408	0.04	2
Other	NICLOSAMIDE	*	077401	348	348	0.03	1
Other	ACETIC ACID		030033	329	329	0.03	1
Other	POLYISOBUTYLENE		011403	285	246	0.03	2
Other	WARFARIN		086002	279	271	0.03	7
Other	DAMINOZIDE		035101	220	173	0.02	4

* Restricted Use Pesticide (RUP)
- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name	AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Other	HYDANTOIN	028501	216	216	0.02	1
Other	PINDONE SODIUM SALT	067704	213	201	0.02	6
Other	TRIMETHYLBENZYL AMMONIUM RESIN	008711	194	194	0.02	1
Other	POTASSIUM N-METHYLDITHIOCARBAMATE	039002	188	188	0.02	2
Other	FENAMIPHOS *	100601	188	188	0.02	1
Other	ACETIC ACID	030029	183	183	0.02	1
Other	ALKY*DIMETHYL ETHYLBENZYL AMMONIUM CHLORID	069154	178	171	0.02	3
Other	O-PHENYLPHENOL	064103	166	166	0.02	2
Other	POLYETHOXYPOLYPROPOXYETHANOL - IODINE COMP	046904	164	164	0.01	1
Other	2-BENZYL-4-CHLOROPHENOI	062201	160	160	0.01	2
Other	DIETHYL TOLUAMIDE	080301	160	142	0.01	3
Other	NONYLPHENOXYPOLYETHOXYETHANOL - IODINE COM	046903	158	158	0.01	1
Other	DISODIUM CYANODITHIOIMIDOCARBONATE	063301	137	137	0.01	2
Other	SODIUM DIMETHYLDITHIOCARBAMATE	034804	130	130	0.01	1
Other	QUATERNARY AMMONIUM COMPOUNDS, ALKYLBENZ	069106	122	67	0.01	7
Other	METALDEHYDE *	053001	116	116	0.01	1
Other	OXAMYL *	103801	109	109	0.01	1
Other	AMMONIUM SALTS OF C8-C18 AND C18' FATTY AC	031801	84	50	0.01	4
Other	DICHLORO-5-ETHYL-5-METHYLHYDANTOIN	128826	83	83	0.01	1
Other	PARATHION *	057501	83	83	0.01	1
Other	AMINOPYRIDINE *	069201	77	21	0.01	60
Other	ETHEPHON	099801	62	39	0.01	5
Other	AMMONIUM 1-NAPHTHALENEACETATE	056004	58	37	0.01	6
Other	1-DECANAMINIUM, N,N-DIMETHYL-N-OCTYL-, C	069165	51	47	-	3
Other	ZINC NAPHTHENATE	088301	49	44	-	4
Other	DIBROMO-3-NITRILOPROPIONAMIDE	101801	46	46	-	1
Other	DIPHACINONE	067701	46	22	-	166
Other	TOXAPHENE	080501	44	44	-	1
Other	STREPTOMYCIN SESQUISULFATE	006310	42	13	-	10
Other	STRYCHNINE	076901	41	12	-	21
Other	CALCIUM 2-ISOVALERYL-1,3-INDANDIONE	067706	40	30	-	5

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Other	EGG SOLIDS		105101	31	31	·	1
Other	CHLOROPHACINONE		067707	30	21	·	24
Other	ZINC PHOSPHIDE (ZN3P2)		088601	30	17	·	5
Other	BRODIFACOUM		112701	29	5	·	329
Other	CHLORMEQUAT CHLORIDE		018101	26	24	·	3
Other	1-DECANAMINIUM, N-DECYL-N,N-DIMETHYL-, C		069149	26	23	·	3
Other	1-OCTANAMINIUM, N,N-DIMETHYL-N-OCTYL-, C		069166	25	23	·	3
Other	PINE OIL		067002	24	13	·	8
Other	CHOLECALCIFEROL		202901	23	12	·	34
Other	3-(3-(4'BROMO-(1,1'BIPHENYL)-4-YL)-3-HYDROXY-1-PHE		112001	21	5	·	219
Other	FLUAZIFOP-BUTYL		122805	16	13	·	3
Other	2-(THIOCYANOMETHYLTHIO) BENZOTHIAZOLE		035603	14	14	·	1
Other	BROMETHALIN		112802	11	4	·	64
Other	DIPHACINONE	*	067701	9	4	·	12
Other	DIOXATHION	*	037801	8	8	·	1
Other	CHLOROPHACINONE	*	067707	7	2	·	25
Other	SULFAQUINOXALINE		077901	7	6	·	3
Other	POTASSIUM NITRATE		076103	6	6		2
Other	PINDONE		067703	4	3	·	10
Other	MUSCALURE		103201	3	1	·	25
Other	COTTONSEED OIL		031602	2	2	·	1
Other	BENZYLDIETHYL METHYL		129045	2	1	·	4
Other	DIPHACINONE, SODIUM SALT		067705	2	1	·	11
Other	HYDROGEN CHLORIDE		045901	1	1	·	1
Other	ETHYLENE GLYCOL		042203	1	1	·	1
Other	CHOLECALCIFEROL		208700	1	1	·	4
Other	THYMOL		080402	1	1	·	4
Other	TRIBUTYLTIN OXIDE		083001	1	1	·	1
Other	FERRIC SULFATE		034902	1	1	·	1
Other	SODIUM 1-NAPHTHALENEACETATE		056007	·	·	·	1
Other	CHELATES OF COPPER GLUCONATE		024405	·	·	·	1

* Restricted Use Pesticide (RUP)
· Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

DETAILED TABLE 14: Pesticide Usage By Pesticide Type and Active Ingredient Ordered By Estimated Usage:
1993 C/CPAS Results for Five Non-agricultural Certified/Commerical Pesticide Applicator Categories

Pesticide Type	Active Ingredient (AI) Name		AI Code	Pounds AI	Standard Error	Percent of Total	Number of Observations
Other	MUSTARD OIL		004901	-	-	-	1
Other	IBA		046701	-	-	-	5
Other	QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C1		069189	-	-	-	1
Other	OXYCARBOXIN		090202	-	-	-	1
Other	BERGAMOT OIL		129029	-	-	-	1
Other	BRODIFACOUM	*	112701	-	-	-	1
Other	SODIUM WARFARIN		086003	-	-	-	1
Other	CYTOKININ (AS KINETIN)		116801	-	-	-	1
Other	TRANS-3,7-DIMETHYL-2,6-OCTADIEN-1-OL		597501	-	-	-	1
Other	ORANGE OIL		040517	-	-	-	1
Other	ANCYMIDOL(A-CYCLOPROPYL-A-(P-METHOXYPHENYL		108601	-	-	-	1
Other	NAA		056002	-	-	-	1
Other	ALPHA-IONONE		129030	-	-	-	1
Other	NAD		056001	-	-	-	1
Multi-Type	TOTAL	*		9,989,034	5,118,009	100.00	1,468
Multi-Type	ACROLEIN	*	000701	5,102,187	3,612,055	51.08	6
Multi-Type	COPPER SULFATE PENTAHYDRATE		024401	4,185,885	3,498,732	41.90	49
Multi-Type	PIPERONYL BUTOXIDE		067501	630,097	342,375	6.31	1,383
Multi-Type	BORAX		011102	51,264	36,344	0.51	5
Multi-Type	BORAX	*	011102	11,673	11,467	0.12	2
Multi-Type	PIPERONYL BUTOXIDE	*	067501	7,619	7,552	0.08	2
Multi-Type	2-PROPYNL(S-(E,E))		107502	310	106	-	21

* Restricted Use Pesticide (RUP)
\- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 103604,103601
3 Consists of AI codes 030001,030019,030035,030063
4 Consists of AI codes 116002,116004
5 Consists of AI codes 005102,005104

Appendix F

Expanded Version of Table 15. Restricted Product Pesticide Usage by Active Ingredient

Appendix F contains an uncensored version of Table 15. The table, which focuses on non-agricultural restricted use product usage by certified/commercial applicators in U.S. during 1993, list all active ingredients contained in restricted use products with positive nonagricultural pesticide usage (in pounds) reported in the C/CPAS survey.

As in Table 15, usage estimates were computed from the source questions Q12, Q14, and Q15 for five certification areas (turf and ornamental; right-of way; aquatic; industrial, institutional, structural and health-related; and public health). Furthermore, it should be noted that some products, such as 2-4,D and picloram, are contained in both restricted use (RUP) and general use pesticides and thus are listed in this table.

DETAILED TABLE 15: Restricted Product Pesticide Usage By Active Ingredient Ordered By Estimated Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name		AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
TOTAL				11,084,906	3,888,812	100.00	1,067
ACROLEIN		000701	Multi-Type	5,102,187	3,612,055	46.03	6
METHYL BROMIDE		053201	Fumigant	2,710,834	1,155,808	24.46	51
SULFURYL FLUORIDE		078003	Fumigant	1,513,496	579,359	13.65	33
2,4-D	3	030019	Herbicide	411,199	149,518	3.71	32
PICLORAM, SALT	5	005102	Herbicide	248,268	80,568	2.24	69
BENDIOCARB		105201	Insecticide	176,740	113,542	1.59	42
CARBOFURAN		090601	Insecticide	134,943	134,943	1.22	1
COAL TAR CREOSOTE		025004	Wood Preservative	100,515	60,729	0.91	6
SODIUM FLUORIDE		075202	Insecticide	98,126	59,148	0.89	6
PROPETAMPHOS		113601	Insecticide	89,344	15,101	0.81	222
TRICLOPYR	4	116004	Herbicide	64,790	44,299	0.58	8
ALUMINUM PHOSPHIDE		066501	Fumigant	50,225	23,238	0.45	39
LINDANE		009001	Insecticide	42,903	33,153	0.39	33
ISAZOFOS		126901	Insecticide	42,018	11,045	0.38	71
ATRAZINE		080803	Herbicide	41,350	14,671	0.37	33
DIAZINON		057801	Insecticide	41,265	28,149	0.37	11
PICLORAM, ISOOCTYL ESTER		005103	Herbicide	34,090	23,308	0.31	8
ETHOPROP		041101	Nematicide	21,065	20,173	0.19	6
DICLOFOP-METHYL		110902	Herbicide	20,386	9,261	0.18	14
CUBE RESINS OTHER THAN ROTENONE		071004	Insecticide	15,577	15,106	0.14	5
TRIBUTYLTIN METHACRYLATE		083120	Antifoulant	13,625	11,191	0.12	13
OXYDEMETON-METHYL		058702	Insecticide	12,246	6,694	0.11	25
BORAX		011102	Multi-Type	11,673	11,467	0.11	2
SODIUM BENTAZON		103901	Herbicide	10,897	8,690	0.10	2
3-TRIFLUOROMETHYL-4-NITROPHENOL		036201	Rodenticide	9,816	9,816	0.09	2
CHLOROPICRIN		081501	Fungicide	8,177	5,194	0.07	13
ROTENONE		071003	Insecticide	7,788	7,553	0.07	5
PIPERONYL BUTOXIDE		067501	Multi-Type	7,619	7,552	0.07	2
POTASSIUM DICHROMATE		068302	Wood Preservative	6,582	4,119	0.06	4
PARAQUAT DICHLORIDE		061601	Herbicide	5,866	3,972	0.05	14
PROPYZAMIDE		101701	Herbicide	5,588	3,500	0.05	9

Restricted Use Pesticide (RUP)
- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 005102,005104
4 Consists of AI codes 116002,116004

DETAILED TABLE 15: Restricted Product Pesticide Usage By Active Ingredient Ordered By Estimated Usage
1993 C/CPAS Results for Five Non-agricultural Certified/Commercial Pesticide Applicator Categories

Active Ingredient (AI) Name	AI Code	Pesticide Type	Pounds AI	Standard Error	Percent of Total	Number of Observations
ISOFENPHOS	109401	Insecticide	5,379	2,881	0.05	8
DIFLUBENZURON	108201	Insecticide	4,253	3,595	0.04	4
DISULFOTON	032501	Insecticide	4,147	1,487	0.04	24
PCP	063001	Fungicide	2,306	2,306	0.02	1
PERMETHRIN, MIXED CIS,TRANS	109701	Insecticide	1,614	1,614	0.01	2
TRIBUTYLTIN FLUORIDE	083112	Antifoulant	1,507	1,255	0.01	11
ZINC PHOSPHIDE (ZN3P2)	088601	Rodenticide	1,283	480	0.01	73
DICROTOPHOS	035201	Insecticide	1,258	762	0.01	24
COPPER(I) OXIDE	025601	Antifoulant	1,141	915	0.01	2
AMITROLE	004401	Herbicide	544	334	-	6
NICLOSAMIDE	077401	Molluscicide	348	348	-	1
CHLORPYRIFOS	059101	Insecticide	304	304	-	1
MAGNESIUM PHOSPHIDE	066504	Fumigant	275	216	-	4
AZINPHOS-METHYL	058001	Insecticide	272	272	-	1
FENAMIPHOS	100601	Nematicide	188	188	-	1
SIMAZINE	080807	Herbicide	125	125	-	1
METALDEHYDE	053001	Molluscicide	116	116	-	1
METOLACHLOR	108801	Herbicide	112	112	-	1
OXAMYL	103801	Nematicide	109	109	-	1
FENTHION	053301	Insecticide	99	69	-	5
PARATHION	057501	Other	83	83	-	1
AMINOPYRIDINE	069201	Bird Repellant	77	21	-	60
METHIOCARB	100501	Insecticide	60	58	-	3
METHAMIDOPHOS	101201	Insecticide	29	29	-	1
ENDOSULFAN	079401	Insecticide	21	21	-	1
MANCOZEB	014504	Fungicide	12	12	-	1
METHYL PARATHION	053501	Insecticide	11	11	-	1
ALDICARB	098301	Insecticide	10	10	-	1
DIPHACINONE	067701	Rodenticide	9	4	-	12
DIOXATHION	037801	Other	8	8	-	1
CHLOROPHACINONE	067707	Rodenticide	7	2	-	25
BRODIFACOUM	112701	Rodenticide	-	-	-	1

Restricted Use Pesticide (RUP)
- Pounds AI/Standard Errors Within (0,0.5)lbs; Percents Within (0,0.005)
1 Totals may differ from the sum of the entires because of rounding
2 Consists of AI codes 030001,030019,030035,030063
3 Consists of AI codes 005102,005104
4 Consists of AI codes 116002,116004

Glossary

Selected C/CPAS Terms and Definitions

Glossary of Selected C/CPAS Terms and Their Definitions

C/CPAS -- is an acronym for the Certified/Commercial Pesticide Applicator Survey

Certified/Commercial applicator -- is an individual who has been certified by at least one State to apply restricted-use pesticides on their own property, the property of their employer, or on the property of others for a fee.

Eligible population -- of the C/CPAS was all pesticide applicators employed by businesses licensed to apply pesticides to the non-agricultural sites as well as all persons certified to apply restricted-use pesticides to non-agricultural sites in the 48 coterminous states and the District of Columbia.

For-hire pesticide application business -- is a business licensed or registered by a state to apply pesticides, either restricted or not restricted, to the property of others for a fee. A for-hire business is a cluster or group of pesticide applicators.

For-hire pesticide applicator -- is a employee of a for-hire pesticide application business. For-hire applicators may be certified or not certified.

Non-agricultural sites -- are sites that are included under the five non-agricultural certification categories:

- Turf and ornamental pest control
- Right-of-way pest control
- Aquatic pest control
- Industrial, institutional, structural, and health related pest control
- Public health pest control

Not-for-hire certified applicator -- is a certified applicator that is not employed by a for-hire businesses.

Reporting unit -- is the entity for which the collected data applies. A reporting unit may be one or the union of more than one sampling units. If a reporting unit is more than one sampling unit, all sampling units included in the reporting unit were identified so that the data for the reporting unit can be properly weighted to produce unbiased estimates.

Sampling unit -- is the entity represented by one record on the sampling frame. The first stage sampling units was a county or group of smaller counties. The second-stage sampling units were for-hire pesticide application business location or not-for-hire certified applicators.