Final Report
on the Results of
A National Survey of Pesticide Usage
on Golf Courses in the U.S.
conducted in
July - September 1982

Prepared by

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American Association of Retired Persons
under a cooperative agreement with
The Environmental Protection Agency

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INTRODUCTION AND SUMMARY

This report presents the results of a survey of pesticide usage on the nation's golf courses. The survey was done by the Senior Community Services Employment Program of the American Association of Retired Persons (AARP) under a cooperative agreement with the Environmental Protection Agency (EPA . The data collection was conducted in the summer and fall of 1982, at which time the nation's golf courses numbered approximately 13,000. The survey was conducted in order to help meet the data needs of EPA regarding the non-farm use of pesticide chemicals in the United States. This study represents the first comprehensive quantitative assessment of pesticide use on golf courses in the country. The study was restricted to the examination of golf courses in the 48 contiguous states of the United States.

The results of the study confirmed that indeed golf courses do use a significant amount of pesticide chemicals in the annual course operations. The projected total national usage of pesticides amounted to a total of nearly 12 million pounds of active ingredients of the fungicide, herbicide, and insecticide products used on these sites. The usage of these products and chemicals varied across the 10 EPA regions of the country with the western regions (EPA regions 8,9, and 10) using the least and the Eastern regions (regions 3,4, and 5) using the greatest amounts. These differences, however, may be due to a

variety of variables which differ from one region to another such as number of courses in the region, climate of the region, pest prevalence within the region, etc.

The results of this survey are also maintained on a User Data Tape which is the property of the Environmental Protection Agency and inquiries regarding its use or duplication for further analyses may be referred to the Economic Analysis Branch, U.S. Environmental Protection Agency. This User Tape is a SAS dataset of the responses to the survey without any specific identifying information. The data contained on the User Tape is a duplicate of the data set used in the analyses presented in this report.

BACKGROUND AND PURPOSE

Presently, quantitative pesticide usage data concerning golf courses are very limited, out of date, and not sufficiently detailed nor reliable for meeting the needs of users of this information. Within EPA, quantitative usage data are needed as a basis for human exposure and risk analysis, environmental exposure and risk analysis, analyses of the benefits to pesticide users, for prioritization of chemicals for reregistration review, general monitoring activities, integrated pest management education and training programs, basic research, and for planning of enforcement activities. However, although

the study results will serve these purposes for EPA, individuals' names and the names of the golf courses serving as sample respondents in this study will not be associated with the responses to this survey and will not be available to EPA in any form.

Golf courses are significant users of pesticides, especially herbicides and fungicides. These pesticides are usually applied very intensively to the golf courses in order to maintain the quality and beauty of the playing surfaces. According to the National Golf Foundation, in 1981 there were nearly 13,000 golf courses in the United States which were utilized by more than 16 million golfers per year. The most heavily treated areas of the golf course (e.g. tees, greens, and fairways) are also those areas of most intensive use and exposure to humans. Because of this potential for human (and environmental) exposure on golf courses, this site was selected for a usage survey along with a number of other sites. Given this, current and accurate data would be of considerable importance in improving EPA's ability to provide relevant and specific testimony in various proceedings and in providing a more accurate data base for EPA decision-making and regulatory action.

THE GOLF COURSE INDUSTRY

According to the National Golf Foundation, in 1980 there were 12,788 golf courses in the nation with some 76 new courses having been created during the previous year. These courses comprised a total estimated acreage of 1,286,000 acres with an annual estimated total maintenance cost of 870 million dollars. The 12,788 courses were further broken down into the following categories:

Regulation.....	11,076
Executive.....	712
Par-3.....	1,000
Total Courses	12,788

These courses were played by an estimated 16,070,000 golfers, the majority of which (12.87 million) played 15 or more rounds a year. The above mentioned categories of courses refer to the relative size of the golf course. Regulation golf courses, the majority of courses in the country, are of a minimum overall length with the required number of par-3, par-4, and par-5 holes. The executive category is comprised of courses which are quite similar to regulation courses with the exception that they are somewhat shorter in overall length of a complete 9 or 18 hole round. The third category, Par 3, courses are

generally quite a bit shorter in overall length and are comprised totally or predominantly of par-3 holes -- that is, there are very few if any holes which are longer than would be expected in three golf strokes. The courses in the above categories may be private courses or public courses-- the above categories refer only to the length-size of the course, not to the ownership status of the course.

STUDY DESIGN AND SAMPLE SELECTION

The needs of EPA regarding golf course pesticide usage information required that the study examine each of the 10 EPA regions of the U.S. as well as provide national usage estimates. It was decided to design sample selection and data collection around a 20-state 10-region frame (i.e., 20 states in the contiguous 48 states of the country were included in collection of data with 2 states selected at random from each of the 10 EPA regions across the country.

A sample of 400 golf courses was to be selected from the 20 randomly selected states within the 10 EPA regions. Further, it was decided that the sample was to be selected such that each region's contribution to the total sample was proportional to that region's portion of the nation's total golf courses. And since each region was to be represented by 2 randomly selected states within that region,

each state's proportion of the region's sample was to be consistent with the ratio of total courses in the two states of the region. In other words, if region A had 1000 golf courses and the nation had 10,000 golf courses, then the sample from region A should be 1000/10,000 or 1/10 of the total sample in the study. Further, if state 1 in region A had 200 courses and state 2 in that region had 100 courses, then the sample from state 1 should be twice the size of that from state 2, and the total of the 2 state's samples should be 1/10 of the total national sample. This process was followed in the allocation of sample size requirements to each of the randomly selected 20 states and the 10 EPA regions, using a total national sample requirement of 400.

The selection of golf courses, comment and guidance in developing the survey instrument, and help in facilitating the data collection process was greatly enhanced by the cooperation of the National Golf Foundation (NGF) which represents nearly all (98%) of the nation's golf courses. The NGF agreed to allow the study staff to utilize their address list of their members for purposes of selecting the study sample.

In order to select the sample on a regional basis, the NGF address lists which were ordered on the basis of Standard Metropolitan Statistical Areas (SMSA's) were used. NGF's willingness to allow us this use of their list was tremendously helpful to the study since

there was no other such list compiled and the selection of the sample would have been quite difficult if not impossible without it. The drawing of the sample from courses which were within the SMSA's was a geographic cluster sample which optimized the efficiency of the field personnel. The use of SMSA lists of the NGF member courses was not seen as a biasing factor in the study since a majority of the nation's courses lie within the less rural parts of the country and there did not appear to be any systematic bias associated with this sampling approach. Following this process, 400 golf courses were selected to serve as the primary sample for this survey. Additional courses were selected from each SMSA to serve as alternates should they be needed during the process of data collection.

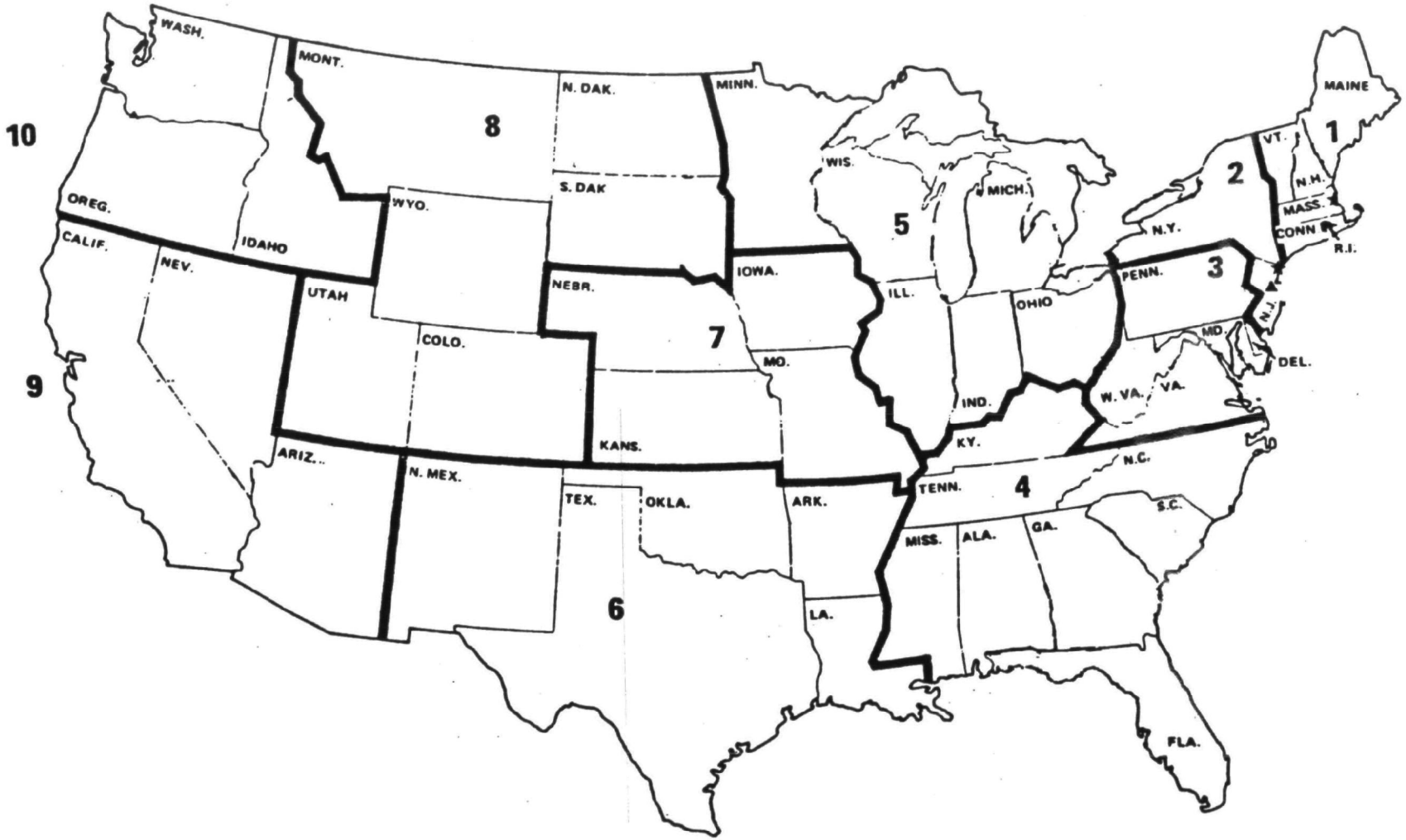
The method of data collection was personal interview with one or more persons at the golf course who were responsible for the actual application of pesticides to the course grounds. This respondent was usually the golf course superintendant or grounds keeper who was knowledgable of the types, amounts, and timing of the various pesticide chemicals used on the courses. The actual number of courses selected in each state and the number of courses in the relevant populations are shown in Table 1. A map showing the 10 EPA regions of the U.S. is shown in Figure 1.

TABLE 1

SAMPLE SELECTION BY STATE AND REGION
WITH STATE, REGION, AND NATIONAL POPULATIONS

EPA Region	State	Sample	Golf Course Population of State	Region
I	Massachusetts	22	329	826
	Rhode Island	4	52	
II	New Jersey	9	278	1052
	New York	24	774	
III	Maryland	15	158	1235
	Virginia	24	251	
IV	Florida	56	680	2378
	Kentucky	18	219	
V	Illinois	44	575	3045
	Michigan	51	677	
VI	Louisiana	7	142	1157
	Texas	29	626	
VII	Iowa	18	344	1006
	Missouri	13	258	
VIII	Colorado	12	165	563
	Utah	6	82	
IX	Arizona	6	166	1079
	California	29	817	
X	Idaho	4	77	447
	Washington	10	217	
	Totals	401		12,788

U.S. ENVIRONMENTAL PROTECTION AGENCY



9.

DATA COLLECTION PROCESS

The 20 states which were included in the sample were divided into four data collection regions and a regional coordinator was selected and trained to coordinate the activities in his/her area. The actual courses in the sample were plotted geographically in each state and interviewers were recruited from the areas near the sample courses to minimize travel time and effort. Once selected, the interviewers and coordinators were given in-depth training for a three-day period in sessions conducted by the study staff in each of the four data collection regions. This training included principles of interviewing, purpose and scope of the study, description of pesticides and their use on golf courses, and numerous mock interviews to give the interviewers considerable familiarity with the study and the survey instrument.

The method of data collection was by personal interview of the person at each selected golf course who was responsible for the application of chemicals to the course - in most cases this was the grounds keeper or golf course superintendent. However, in order to assure the best possible cooperation and collection of data, a number of activities occured prior to actual data collection. Prior to the actual data collection, an introductory letter was sent to each prospective interviewee describing the study and the particular nature

of the data to be requested in the interview, and mentioning the NGF's involvement and support of the study. In addition, the potential respondents were assured of the anonymity and privacy of their responses to the questionnaire. This process helped immensely in the collection of data and the familiarizing of the potential respondents to the study and its purpose.

After the training and assignment of sample courses to each of the interviewers, numbered blank questionnaires and materials were given to the interviewers with interviewing to begin in July of 1982. The data collection process continued through September of 1982 at which time interviewing was terminated and data cleaning/coding was begun.

THE SURVEY QUESTIONNAIRE

The survey instrument was developed after extensive discussion with many different individuals and organizations in order to make the survey instrument as comprehensive and functional as possible. The primary information which was to be gathered by the survey was that of specific product usage, amount of each product being used, and the actual EPA registration number of that product. In addition, other information was being sought regarding specifics about the golf course (e.g. size,type of course, fiscal information to describe the course,

how, when, and where chemicals were applied, etc). The format of the instrument had to be such that all of this information could be recorded and that the questions be relevant and pertinent to the golf course functions. To do this, a pilot test of the instrument was conducted on actual golf course superintendents using actual information and obtaining actual usage and EPA registration number data. Advice and guidance was received from the NGF staff, EPA staff, previous studies of a similar nature, and modifications as indicated from the pilot testing of the instrument. The final survey questionnaire (and the handbook used by the respondent to aid in data collection) appear in Appendix A.

Appendix J contains the item by item response frequencies for the survey sample and for the projected national total of golf courses for all questionnaire items other than the quantitative usage items for specific chemicals.

RESPONSE RATES

Interviews were conducted with 401 golf courses and their questionnaires returned to the study staff. Of these, 3 interviews were dropped for insufficient data to be included in the overall study. Of the remaining 398 interviews, there were 20 with insufficient usage

data to be included in the actual chemical usage analysis. Among the resulting 378 courses which were utilized in the usage projection portion of the study, there were 3839 individual mentions of pesticide products used on the sample courses. Among these individual observations of pesticide usage, there were 216 observations with missing EPA registration information which could not be resolved. This resulted in 3580 valid pesticide usage observations and a 6.7% missing data rate in the pesticide usage portion of the study.

Data from 378 courses were included in the pesticide usage projections portion of the study from among the 401 courses interviewed (i.e., 94.3% of the surveys provided useful data). The actual number of courses and responses included in each portion of the data analysis presented in this report is shown in Appendix B.

WEIGHTING AND PROJECTIONS OF REGIONAL AND NATIONAL USAGE

In projecting total usage (in pounds) of the various chemicals and products, the golf courses in the survey sample had to be weighted to take into account the proportion of the courses sampled to the total number of courses in the region. On the average, each course in the sample stood for or represented some 25 to 35 golf courses in their area. The process of weighting, therefore, was to assign an exact

multiplier to the sample golf courses in each state such that, when their usage data are multiplied by the weight, the total usage represents all 12,788 golf courses in the country.

First, the number of golf courses selected in each state had to be adjusted to reflect their exact proportion of their region's total golf course population. This was a small adjustment to correct for not being able to sample, for instance, 21.673 golf courses in a state, but rather having to sample 22 whole courses in that state. In addition, due to missing or incomplete data, not every course in the sample was used in the calculations of amounts of pesticidess used. This small adjustment we will call Sample Adjustment (SA) and the weight for obtaining total estimates we will call Projection Weight (PW). These values were calculated in the following manner:

$$\text{Sample Adjustment(SA)} = \left[\frac{\text{state total}}{\text{2-state total}}\right] \div \left[\frac{\text{state sample}}{\text{2-state sample}}\right]$$

Next, the weight or multiplier for use in projecting the sample usage data to reflect regional and national total usage was calculated in the following manner:

$$\text{Projection Weight (PW)} = \frac{\text{region total}}{\text{region sample}} \times \text{SA (from formula above)}$$

This adjustment and projection weight along with the state, regional, and national sample sizes and total populations are shown in Appendix B. The sample sizes reflect only those courses used in the usage data and projections and do not include those courses which had no usable usage figures. Hence, the total sample size and, in some cases, the state and region sample sizes are smaller than the total sample sizes discussed earlier in the section on sample selection. In data presentations of other than pesticide usage amounts the total sample will reflect the actual number of courses with usable data in that category. However, since the prime concern in this study is that of pesticide usage amounts, most data will be based on the sample figures discussed here and shown in Appendix B.

Calculating pesticide usage was done in two steps. The first step involves converting all end use production into pounds. The second step is to identify active ingredient (a.i.) amounts. In making the the first conversion to pounds, all reported amounts which were in dry measure (e.g., tons, pounds, ounces, etc.) were converted to pounds or decimal portions of pounds. All reported amounts which were in liquid measure (e.g., gallons, pints, quarts, etc.) were converted to gallons or decimal portions of gallons. Then all liquid measures (gallons) were converted to pounds using the specific gravity of water or 8.33 pounds/gallon. This specific gravity standard was used since there was no specific gravity information available for the individual chemical

ingredients. The use of this standard (the weight of water) will cause the projected usage figures to be somewhat high for chemicals that are lighter than water (e.g., petroleum distillates, oils, etc.), and to be somewhat low for those chemicals which are heavier than water. Where a particular chemical usage figure is quite critical and the exact specific gravity is necessary to be used in projecting total usage, the projected usage figure given can be adjusted by multiplying the usage figure given by the ratio of the weight of the chemical to the weight of an equal amount of water.

Calculating the amount of active ingredient use was done by applying the EPA Office of Pesticide Program product label file. The product label file contains the percent by weight of all active ingredients contained in each end use product.

USAGE OF CHEMICALS AND PRODUCTS

The survey results regarding the pesticide products and their active ingredients revealed 126 different active ingredients occuring in the pesticide chemicals used nationally in the annual maintainance of golf courses. The complete listing of these chemicals and their associated EPA chemical code numbers along with the projected national usage (in pounds used) of the active ingredient (a.i.) is shown in Appendix C. A cautionary note is necessary at this point. In the collection of data there were a number of instances where the respondent provided all the necessary information about the pesticides used but had used all of certain products and, hence, had no containers/bags of the product left from which the interviewer could record the EPA registration number. In some cases the respondent was able to provide the interviewer with sufficient detail (brand name and identifying information) such that the proper EPA registration number could later be assigned. However, in some cases, only the amount used, the generic name(e.g. balan, MCPP, 2-4-D, etc), and the formulation of the product were obtainable. In these cases, in order to save the usage data which was given, an assignment process was followed to try and resolve as many of the missing EPA registration number cases as possible.

This process involved using the formulation and any other information provided to determine the proper EPA reg. number. Where

that was not sufficient by itself, the "typical" product in that pesticide or generic category was used as the EPA registration number to be assigned where formulation and other available information was consistent with the "typical" product used in that category. This number then served as the EPA registration number on that observation. The result is that, while the amounts used are accurate, the actual specific product (brand name) of the product was assigned. This process can cause error in the sense that a specific product cited in the data tables may not be the accurate product name, although the active ingredient used is an accurate amount. This problem is much more specific to data regarding products than it is to general chemicals which are the same in a variety of different brand name products.

In Table 2, the overall usage of pesticides has been combined into three general categories: A) Herbicides, B)Fungicides, and C) Insecticides. This classification was made on the basis of respondents' classifications of the products which were reportedly used on the courses (i.e., if the respondent gave the figures for a product which he/she said was one of the chemicals in the list of herbicides, then the usage data was listed under the herbicide category). In Table 2 below, the projected total chemical (active ingredient) usage is shown for each category of pesticide by EPA region.

TABLE 2
Projected Total Usage of Chemicals
By Pesticide Category and Region:1982

Pesticide Category	EPA Region	Total Pounds Active Ingredient
Herbicides	1	284,865
	2	439,392
	3	1,249,377
Sub-Total	4	1,034,842
---	5	898,710
4,571,250 lbs.	6	246,705
	7	260,694
	8	53,237
	9	67,096
	10	36,333
Fungicides	1	121,693
	2	642,720
	3	461,591
Sub-Total	4	395,323
---	5	2,640,167
4,574,161 lbs.	6	69,787
	7	133,844
	8	23,104
	9	51,934
	10	33,999
Insecticides	1	49,422
	2	240,966
	3	228,805
Sub-Total	4	1,976,212
---	5	288,315
3,182,133 lbs.	6	129,081
	7	79,659
	8	19,834
	9	164,930
	10	4,909
Overall Total		11,935,242

As the table indicates, there is a very similar total amount of herbicide and fungicide chemical usage at the national level, while the usage of insecticide chemicals is about 3/4 of the use of the other pesticide categories. While insecticide usage is somewhat less than the others, it is still considerable in amount and it may be greater than expected prior to the survey. While the usage of herbicides and fungicides is expected to be considerable on sites where grass condition is critical, the amount of insecticides used is a somewhat unanticipated finding.

In order to facilitate the reference to chemicals (active ingredients) and their corresponding chemical number (CHEM CODE), an alphabetical listing of chemicals is shown in Appendix K. And as further reference, a numerical listing of the chemical code numbers is shown in Appendix L along with the corresponding chemical name.

In Appendix M the standard error of the mean (STDERR) is shown for each chemical for national projections. Since the usage projections for the chemicals is based upon the mean of the sample observations multiplied by the weighting factor, this standard error term can be used to calculate the upper and lower confidence limits of the projected value by using the appropriate confidence interval z-score value (e.g. 1.96 for 95% confidence interval; 1.64 for the 90% confidence interval). The actual upper and lower limit values depend upon the mean for each group and the weighting factor for that group.

A general and somewhat conservative value for the error range of these figures is +/- 500 lbs. This range, however, is applicable to the projected total usage amounts which are in excess of 50,000 lbs. In Appendix N, this same information (standard error) is shown for the projected regional total usage of chemicals.

The twenty most heavily used chemicals, in terms of projected national usage in pounds/year, are shown below in Table 3.

TABLE 3

20 Most Heavily Used Pesticide Chemicals (Active Ingredients)
(Projected National Usage in Pounds)
1982

Chemical Code #	Chemical Name(Active Ingredient)	Total Pounds Used
81901	Chlorothalonil/Daconil 2787/Bravo	1,297,581
31501	Mecoprop/MCPP	1,096,157
13803	MSMA	834,830
109801	Iprodine/Glycophene/Chipco 26019	815,694
79801	Thiram	635,185
57801	Diazinon/AG-500/Spectracide	512,112
99101	Benomyl/Benlate	500,912
63503	Parafin Oil/Amsco 140	487,427
30019	Dimethylamine 2,4-D	462,006
63001	Pentachlorophenol/dowicide 7	456,909
42002	Ethylene Dibromide/EDB	402,067
78701	Dacthal/DCPA	400,016
14505	Maneb	376,763
109401	Isofenphos/Amaze/Oftanol	374,718
29802	Dicamba(Dimethylene salt of,)	297,262
14504	Dithane M-45	218,083
57901	Dylox/Trichlorfon/Anthon	215,975
9801	Bensulide/Betasan/Prefar	210,510
6501	Aromatic Petroleum Deriv. Solvent	190,516
86802	Xylene/Socal Aquatic Solvent 3501	152,703

Of these 20 most heavily used chemicals or active ingredients, the first (heaviest use in pounds/year) is the fungicide chlorothalonil, also known as Daconil 2787 or Bravo. This one chemical alone is projected at nearly 1.3 million pounds annually on the golf courses nationally. This figure represents the projected amount of active ingredient used, not the total packaged product or diluted/mixed product for application -- those amounts would be considerably larger. It is noteworthy that among the top five chemicals used on golf courses, three are fungicides. This table shows that these heaviest used chemicals are 6 herbicides, 6 fungicides, 3 insecticides, and 3 petroleum solvents.

A major issue in examining these usage amounts is the question of how this usage is distributed across the nation's golf courses. Although the national projections reflect the total national usage by the 12,788 courses in the study population, this usage is not necessarily evenly distributed across all the courses, nor is it necessarily even across the 10 EPA regions. The projected usage of these chemicals by EPA region is shown in the full data tables contained in Appendix D.

The impact of this distribution of usage of various chemicals across regions is that the projected national total usage of each chemical would be applied to considerably less acreage than is represented by all 12,788 golf courses. In addition, the fact that

most of these chemicals are used on only a portion of the golf course (primarily tees, greens, and fairways) means that lbs./acre usage of the chemicals is much higher. For example, the chemical chlorothalonil (or Daconil 2787, Bravo) is projected at 1,240,324 lbs. active ingredient usage nationally. In Region 5, the projected regional usage of this chemical is 832,038 lbs. active ingredient. In Region 5 there are 3,015 golf courses or 23.8% of the nation's 12,788 courses (3045/12788). But the projected regional use of this chemical is 67.08% of the projected national usage. The use of this chemical, obviously, is much higher in Region 5 than in the other regions and the lbs./acre usage would be expected to be considerably higher annually than in the other EPA regions. If, for the sake of discussion, we assume the typical golf course to have about 2.5 acres of greens/tees and about 40 acres of fairways for a total of 42.5 acres combined area on which the chemical is generally used, then the 3045 courses in Region 5 have a total of 42.5 x 3045 or 129,412.5 acres of treated area. Therefore, the 832,038 lbs. of the active ingredient chlorothalonil used in Region 5 would be distributed on the 129,412.5 acres for a rate of 6.429 lbs./acre of chlorothalonil.

There are differences in the amounts of chemicals used from one region to another, and these differences are more than just differences in the number of courses from one region to another. The relative difference in projected total usage of specific chemicals from one region to the next (the usage of a greater or lesser relative amount of

chemical compared to the proportion of courses in that region) could be due to climatic conditions, different marketing efforts by suppliers in one region versus another, or due to differences in the prevalence of certain types of pests from one region to another.

As a guide in examining the regional usage amounts of a given chemical relative to the total national usage, the proportion of courses in each EPA region to the total 12,788 courses nationally is shown below in Table 4.

TABLE 4

Proportion of Total Golf Courses in Each EPA Region:1982

EPA Region	Number of Courses	Percentage of Total Courses
1	826	6.46%
2	1052	8.23
3	1235	9.66
4	2378	18.59
5	3045	23.81
6	1157	9.05
7	1006	7.87
8	563	4.40
9	1079	8.44
10	447	3.49
Total	12788	100.00%

The application densities or application rates for each chemical nationally are shown in Appendix E. These application densities were computed by taking the total projected national usage (in lbs.) and dividing that figure by the total projected acres upon which this figure is applied. In figuring the total acres, the actual acreage

upon which reported use of the chemical occurred was multiplied by the weighting factor used in projections based on the number of courses. In other words, the same process was used for projecting total acreage as was used in projecting total amount of chemical used. The figures in Appendix E are for active ingredient use, not the larger product use/acre. The application density figure is in lbs. active ingredient/acre, projected to the national total golf course usage.

In addition to the national projected application densities (Appendix E) the same calculations for application densities were done on a regional basis. This information is shown in Appendix F. There is some regional variation in the rates of various of the chemicals. In addition, although most of the application densities are less than 1.00 lbs/acre of the active ingredient, there are some notable exceptions which are not only much greater than 1.00 lbs/acre but also are not consistent across regions. This may be due to climatic and pest differences as well as differences in the actual turf being treated; it could also be a function of the number of times in a given year that the chemical is applied. Some of the chemicals are applied only once in a year's time while others are applied on a more frequent basis (e.g. every week; once a month; etc.). In Appendix G, the average number of applications in a 12-month period is shown for each chemical(active ingredient) as listed by chemical code number. The data in this appendix do show that, for one chemical at least, this explanation may hold -- for chemical code number 63502 (white mineral

oil) which is applied on an average 60 times in a year period, the application density (density in lbs/acre) is higher than most at a rate of 10.94 lbs/acre on a national average. This argument does not hold, however, for several of the other chemicals (e.g. chemical code numbers 31501-MCPP; 42002-EDB; and 63001-Dowicide 7). In these cases, it may simply be that the recommended application rate in lbs/acre may be large for the desired effectiveness. In any case, the data regarding application densities (Appendix E or F) do show several chemicals with a noticeably higher application density than the majority of the chemicals examined. If minimum use of chemicals (while achieving acceptable results) is a goal, additional analyses might be beneficial to determine whether these variations in application densities are due to the factors mentioned above or, in part, due to other factors.

PEST PROBLEMS AND PESTICIDE EFFECTIVENESS

As part of the survey questions, respondents were asked, for each pesticide chemical used, to indicate whether the pest problem being treated was a "major" or a "minor" pest problem. In addition, respondents were asked to rate the "effectiveness" of the pesticide in addressing the particular problem. Effectiveness was rated on a scale from 1 to 4 (1=excellent, 4=poor). Appendix H shows the ratings of severity of pest problem for each chemical by chemical code number. The chart in Appendix H lists the chemical code number followed by the

total amount of chemical use (in lbs active ingredient) followed by the number of pounds which were used for a "major" pest problem, then the number of pounds used for a "minor" pest problem, then the number of pounds used for a problem which was both major and minor or in between the two categories. For example, chemical 4401 (Cytrol) was used nationally in the amount of 130 lbs. A.I. Of this 130 lbs, 58 lbs were used in a "major" pest problem situation while the remaining 72 lbs were used in a "minor" pest problem situation. The data show that while numerous chemicals were used in both major and minor problem situations, still a large number of the chemicals were used in situations which were totally described as "major" pest problem situations.

In Appendix I, the mean effectiveness ratings are shown for each chemical. This data shows first the chemical code number followed by the total pounds used nationally, followed by the mean (average) of the effectiveness ratings assigned by the respondents using the chemical. In examining the data in Appendix I, a low effectiveness rating is good or excellent, while a higher number indicates a fair or poor effectiveness rating. The data contain average ratings which are very near or at the "excellent" end of the scale (1.00 or very near 1.00). while none are beyond or worse than the "fair" end of the scale (2.75 - 3.00). Regardless, there are chemicals which are rated considerably better or more effective than others even though the differences may be more relative than absolute or more subjective than objective.

As the data presented thus indicates, there are differences in the application, pest problem severity, and perceived effectiveness of the chemicals applied to the nation's golf courses. There is, however, considerable indication that large amounts of pesticide chemicals are used on the courses and that these chemicals are applied quite frequently throughout the year. All of this points to the importance of proper care and use of these chemicals. In order to address this issue, a series of questions was asked of respondents which dealt with the clarity or sufficiency of information on the pesticide instruction labels. The respondents were asked whether the instruction labels gave them sufficient information in terms of seven different aspects of the use of the chemicals. The response to these questions is shown in Table 5.

TABLE 5
Adequacy of Label Instructions:1982
(Yes = sufficient information
No = not sufficient information)

Information Category	Percent (%) Responding:(a) YES	NO	SOMETIMES
Safety Precautions	92.5	1.8	3.3
Disposal Procedures	79.5	9.5	8.7
Drift Hazards	81.7	7.5	8.4
Storage Requirements	84.9	4.6	8.1
Application Rate	92.9	1.3	3.4
Toxic Haz/Symptoms	87.4	4.6	5.6
Antidote Instruction	85.9	4.9	6.9

(a)Percents do not add to 100 due to those indicating no pesticides used.

The responses to sufficiency of label instructions clearly indicates that the great majority of respondents feel that label instructions do provide them sufficient information in the areas mentioned. However, the two areas which seem to be least clear in terms of information provided are a) disposal procedures and b) drift hazards. The information about safety precautions and application rates seems to be the most complete in providing information needed. With these responses, as with those regarding effectiveness, there is the potential for bias in the positive direction as the responses were subjective impressions of the respondents and may have been elevated in order to indicate that the repondent did indeed know his/her job sufficiently to eliminate much of the problem of label instruction clarity. Nevertheless, the responses do show some relative difference among the various segments of label instruction.

COURSE EXPENDITURES FOR PESTICIDES AND MAINTENANCE

In the tables below are shown the average (mean) golf course expenditures for course maintenance and for pesticide chemicals by course type (Table 6) and by EPA region (Table 7).

TABLE 6
Average Course Expenditures by Course Type:1982

Course Type	Projected Total Courses	Average Course Acreage	Course Maintenance (Annual)	Pesticide Chemicals (Annual)
Private	4547	124	$178,529	$11,457
Daily Fee	4659	110	93,566	4,244
Municipal	2630	133	162,469	5,821
Gov't Operated	685	178	151,587	5,240
Semi-Private	649	94	110,621	10,212
Public/School (a)	34	9	7,500	n/a
Mixed Type (a)	34	130	140,000	15,000

(a)this information is based upon a single observation and should be interpreted very cautiously.

There are quite clearly differences between types of courses in the size of the overall course maintenance budget and in the size of the budget for pesticide chemicals. Private courses have larger budgets for both maintenance and pesticide chemicals while daily fee courses have modest budgets in both areas. Municipal courses are more like private in their overall maintenance budget but modest in their actual pesticide chemicals budget like the daily fee courses.

The table below shows this acreage and budget information on a Regional basis.

TABLE 7
Average Course Acreage and Expenditures by Region:1982

EPA Region	Average Course Acreage	Course Maintenance (Annual)	Pesticide Chemicals (Annual)
1	93	$ 78,841	$ 4,254
2	121	147,151	9,964
3	130	139,258	8,738
4	147	218,619	11,586
5	121	99,730	6,429
6	148	174,012	11,242
7	108	91,582	5,467
8	121	140,975	2,514
9	86	220,483	3,045
10	108	90,390	2,084

The table above indicates clearly that there are differences in the average budgets for maintenance and pesticides from one EPA region to another. These differences could be attributed to several possible differences among the regions. Climate is certainly a possible factor in these differences. Different climates and pest infestations can affect either the turf condition and need for certain chemicals as well as the level of activity on the courses. Differences in the length of the playable season also exist and affect the course maintenance costs since the courses used more often or for longer seasons would require more dollars being spent on both maintenance and pesticide chemical expenditures. The actual causes for these regional differences should be addressed by those whose expertise is in the area of golf course maintenance and turf care.

APPENDICES

APPENDIX A

SURVEY QUESTIONNAIRE

AND

RESPONDENT HANDBOOK

GOLF COURSE SURVEY QUESTIONNAIRE

GOLF COURSE NAME _____ CONTROL # 01595

RESPONDENT NAME _____ POSITION _____

GOLF COURSE ADDRESS _____

_____

CITY _____ STATE _____ ZIP CODE _____

PHONE NO. ( ) _____ - _____

INTERVIEWER _____ DATE ___/___/___

VERIFIED BY _____ DATE ___/___/___

Control # 01591

What type of course if this? (*Interviewer—circle number corresponding to the appropriate response.*)

Regulation ..... -1
Executive ..... -2
Par Three ..... -3

2. What size is the course (# holes)? ☐☐
(*If more than one course, specify for each additional course.*) ☐☐
☐☐

3. And is the course . . .
(*Identify according to largest division.*)

Private ..... -1
Daily fee ..... -2
Municipal ..... -3
Government operated .... -4

4. How long is the course open during the year?

All year ..... -1
Seasonal ..... -2 No. of months ☐☐

5. Size of Course: (*If information is given in square yards use column A, if in acres column B.*)

	A Sq. Yds.	B Acres
A. Tees	☐☐☐☐☐☐	☐☐☐
B. Greens	☐☐☐☐☐☐	☐☐☐
C. Traps	☐☐☐☐☐☐	☐☐☐
D. Fairways	☐☐☐☐☐☐	☐☐☐
E. Roughs	☐☐☐☐☐☐	☐☐☐
F. Water hazards	☐☐☐☐☐☐	☐☐☐
G. Out of bounds areas	☐☐☐☐☐☐	☐☐☐
Total	☐☐☐☐☐☐	☐☐☐

6. Now I'm going to ask you some questions about the types and amounts of various pesticides which you use during the year.

Reading from the list of pesticides, please tell me the names and numbers of any of those whi you use in the maintenance of this course. For each one used, I will ask you how much you how effective it is, etc. So could you first look at the herbicides.

> Read the column headings and record in the columns-after herbicides, go to fungicides,

1. Pesticide # (Enter Code #)	2. EPA Reg. # (From Label)	3. Principal Target Pest # (Enter Code #)	4. Formulation (Enter Code #)	5. Amount Used		
				A. Greens/ Tees	B. Fairways (Indicate Lbs.,	Gals.

Control # 01596

Past 12 Months)			6. Type of Application Equipment (Enter Code #)	7. Number of Applications In Past 12 Mo.	8. Major or Minor Pest Problem (1) Major (2) Minor (Enter '1' or '2')	9. Effectiveness (Enter Code #)
Past 12 Months.)	D. Water Hazards	E. Out of Bounds Areas				

7. In the past 12 months, have you had any problems with drift of any of the pesticides you use. (Circle appropriate response.)

Yes -1 No -2

7.a If 'yes', with which ones? (*Use pesticide #s from handbook.*)

_____
_____
_____

8. Did any of the pesticides that you used during the past 12 months cause any undesirable side effects? (*Circle appropriate response.*)

Yes -1 No -2

8.a If yes, please specify_____
_____

9. How do you dispose of your pesticides and their containers? (*Circle appropriate # in each column.*)

	Containers	Pesticide (Contents)
Burn in incinerator	-1	-1
Bury in designated area	-2	-2
Storage	-3	-3
Ship to approved disposal site	-4	-4
Put in trash (dumpster, etc.)	-5	-5
Other (specify)	-6	-6

10. How do you usually store your pesticides: (*Circle appropriate response.*)

In separate area	-1
Locked storage area	-2
Other (specify)	-3

11. Do the pesticide instruction labels give you sufficient information in terms of . . .

	Yes	No	Sometimes	(Clarify)
A. Safety precautions required	-1	-2	-3	_____
B. Disposal procedures	-1	-2	-3	_____
C. Drift hazards	-1	-2	-3	_____
D. Storage requirements	-1	-2	-3	_____
E. Application rate instructions	-1	-2	-3	_____
F. Toxic hazards and symptoms	-1	-2	-3	_____
G. Antidote instructions	-1	-2	-3	_____

12. And what safety precautions do you take before, during and after application?
(Circle appropriate # in each column.)

	Yes	No
Protective clothing	-1	-2
Washing hands	-1	-2
Washing clothes	-1	-2
Taking showers	-1	-2
Use respiratory device	-1	-2
Wear goggles	-1	-2
Use masks	-1	-2
Other (specify)	-1	-2

13. Are you a certified applicator? *(Circle appropriate response.)*

Yes -1 No -2

14. Do you contract for any pest control services? *(Circle appropriate response.)*

Yes -1 No -2

14.a If yes, how often?

☐☐ times/ week, month, year, as needed

(Circle correct period of time.)

14.b About how much do you spend in a year for pest control services? *(Enter amount in boxes.)*

$☐☐☐☐☐☐

15. For what purposes do you hire a pest control operator? _____

_____

16. What do you spend annually on pesticides chemicals? *(Enter amount in boxes.)*

$☐☐☐☐☐☐

17. What is your annual budget for course maintenance *not* including equipment purchase?
(Enter amount in boxes.)

$☐☐☐☐☐☐

That concludes the interview, and I want to thank you for your cooperation in this study. Now let me make sure that I have the correct name, address, and phone number.

(Go back to front page and recheck for complete information.)

(Also review questionnaire for clarity and completeness.)

RESPONDENT HANDBOOK

APPLICATION, USE AND EFFECTIVENESS OF PESTICIDES

A. HERBICIDES
B. FUNGICIDES
C. INSECTICIDES

A. Herbicides

Trade Name	*Common Name*
A1 - Betasan	Bensulide
A2 - Balan	Benefin
A3 - Dacthal	Chlorthal Dimethyl
A4 - Banvel-D	Dicamba
A5 - Ronstar	Oxadiazon
A6 - Roundup	Glyphosphate
A7 - Tupersan	Siduron
A8 - MCPP	Mecoprop
A9 - Many Trade Names	2,4-D
A10- Neburon	Neburon
.11- Dalapon, Dowpon	Dalapon
A12- Kerb	Simazine
A13- Atrazine	Atrazine
A14- MSMA	MSMA
A15- DSMA	DSMA
A16- Many Trade Names	2,4,5-T
A17- Trimec	
A18- Treflan	Trifluralin
A19- Basagran	Bentazon
A20- Other (Specify)	

Weeds

A40- Annual Grasses-Summer

A41- Annual Grasses-Winter

A42- Annual Broadleaf Weeds-Summer

A43- Annual Broadleaf Weeds-Winter

A44- Perennial Grasses

A45- Perennial Broadleaf Weeds

A46- Digitarius (Smooth Crab, Soft Crab)

A47- Goose Grass (Hard Crab, Crow's Foot Silver Crab)

A48- Other (specify)

Formulation Codes

1- Wettable Powder (WP)

2- Emulsifiable Concentrate (EC)

3- Liquid, Solution(S)

4- Flowable (F)

5- Dust (D)

6- Granule (G)

7- Soluble Powder (SP)

8- Bait (B)

Application Equipment Codes

1- Hand Sprayers

2- Low Pressure Field Sprayer

3- High Pressure Sprayer

4- Air Blast Sprayer

5- Ultra Low Volume Sprayer (ULV)

6- Hand Duster

7- Power Duster

8- Rotary (Cyclone) Spreader

9- Drop Spreader

10- Other

Effectiveness Codes

1- Excellent

2- Good

3- Fair

4- Poor

5- Can't Determine

Fungicides

Trade Name	*Common Name*
B1 - Acti-Dione	Cyclohexamide
B2 - Benlate, Tersan 1991	Benomyl
B3 - Captan	Captan
B4 - Dithane, Tersan LSR	Maneb
B5 - Dithane-M45 (Fore)	Mancozeb
B6 - Tersan-75	Thiram
B7 - Arathane	Dinocap
B8 - Ridomil, Subdue	Metalaxyl
B9 - Bravo, Daconil 2787	Chlorthalonil
B10- Fusarex	Tecnazene
B11- Topsin E, Cleary 3336	Thiophante
B12- Dyrene	Anilazene
B13- Demosan, Tersan SP	Chloroneb
B14- Chipco 26019, Rovral	Iprodione
B15- Zineb	Zineb
B16- Bayleton, Amiral	Triadimefon
B17- Calo-Clor	
B18- Other (Specify)	

Fungi

B40- Brown Patch

B41- Dollar Spot

B42- Fusarium Blight

B43- Grey Snow Mold

B44- Leafspot (Melting Out)

B45- Pink Snow Mold

B46- Powdery Mildew

B47- Rust

B48- Stripe Smut

B49- Pythryium Blight

B50- Red Thread

B51- Typhula

B52- Other (specify)

Formulation Codes	Application Equipment Codes	Effectiveness Codes
	1- Hand Sprayers	
1- Wettable Powder (WP)	2- Low Pressure Field Sprayer	1- Excellent
2- Emulsifiable Concentrate (EC)	3- High Pressure Sprayer	2- Good
3- Liquid, Solution(S)	4- Air Blast Sprayer	3- Fair
4- Flowable (F)	5- Ultra Low Volume Sprayer (ULV)	4- Poor
5- Dust (D)	6- Hand Duster	5- Can't Determine
6- Granule (G)	7- Power Duster	
7- Soluble Powder (SP)	8- Rotary (Cyclone) Spreader	
8- Bait (B)	9- Drop Spreader	
	10- Other	

C. Insecticides

Trade Name	*Common Name*
C1 - Dursban	Chloropyrifos
C2 - Diazinon	Diazinon
C3 - Oftanol	Isofenphos
C4 - Baygon	Propoxur
C5 - Lannate	Methomyl
C6 - Ficam	Bendiocarb
C7 - Dylox, Proxol	Trichlorfon
C8 - Sevin	Sevin, Carbaryl
C9 - Methoxychlor	Methoxychlor
C10- Kelthane	Dicofol
11- Malathion	Malathion
C12- DDVP-Vapona	Dichlorvos
C13- Dasanit	Fensulfothion
C14- Aspon	Chlordane
C15- Other (Specify)	

Insects
C40- Sod Webworm
C41- Atanius Beetle
C42- White Grubs
C43- Army Worms
C44- Cut Worms
C45- Ants
C46- Leaf Hoppers
C47- Blue Grass Killbugs
C48- Mosquitoes
C49- Nematodes
C50- Mole Crickets
C51- Japanese Beetle
C52- Tent Catepillars
C53- Other (specify)

Formulation Codes

1- Wettable Powder (WP)

2- Emulsifiable Concentrate (EC)

3- Liquid, Solution (S)

4- Flowable (F)

5- Dust (D)

6- Granule (G)

7- Soluble Powder (SP)

8- Bait (B)

Application Equipment Codes

1- Hand Sprayers

2- Low Pressure Field Sprayer

3- High Pressure Sprayer

4- Air Blast Sprayer

5- Ultra Low Volume Sprayer (ULV)

6- Hand Duster

7- Power Duster

8- Rotary (Cyclone) Spreader

9- Drop Spreader

10- Other

Effectiveness Codes

1- Excellent

2- Good

3- Fair

4- Poor

5- Can't Determine

APPENDIX B

WEIGHTING FACTORS

AND

SAMPLE AND POPULATION SIZES

TABLE OF SAMPLE SIZES - POPULATIONS - WEIGHTING FACTORS --- EPA GOLF COURSE SURVEY

EPA Region	Code	State	State Sample	Region Sample	-- Courses in Population Base -- State Total	2-State Popul	Region Total	Nation Total	Sample Adjustment
I	11	Massachuse	22	26	329	381	826	12788	1.0205202
	12	Rhode Isla	4	26	52	381	826	12788	.88713911
II	21	New Jersey	12	34	278	1052	1052	12788	.74873257
	22	New York	22	34	774	1052	1052	12788	1.1370550
III	31	Maryland	14	37	158	409	1235	12788	1.0209570
	32	Virginia	23	37	251	409	1235	12788	.98724354
IV	41	Florida	53	70	680	899	2378	12788	.99901358
	42	Kentucky	17	70	219	899	2378	12788	1.0030753
V	51	Illinois	41	89	575	1252	3045	12788	.99694148
	52	Michigan	48	89	677	1252	3045	12788	1.0026125
VI	61	Louisiana	6	36	142	768	1157	12788	1.109375
	62	Texas	30	36	626	768	1157	12788	.97812500
VII	71	Iowa	15	28	344	602	1006	12788	1.0666667
	72	Missouri	13	28	258	602	1006	12788	.92307692
VIII	81	Colorado	9	15	165	247	563	12788	1.1133603
	82	Utah	6	15	82	247	563	12788	.82995951
IX	91	Arizona	6	32	166	983	1079	12788	.90064429
	92	California	26	32	817	983	1079	12788	1.0229282
X	01	Idaho	3	11	77	294	447	12788	.96031746
	02	Washington	8	11	217	294	447	12788	1.0148810
TOTALS			378	378	6887	6887	12788	12788	

EPA Region	Code	State	State Sample	Projection Weight
I	11	Massachuse	22	32.421141
	12	Rhode Isla	4	28.183727
II	21	New Jersey	12	23.166667
	22	New York	22	35.181818
III	31	Maryland	14	34.077890
	32	Virginia	23	32.952588
IV	41	Florida	53	33.937918
	42	Kentucky	17	34.075901
V	51	Illinois	41	34.108840
	52	Michigan	48	34.302865
VI	61	Louisiana	6	35.654080
	62	Texas	30	31.435851
VII	71	Iowa	15	38.323810
	72	Missouri	13	33.164835
VIII	81	Colorado	9	41.788124
	82	Utah	6	31.151147
IX	91	Arizona	6	30.368600
	92	California	26	34.491862
X	01	Idaho	3	39.023810
	02	Washington	8	41.241071
			378	679.05255

APPENDIX C

PROJECTED NATIONAL USAGE

OF

CHEMICALS (ACTIVE INGREDIENTS)

CHEM CODE#	CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
4401	Cytrol	130
6321	Calcium oxytetracycline	646
6501	Aromatic petroleum derivative solvent	190516
6601	Aromatic petroleum distillate, oil, so	13704
6602	Heavy aromatic naphtha	21424
8711	Trimethylbenzyl ammonium resin, polybromide form o	2827
9001	Gamma-1,2,3,4,5,6-hexachlorocyclohexan	857
9801	Prefar	210510
10501	Acarin	15321
12301	Weed - Broom (Use 3 code nos. 012301,	211
12902	Cadmium chloride	25731
12903	Cadmium sebacate	5398
12904	Cadmium succinate	2194
13502	Standard lead arsenate	1604
13802	DSMA	35676
13803	MSMA	834830
13804	OAMA	1083
13805	DDAMA	1083
13806	CMA	4655
14504	Dithane m-45	218083
14505	Dithane S-31 (Use 2 code nos. 014505 a	376763
14506	EBDC, zinc salt of	38386
24401	Bluestone	20234
24403	Cutrine algaecide	296
25902	Cyclohexanone	214
27301	Tersan SP	20208
28901	Radapon	3441
28902	Dalapon, sodium salt of	2231
28903	Dalapon, magnesium salt of	369
29301	VEL 58-CS-11	18715
29802	Banvel M (Use 2 code nos. 029802 and 0	297262
29803	Dicamba, diethanolamine salt of	113
30001	Weed - Broom (Use 3 code nos. 012301,	22546
30010	2,4-Dichlorophenoxyacetic acid, alkanolami	19064
30016	2,4-Dichlorophenoxyacetic acid, diethanola	23998
30019	Banvel M (Use 2 code nos. 029802 and 0	462006
30029	2,4-Dichlorophenoxyacetic acid, N-oleyl-1,	718
30033	2,4-Dichlorophenoxyacetic acid, triethanol	674
30063	2,4-Dichlorophenoxyacetic acid, octyl este	5592
31301	DCNA	11124
31501	MCPP	1096157
31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,	55696
31516	2-(2-Methyl-4-chlorophenoxy)propionic acid,	56054
31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,	89274
32201	Reglone	1620
32501	Di Syston	485
32701	Fensulfothion	23043
34001	Marlate	2199
34201	Diazoben	9146
35509	Tupersan	37967
36001	Karathane	7387
36101	Treflan	4404
38904	Aquathol Plus	2843

CHEM CODE#	CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
39001	Vesadex	251
39103	(Ethylenedinitriloltetraacetic acid, so	401
40501	Citrus oil	6011
42002	EDB	402067
43401	Acti-Aid	10305
47501	Visco 1152 (Use 2 code nos. 047501 and	8015
47802	Bay 39007	94476
52001	Corrosive sublimate	73159
52201	Calomel	146318
56502	PCNB	56005
56801	Sevin	144301
57001	MGK 264	2010
57701	AC 26691	92654
57801	AG-500	512112
57901	Anthon	215975
58201	Synklor	4203
59101	Dowco 179	91885
61601	1,1'-Dimethyl-4,4'-bipyridinium dichloride	2983
63001	Dowicide 7	456909
63501	Pyrethrum Extract (Use 2 code nos. 063	2698
63502	White mineral oil	99670
63503	Amsco 140	487427
66003	PMA	6236
67501	Butacide	1349
68301	Potassium chromate	5398
69001	Pyrethrum Extract (Use 2 code nos. 063	626
69129	Hyamine 2389	10018
69201	4-AP	0
74801	DEF	1317
76406	Sodium phosphate, tribasic	1002
76901	Strychnine alkaloid	0
78701	DCPA	400016
78801	Diallate	5487
79038	Fatty alcohol (100% C10 = n-decanol)	304
79101	ASP 51	754
79801	Arasan	635185
80501	Chlorinated camphene, technical	19891
80803	AAtram (Use 2 code nos. 019101 and 080	3059
80804	G-31435	655
80807	CDT	2004
80811	Anilazine	150262
81301	Merpan	16355
81901	Bravo	1297581
82053	Trichlorophenoxyacetic acid, butoxyethanol ester o	1215
82501	Trichlorophenoxy)propionic acid = silvex	5541
84001	DDVP	11074
84301	Binnell	90867
84701	Banrot (Use 2 code nos. 084701 and 102	2884
86801	PCMX	84330
86802	Socal Aquatic Solvent 3501	152703
86803	Xylene range hydrocarbon solvent	28967
90301	Nudrin	6
99101	Benlate	500912

CHEM CODE		CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
100601		Bay 68138	92080
101101		Bay 94337	4560
101701		RH-315	35062
102001		NF-44	25206
103001		R-7165	515
103301		Orthene	19350
103401		Cleary's 3336	20611
103601		CP-70139	138736
103901		BAS 351 H	18627
105201		NC-6897	393
106201		BTS-27419	4940
106901		Methyl sulfanilylcarbamate = asulam	3339
109001		RP-17623	40099
109401	SRA 12869		374718
109801	P	RP-26019	815694
109901	P	Bayleton	51633
112701	P	PP 581	0
113501	P	CGA-48988	32752
114002		Vistar	6342
169106	Dimethylcocobenzyl ammonium chloride		142

APPENDIX D

PROJECTED REGIONAL USAGE

OF

CHEMICALS (ACTIVE INGREDIENTS)

PROJECTED TOTAL USAGE OF
CHEMICALS (ACTIVE INGREDIENTS) BY REGION

REGION	CHEM CODE#		CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
REGION 1	6501		Aromatic petroleum derivative solvent	8546
1	6601		Aromatic petroleum distillate, oil, so	2465
1	9601		Prefar	11482
1	10501		Acarin	22
1	12902		Cadmium chloride	271
1	13802		DSMA	51
1	14504		Dithane m-45	1062
1	14505		Dithane S-31 (Use 2 code nos. 014505 a	4883
1	27301		Tersan SP	97
1	29601		VEL 58-CS-11	159
1	29802		Banvel M (Use 2 code nos. 029802 and 0	243229
1	30001		Weed - Broom (Use 3 code nos. 012301,	874
1	30019		Banvel M (Use 2 code nos. 029802 and 0	6821
1	31501		MCPP	1638
1	31503		2-(2-Methyl-4-chlorophenoxy)propionic acid,	61
1	31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,	2613
1	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	3305
1	34001		Marlate	117
1	35509		Tupersan	4994
1	36101		Treflan	25
1	43401		Acti-Aid	395
1	52001		Corrosive sublimate	5073
1	52201		Calomel	10146
1	56502		PCNB	832
1	56801		Sevin	6601
1	57701		AC 26691	872
1	57801		AG-500	4305
1	57901		Anthon	3683
1	59101		Dowco 179	6440
1	66003		PMA	152
1	78701		DCPA	3560
1	78801		Diallate	106
1	79801		Arasan	52623
1	80803		AAtram (Use 2 code nos. 019101 and 080	348
1	80811		Anilazine	1502
1	81301		Herban	0
1	81901		Bravo	24875
1	82053		Trichlorophenoxyacetic acid, butoxyethanol ester o	1215
1	84001		DDVP	38
1	84301		Binnell	32
1	86802		Socal Aquatic Solvent 3501	963
1	86803		Xylene range hydrocarbon solvent	515
1	99101		Benlate	1903
1	102001		NF-44	6493
1	103401		Cleary's 3336	2988
1	103601		CP-70139	2783
1	109001		RP-17623	22
1	109401	SRA 12869		14656
1	109801	P	RP-26019	9611
1	109901	P	Bayleton	390
1	113501	P	CGA-48988	525
REGION 2	6501		Aromatic petroleum derivative solvent	12945
2	6601		Aromatic petroleum distillate, oil, so	686

PROJECTED TOTAL USAGE OF
CHEMICALS (ACTIVE INGREDIENTS) BY REGION

REGION	CHEM CODE#		CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
2	9801		Prefar	39465
2	12902		Cadmium chloride	3879
2	12903		Cadmium sebacate	141
2	13802		DSMA	1544
2	13803		MSMA	691
2	14504		Dithane m-45	24248
2	14505		Dithane S-31 (Use 2 code nos. 014505 a	45100
2	14506		EBDC, zinc salt of	33533
2	24401		Bluestone	104
2	27301		Tersan SP	2732
2	29801		VEL 58-CS-11	1058
2	29802		Bamvel M (Use 2 code nos. 029802 and 0	4210
2	30001		Weed - Broom (Use 3 code nos. 012301,	13264
2	30010		2,4-Dichlorophenoxyacetic acid, alkanolami	436
2	30016		2,4-Dichlorophenoxyacetic acid, diethanola	0
2	30019		Bamvel M (Use 2 code nos. 029802 and 0	25872
2	30033		2,4-Dichlorophenoxyacetic acid, triethanol	674
2	31501		MCPP	20581
2	31503		2-(2-Methyl-4-chlorophenoxy)propionic acid,	13849
2	31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,	0
2	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	6253
2	32501		Di Systoh	475
2	34001		Marlate	846
2	35509		Tupersan	14445
2	36101		Treflan	383
2	38904		Amuathol Plus	2843
2	39001		Vegadex	251
2	[illegible]		Acti-Aid	1904
2	5200.		Corrosive sublimate	528
2	52201		Calomel	1056
2	56502		PCNB	17751
2	56801		Sevin	11236
2	57701		AC 26691	3024
2	57801		AG-500	33011
2	57901		Anthon	43409
2	59101		Dowco 179	12946
2	68301		Potassium chromate	141
2	78701		DCPA	250106
2	78801		Diallate	132
2	79101	ASP 51		36
2	79801		Arasan	180670
2	80811		Amilazine	19817
2	81301		Maneb	1158
2	81901		Bravo	79053
2	84301		Bimmell	6636
2	86802		Socal Aquatic Solvent 3501	11022
2	86803		Xylene range hydrocarbon solvent	19903
2	99101		Benlate	20307
2	101701		RH-315	53
2	102001		NF-44	8268
2	103401		Cleary's 3336	2169
2	103601		DP-70139	7855
2	103901		BAS 351 H	214

PROJECTED TOTAL USAGE OF
CHEMICALS (ACTIVE INGREDIENTS) BY REGION

REGION	CHEM CODE#		CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
2	105201		NC-6897	278
2	109001		RP-17623	1136
2	109401	SRA 12869		86150
2	109801	P	RP-26019	204079
2	109901	P	Bayleton	5636
2	113501	P	CGA-48988	10217
2	114002		Vistar	5465
REGION 3	4401		Cytrol	58
3	6501		Aromatic petroleum derivative solvent	20835
3	6601		Aromatic petroleum distillate, oil, so	3539
3	6602		Heavy aromatic naphtha	9141
3	9801		Prefar	45560
3	13802		DSMA	15752
3	13803		MSMA	20099
3	14504		Dithane m-45	34491
3	14505		Dithane S-31 (Use 2 code nos. 014505 a	57023
3	14506		EBDC, zinc salt of	4853
3	24401		Bluestone	3262
3	27301		Tersan SP	2309
3	29801		VEL 58-CS-11	2175
3	29802		Banvel M (Use 2 code nos. 029802 and 0	3028
3	30001		Weed - Broom (Use 3 code nos. 012301,	68
3	30016		2,4-Dichlorophenoxyacetic acid, diethanola	7606
3	30019		Banvel M (Use 2 code nos. 029802 and 0	27585
3	31501		MCPP	1032966
3	31503		2-(2-Methyl-4-chlorophenoxy)propionic acid,	5641
3	31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,	12879
3	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	6443
3	32201		Reglone	1163
3	32701		Fensulfothion	15340
3	35509		Tupersan	3592
3	36101		Treflan	1895
3	43401		Acti-Aid	241
3	52001		Corrosive sublimate	204
3	52201		Calomel	409
3	56502		PCNB	297
3	56801		Sevin	21886
3	57801		AG-500	36930
3	57901		Anthon	22909
3	59101		Dowco 179	14661
3	61601		1,1'-Dimethyl-4,4'-bipyridinium dichloride	1293
3	66003		PMA	1209
3	74601	DEF		1317
3	78701		DCPA	18796
3	78801		Diallate	284
3	79801		Arasan	28795
3	80807		CDT	273
3	80811		Anilazine	108054
3	81901		Bravo	111105
3	84001		DDVP	284
3	84301		Binnell	16244
3	84701		Banrot (Use 2 code nos. 084701 and 102	376
3	86802		Socal Aquatic Solvent 3501	19005

PROJECTED TOTAL USAGE OF
CHEMICALS (ACTIVE INGREDIENTS) BY REGION

REGION	CHEM CODE#		CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
3	86803		Xylene range hydrocarbon solvent	1083
3	99101		Benlate	25579
3	102001		NF-44	833
3	103301		Orthene	3
3	103601		CP-70139	9340
3	103901		BAS 351 H	654
3	109001		RP-17623	15444
3	109401	SRA 12869		63190
3	109801	P	RP-26019	62499
3	109901	P	Bayleton	6603
3	113501	P	CGA-48988	12271
3	114002		Vistar	397
REGION 4	6501		Aromatic petroleum derivative solvent	103001
4	6601		Aromatic petroleum distillate, oil, so	5250
4	8711	Trimethylbenzyl ammonium resin, polybromide form o		2827
4	9801		Prefar	48061
4	10501		Acarin	131
4	12902		Cadmium chloride	299
4	13802		DSMA	16323
4	13803		MSMA	652450
4	14504		Dithane m-45	109612
4	14505		Dithane S-31 (Use 2 code nos. 014505 a	26163
4	24401		Bluestone	16363
4	24403		Cutrine algaecide	76
4	27301		Tersan SP	4019
4	28901	Radapon		3441
4	28902		Dalapon, sodium salt of	1230
4	28903		Dalapon, magnesium salt of	204
4	29801		VEL 58-CS-11	54
4	29802		Banvel M (Use 2 code nos. 029802 and 0	6875
4	30010		2,4-Dichlorophenoxyacetic acid, alkanolami	6709
4	30016		2,4-Dichlorophenoxyacetic acid, diethanola	3034
4	30019		Banvel M (Use 2 code nos. 029802 and 0	38102
4	31501		MCPP	1218
4	31503		2-(2-Methyl-4-chlorophenoxy)propionic acid,	6379
4	31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,	3999
4	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	9529
4	32701		Fensulfothion	5345
4	34001		Marlate	1237
4	34201		Diazoben	9146
4	35509		Tupersan	7937
4	36101		Treflan	221
4	39103		(Ethylenedinitrilo)tetraacetic acid, so	401
4	40501		Citrus oil	6011
4	42002		EDB	402067
4	43401		Acti-Aid	102
4	47501		Visco 1152 (Use 2 code nos. 047501 and	8015
4	47802		Bay 39007	94428
4	52001		Corrosive sublimate	627
4	52201		Calomel	1254
4	56502		PCNB	6330
4	56801		Sevin	61033
4	57001		MGK 264	2010

REGION	CHEM CODE#		CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
4	57701		AC 26691	14354
4	57801		AG-500	297849
4	57901		Anthon	19157
4	58201		Synklor	206
4	59101		Dowco 179	43044
4	63501		Pyrethrum Extract (Use 2 code nos. 063	87
4	63503		Amsco 140	475994
4	66003		PMA	85
4	67501		Butacide	1208
4	69001		Pyrethrum Extract (Use 2 code nos. 063	602
4	69129		Hyamine 2389	10018
4	69201		4-AP	0
4	76406		Sodium phosphate, tribasic	1002
4	78701		DCPA	20083
4	78801		Diallate	4580
4	79101	ASP 51		178
4	79801		Arasan	46795
4	80501		Chlorinated camphene, technical	19891
4	80803		AAtram (Use 2 code nos. 019101 and 080	2711
4	80807		CDT	652
4	80811		Anilazine	6256
4	81301		Herpan	3069
4	81901		Bravo	120443
4	82501	Trichlorophenoxy)propionic acid = silvex		5541
4	84001		DDVP	10617
4	84301		Binnell	14119
4	84701		Banrot (Use 2 code nos. 084701 and 102	1304
4	86801		PCMX	84330
4	86802		Socal Aquatic Solvent 3501	91979
4	86803		Xylene range hydrocarbon solvent	2476
4	99101		Benlate	17483
4	100601		Bay 68138	90034
4	101101		Bay 94337	4287
4	101701		RH-315	30221
4	102001		NF-44	1324
4	103301		Orthene	18734
4	103401		Cleary's 3336	818
4	103601		CP-70139	43621
4	103901		BAS 351 H	17339
4	105201		NC-6897	34
4	106901		Methyl sulfanilylcarbamate = asulam	3339
4	109001		RP-17623	8304
4	109401	SRA 12869		108505
4	109801	P	RP-26019	22392
4	109901	P	Barleton	8953
4	112701	P	PP 581	0
4	113501	P	CGA-48988	4753
4	169108	Dimethylcocobenzyl ammonium chloride		85
REGION 5	6321		Calcium oxytetracycline	646
5	6501		Aromatic petroleum derivative solvent	7617
5	6601		Aromatic petroleum distillate, oil, so	790
5	6602		Heavy aromatic naphtha	1236
5	9001		Gamma-1,2,3,4,5,6-hexachlorocyclohexan	357

PROJECTED TOTAL USAGE OF
CHEMICALS (ACTIVE INGREDIENTS) BY REGION

REGION	CHEM CODE#		CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
5	9301		Prefar	16866
5	10501		Acarin	14933
5	12902		Cadmium chloride	17704
5	12903		Cadmium sebacate	5091
5	12904		Cadmium succinate	370
5	13502		Standard lead arsenate	1604
5	13803		MSMA	1374
5	13804		OAMA	818
5	13805		DDAMA	818
5	14504		Dithane m-45	9847
5	14505		Dithane S-31 (Use 2 code nos. 014505 a	228542
5	24403		Cutrine algaecide	129
5	25902		Cyclohexanone	214
5	27301		Tersan SP	9260
5	29801		VEL 58-CS-11	7008
5	29802		Banvel M (Use 2 code nos. 029802 and 0	20614
5	29803		Dicamba, diethanolamine salt of	113
5	30001		Weed - Broom (Use 3 code nos. 012301,	3107
5	30110		2,4-Dichlorophenoxyacetic acid, alkanolami	8234
5	30116		2,4-Dichlorophenoxyacetic acid, diethanola	9984
5	30119		Banvel M (Use 2 code nos. 029802 and 0	138415
5	30129		2,4-Dichlorophenoxyacetic acid, N-oleyl-1,	661
5	30063		2,4-Dichlorophenoxyacetic acid, octyl este	3720
5	31501		MCPP	35132
5	31503		2-(2-Methyl-4-chlorophenoxy)propionic acid,	2523
5	31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,	27466
5	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	27771
5	32201		Reglone	49
5	35509		Tupersan	1225
5	36001		Karathane	7387
5	36101		Treflan	290
5	43401		Acti-Aid	7173
5	47802		Bay 39007	48
5	52001		Corrosive sublimate	63551
5	52201		Calomel	127101
5	56502		PCNB	21933
5	56801		Sevin	24436
5	57701		AC 26691	4078
5	57801		AG-500	76608
5	57901		Anthon	93102
5	56201		Synklor	3238
5	59101		Douco 179	3447
5	63001		Dowicide 7	456617
5	63501		Pyrethrum Extract (Use 2 code nos. 063	2412
5	63503		Amsco 140	10435
5	66003		PMA	3680
5	68301		Potassium chromate	5091
5	76901		Strychnine alkaloid	0
5	78701		DCPA	83946
5	78801		Diallate	386
5	79101	ASP 501		371
5	79801		Arasan	244967
5	80811		Anilazine	7008

PROJECTED TOTAL USAGE OF
CHEMICALS (ACTIVE INGREDIENTS) BY REGION

REGION	CHEM CODE#		CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
5	81901		Bravo	888342
5	84001		DDVP	40
5	84301		Binnell	20633
5	84701		Banrot (Use 2 code nos. 084701 and 102	982
5	86802		Socal Aquatic Solvent 3501	19104
5	86803		Xylene range hydrocarbon solvent	2968
5	90301	Nudrin		6
5	99101		Benlate	414898
5	100601		Bay 68138	2047
5	102001		NF-44	4996
5	103301		Orthene	614
5	103401		Cleary's 3336	7165
5	103601		CP-70139	16138
5	103901		BAS 351 H	189
5	106201		BTS-27419	4940
5	109001		RP-17623	756
5	109401	SRA 12869		67641
5	109601	P	RP-26019	490182
5	109901	P	Bayleton	28474
5	113501	P	CGA-48988	3924
5	114002		Vistar	480
5	169108	Dimethylcocobenzyl ammonium chloride		57
REGION 6	6501		Aromatic petroleum derivative solvent	10982
6	9801		Prefar	3264
6	13802		DSMA	1515
6	13803		MSMA	141925
6	13806		CMA	4855
6	14504		Dithane m-45	23954
6	14505		Dithane S-31 (Use 2 code nos. 014505 a	2012
6	27301		Tersan SP	98
6	29801		VEL 58-CS-11	4038
6	29802		Banvel M (Use 2 code nos. 029802 and 0	3622
6	30010	2,4-Dichlorophenoxyacetic acid, alkanolami		1421
6	30019		Banvel M (Use 2 code nos. 029802 and 0	16280
6	31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,		3262
6	32201		Reglone	228
6	32701		Fensulfothion	2358
6	43401		Acti-Aid	67
6	52001		Corrosive sublimate	236
6	52201		Calomel	472
6	56801		Sevin	8355
6	57701		AC 26691	49796
6	57801		AG-500	19308
6	57901		Anthon	8165
6	59101		Dowco 179	6724
6	61601	1,1'-Dimethyl-4,4'-bipyridinium dichloride		1524
6	63501		Pyrethrum Extract (Use 2 code nos. 063	199
6	63503		Amsco 140	447
6	67501		Butacide	99
6	69001		Pyrethrum Extract (Use 2 code nos. 063	20
6	78701		DCPA	669
6	79101	ASP 51		57
6	79801		Arasan	13038

PROJECTED TOTAL USAGE OF
CHEMICALS (ACTIVE INGREDIENTS) BY REGION

REGION	CHEM CODE#		CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
6	80304	G-31435		655
6	80807		CDT	251
6	81301		Merpan	7073
6	81901		Bravo	15180
6	84301		Binnell	18360
6	84701		Banrot (Use 2 code nos. 084701 and 102	3
6	86802		Socal Aquatic Solvent 3501	6915
6	86803		Xylene range hydrocarbon solvent	1984
6	99101		Benlate	220
6	100601		Bay 68138	0
6	101101		Bay 94337	273
6	101701		RH-315	4464
6	103601		CP-70139	27456
6	103901		BAS 351 H	232
6	105201		NC-6897	31
6	109001		RP-17623	12989
6	109401	SRA 12869		13354
6	109801	P	RP-26019	7078
6	113501	P	CGA-43938	16
REGION 7	6501		Aromatic petroleum derivative solvent	6774
7	6602		Heavy aromatic naphtha	1243
7	9301		Prefar	34007
7	10501		Acarin	36
7	12902		Cadmium chloride	2567
7	12903		Cadmium sebacate	166
7	12904		Cadmium succinate	1492
7	13803		MSMA	17477
7	13804		DAMA	265
7	13805		DDAMA	265
7	14504		Dithane m-45	1751
7	14505		Dithane S-31 (Use 2 code nos. 014505 a	12123
7	27301		Tersan SP	310
7	29802		Banvel M (Use 2 code nos. 029802 and 0	8650
7	30001		Weed - Broom (Use 3 code nos. 012301,	28
7	30019		Banvel M (Use 2 code nos. 029802 and 0	115613
7	30029		2,4-Dichlorophenoxyacetic acid, N-oleyl-1,	57
7	31501		MCPP	4623
7	31503		2-(2-Methyl-4-chlorophenoxy)propionic acid,	16087
7	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	20425
7	35509		Tupersan	4768
7	36101		Treflan	1476
7	43401		Acti-Aid	106
7	52001		Corrosive sublimate	378
7	52201		Calomel	756
7	56801		Sevin	8731
7	57701		AC 26691	3844
7	57801		AG-500	10543
7	57901		Anthon	1828
7	58201		Synklor	75
7	59101		Dowco 179	2260
7	61601		1,1'-Dimethyl-4,4'-bipyridinium dichloride	161
7	63503		Amsco 140	221
7	66003		PMA	67

PROJECTED TOTAL USAGE OF
CHEMICALS (ACTIVE INGREDIENTS) BY REGION

REGION	CHEM CODE#		CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
7	68301		Potassium chromate	165.8
7	78701		DCPA	21365.5
7	79801		Arasan	31721.6
7	80811		Anilazine	1816.5
7	81901		Bravo	48889.5
7	84001		DDVP	38.7
7	84301		Binnell	8579.3
7	86802		Socal Aquatic Solvent 3501	574.6
7	86803		Xylene range hydrocarbon solvent	14.5
7	99101		Benlate	10171.7
7	102001		NF-44	1243.7
7	103401		Cleary's 3336	2222.4
7	103601		CP-70139	5582.8
7	109001		RP-17623	1444.5
7	109401	SRA 12869		21222.5
7	109801	P	RP-26019	15523.1
7	109901	P	Bayleton	1260.3
7	113501	P	CGA-48988	1040.5
REGION 8	6501		Aromatic petroleum derivative solvent	8627.4
8	9801		Prefar	1892.4
8	10501		Acarin	92.2
8	13802		DSMA	490.4
8	14505		Dithane S-31 (Use 2 code nos. 014505 a	668.6
8	27301		Tersan SP	19.5
8	29601		VEL 58-CS-11	1333.8
8	29802		Banvel M (Use 2 code nos. 029802 and 0	3937.8
8	30010		2,4-Dichlorophenoxyacetic acid, alkanolami	1550.0
8	30019		Banvel M (Use 2 code nos. 029802 and 0	29467.2
8	30063		2,4-Dichlorophenoxyacetic acid, octyl este	1573.7
8	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	1822.7
8	36101		Treflan	62.3
8	43401		Acti-Aid	46.7
8	52001		Corrosive sublimate	2562.0
8	52201		Calomel	5124.0
8	56801		Sevin	428.6
8	57701		AC 26691	308.5
8	57801		AG-500	9181.7
8	59101		Dowco 179	284.5
8	63503		Amsco 140	330.1
8	66003		PMA	387.0
8	67501		Butacide	41.8
8	69001		Pyrethrum Extract (Use 2 code nos. 063	4.2
8	78701		DCPA	855.4
8	79801		Arasan	7319.8
8	81301		Merpan	54.5
8	81901		Bravo	350.1
8	84301		Binnell	5178.9
8	86802		Socal Aquatic Solvent 3501	363.8
8	99101		Benlate	6156.6
8	102001		NF-44	214.9
8	103601		CP-70139	5243.2
8	109801	P	RP-26019	200.5
REGION 9	6501		Aromatic petroleum derivative solvent	10701.1

REGION	CHEM CODE#	CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
9	6601	Aromatic petroleum distillate, oil, so	974.6
9	6602	Heavy aromatic naphtha	9753.8
9	9801	Prefar	8055.7
9	10501	Acarin	106.3
9	12301	Weed - Broom (Use 3 code nos. 012301,	211.5
9	12902	Cadmium chloride	1011.4
9	12904	Cadmium succinate	331.1
9	13803	MSMA	813.3
9	14505	Dithane S-31 (Use 2 code nos. 014505 a	243.3
9	24403	Cutrine algaecide	60.3
9	28902	Dalapon, sodium salt of	1000.3
9	28903	Dalapon, magnesium salt of	165.6
9	29801	VEL 58-CS-11	1144.8
9	29802	Banvel M (Use 2 code nos. 029802 and 0	606.7
9	30001	Weed - Broom (Use 3 code nos. 012301,	145.6
9	30010	2,4-Dichlorophenoxyacetic acid, alkanolami	714.6
9	30019	Banvel M (Use 2 code nos. 029802 and 0	9688.3
9	31301	DCNA	11124.5
9	31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,	11156.2
9	31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,	3334.6
9	32201	Reglone	181.0
9	35509	Tupersan	1006.7
9	36101	Treflan	51.7
9	43401	Acti-Aid	223.7
9	56502	PCNB	2046.5
9	56801	Sevin	1255.5
9	57701	AC 26691	11274.2
9	57801	AG-500	21640.4
9	57901	Anthon	1931.5
9	59101	Dowco 179	1818.3
9	63001	Dowicide 7	291.5
9	63502	White mineral oil	99670.4
9	66003	PMA	144.5
9	78701	DCPA	573.1
9	79038	Fatty alcohol (100% C10 = n-decanol)	303.6
9	79801	Arasan	26593.3
9	80807	CDT	827.8
9	80811	Anilazine	5808.4
9	81901	Bravo	8843.6
9	84001	DDVP	56.3
9	84301	Binnell	1083.4
9	84701	Banrot (Use 2 code nos. 084701 and 102	219.4
9	86802	Socal Aquatic Solvent 3501	2240.9
9	86803	Xylene range hydrocarbon solvent	22.2
9	99101	Benlate	3035.3
9	101701	RH-315	318.9
9	102001	NF-44	1832.9
9	103401	Cleary's 3336	275.9
9	103601	CP-70139	17730.5
9	109801	RP-26019	1259.0
REGION 10	4401	Cytrol	72.5
10	6501	Aromatic petroleum derivative solvent	487.7
10	9801	Prefar	1857.5

PROJECTED TOTAL USAGE OF
CHEMICALS (ACTIVE INGREDIENTS) BY REGION

REGION	CHEM CODE#		CHEMICAL NAME (ACTIVE INGREDIENT)	TOTAL LBS.
10	14504		Dithane m-45	13098.2
10	24403		Cutrine algaecide	30.9
10	27301		Tersan SP	1363.6
10	29801		VEL 58-CS-11	1743.7
10	29802		Banvel M (Use 2 code nos. 029802 and 0	2490.1
10	30001		Weed - Broom (Use 3 code nos. 012301,	5059.2
10	30016		2,4-Dichlorophenoxyacetic acid, diethanola	3374.9
10	30019		Banvel M (Use 2 code nos. 029802 and 0	4161.4
10	30063		2,4-Dichlorophenoxyacetic acid, octyl este	298.0
10	31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,	9097.6
10	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	4631.1
10	32501		Di Syston	9.9
10	43401		Acti-Aid	47.8
10	56502		PCNB	6316.1
10	56801		Sevin	334.1
10	57701		AC 26691	103.1
10	57801		AG-500	2736.3
10	57901		Anthon	329.9
10	59101		Douco 179	259.5
10	66003		PMA	512.0
10	76701		DCPA	61.9
10	79101	ASP 51		112.4
10	79801		Arasan	2662.7
10	86802		Socal Aquatic Solvent 3501	536.6
10	99101		Benlate	1157.7
10	102001		NF-44	0.0
10	103001		R-7165	515.3
10	103401		Cleary's 3336	5853.6
10	103601		CP-70139	2935.1
10	109001		RP-17623	3.4
10	109801	P	RP-26019	2870.4
10	109901	P	Bayleton	117.1

MAND ?

APPENDIX E

PROJECTED APPLICATION DENSITIES

OF

CHEMICALS (LBS. A.I. PER ACRE)

M CODE	CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
4401	Cytrol	130	30211	0.00431
6321	Calcium oxytetracycline	646	2514	0.25699
6501	Aromatic petroleum derivative solvent	190516	569972	0.33426
6601	Aromatic petroleum distillate, oil, so	13704	53832	0.25457
6602	Heavy aromatic naphtha	21424	38146	0.56162
8711	Trimethylbenzyl ammonium resin, polybromide form o	2827	4812	0.58745
9001	Gamma-1,2,3,4,5,6-hexachlorocyclohexan	857	14973	0.05725
9801	Prefar	210510	453171	0.46453
10501	Acarin	15321	41745	0.36700
12301	Weed - Broom (Use 3 code nos. 012301,	211	.	.
12902	Cadmium chloride	25731	42614	0.60381
12903	Cadmium sebacate	5398	26022	0.20744
12904	Cadmium succinate	2194	5606	0.39139
13502	Standard lead arsenate	1604	9346	0.17168
13802	DSMA	35676	120375	0.29637
13803	MSMA	834830	485041	1.72115
13804	OAMA	1083	15341	0.07063
13805	DDAMA	1083	15341	0.07063
13806	CMA	4855	24505	0.19812
14504	Dithane m-45	218083	369207	0.59068
14505	Dithane S-31 (Use 2 code nos. 014505 a	376763	255277	1.47590
14506	EBDC, zinc salt of	38386	37822	1.01492
24401	Bluestone	20234	11113	1.82072
24403	Cutrine algaecide	296	23268	0.01273
25902	Cyclohexanone	214	14973	0.01431
27301	Tersan SP	20208	157573	0.12824
28901	Radapon	3441	21211	0.16224
28902	Dalapon, sodium salt of	2231	11929	0.18699
28903	Dalapon, magnesium salt of	369	11929	0.03095
29301	VEL 58-CS-11	18715	130114	0.14383
29802	Banvel M (Use 2 code nos. 029802 and 0	297262	934919	0.31796
29803	Dicamba, diethanolamine salt of	113	3760	0.03015
30001	Weed - Broom (Use 3 code nos. 012301,	22546	50247	0.44870
30010	2,4-Dichlorophenoxyacetic acid, alkanolami	19064	54933	0.34703
30016	2,4-Dichlorophenoxyacetic acid, diethanola	23998	76942	0.31190
30019	Banvel M (Use 2 code nos. 029802 and 0	462006	1254185	0.36837
30029	2,4-Dichlorophenoxyacetic acid, N-oleyl-1,	718	5641	0.12721
30033	2,4-Dichlorophenoxyacetic acid, triethanol	674	.	.
30063	2,4-Dichlorophenoxyacetic acid, octyl este	5592	13892	0.40254
31301	DCNA	11124	37255	0.29861
31501	MCPP	1096157	136608	8.02410
31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,	55696	152615	0.36495
31516	2-(2-Methyl-4-chlorophenoxy)propionic acid,	56054	128441	0.43642
31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,	89274	667334	0.13378
32201	Reglone	1620	15290	0.10597
32501	Di Syston	485	11685	0.04149
32701	Fensulfothion	23043	23652	0.97425
34001	Marlate	2199	51735	0.04251
34201	Diazoben	9146	31085	0.29423
35509	Tupersan	37967	184472	0.20581
36001	Karathane	7387	2763	2.67383
36101	Treflan	4404	75305	0.05848
38904	Aquathol Plus	2843	22798	0.12469

CHEM CODE	CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
39001	Vegadex	251	13193	0.01900
39103	(Ethylenedinitrilo)tetraacetic acid, so	401	45082	0.0089
40501	Citrus oil	6011	45082	0.1333
42002	EDB	402067	34152	11.7730
43401	Acti-Aid	10305	547457	0.0188
47501	Visco 1152 (Use 2 code nos. 047501 and	8015	45082	0.1778
47802	Bay 39007	94476	105764	0.8933
52001	Corrosive sublimate	73159	174105	0.4202
52201	Calomel	146318	174105	0.8404
56502	PCNB	56005	121847	0.4596
56801	Sevin	144301	489094	0.2950
57001	MGK 264	2010	24854	0.0809
57701	AC 26691	92654	198759	0.4662
57801	AG-500	512112	805923	0.6354
57901	Anthon	215975	369651	0.5843
58201	Synklor	4203	26399	0.1592
59101	Dowco 179	91885	711814	0.1291
61601	1,1'-Dimethyl-4,4'-bipyridinium dichloride	2983	34372	0.0868
63001	Dowicide 7	456909	32019	14.2700
63501	Pyrethrum Extract (Use 2 code nos. 063	2698	29492	0.0915
63502	White mineral oil	99670	9111	10.9401
63503	Amsco 140	487427	144038	3.3828
66003	PMA	6236	171737	0.0363
67501	Butacide	1349	47146	0.0286
68301	Potassium chromate	5398	26022	0.2074
69001	Pyrethrum Extract (Use 2 code nos. 063	626	47146	0.0133
69129	Hyamine 2389	10018	45082	0.2222
69201	4-AP	0	19667	0.0000
74901	DEF	1317	2760	0.4770
76406	Sodium phosphate, tribasic	1002	45082	0.0222
76901	Strychnine alkaloid	0	8868	0.0000
78701	DCPA	400016	192775	2.0750
78801	Diallate	5487	17876	0.3069
79038	Fatty alcohol (100% C10 = n-decanol)	304	9111	0.0333
79101	ASP 51	754	26344	0.0286
79801	Arasan	635185	810623	0.7836
80501	Chlorinated camphene, technical	19891	46807	0.4250
80803	AAtram (Use 2 code nos. 019101 and 080	3059	27164	0.1126
80804	G-31435	655	28607	0.0229
80807	CDT	2004	38116	0.0526
80811	Anilazine	150262	193294	0.7578
81301	Merpan	16355	55073	0.2970
81901	Bravo	1297581	860825	1.5074
82053	Trichlorophenoxyacetic acid, butoxyethanol ester o	1215	3761	0.3231
82501	Trichlorophenoxy)propionic acid = silvex	5541	1561	3.5493
84001	DDVP	11074	109653	0.1010
84301	Binnell	90867	344355	0.2639
84701	Banrot (Use 2 code nos. 084701 and 102	2884	44839	0.0643
86801	PCMX	84330	39130	2.1551
86802	Socal Aquatic Solvent 3501	152703	432857	0.3528
86803	Xylene range hydrocarbon solvent	28967	86390	0.3353
90301	Nudrin	6	2232	0.0026
99101	Benlate	500912	655052	0.7647

CODE		CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
100601		Bay 68138	92080	85268	1.0799
101101		Bay 94337	4560	73934	0.0617
101701		RH-315	35062	173316	0.20230
102001		NF-44	25206	156509	0.16105
103001		R-7165	515	33336	0.01546
103301		Orthene	19350	25850	0.74857
103401		Cleary's 3336	20611	59505	0.34637
103601		CP-70139	138736	935804	0.14825
103901		BAS 351 H	18627	150491	0.12378
105201		NC-6897	393	32331	0.01216
106201		BTS-27419	4940	20092	0.24585
106901		Methyl sulfanilylcarbamate = asulam	3339	32629	0.10233
109001		RP-17623	40099	269687	0.14869
109401	SRA 12869		374718	337173	1.11135
109301	P	RP-26019	815694	730874	1.11605
109901	P	Bayleton	51633	231038	0.22348
112701	P	PP 581	0	23600	0.00000
113501	P	CGA-48988	32752	207983	0.15747
114002		Vistar	6342	24591	0.25792
169108	Dimethylcocobenzyl ammonium chloride		142	5629	0.02522
		NATIONAL TOTAL	12327544	19169583	

APPENDIX F

PROJECTED APPLICATION DENSITIES

OF

CHEMICALS BY REGION

REGION=1

EM CODE		CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
6501		Aromatic petroleum derivative solvent	8546	52733	0.16206
6601		Aromatic petroleum distillate, oil, so	2465	12968	0.19011
9301		Prefar	11482	33652	0.34120
10501		Acarin	22	14654	0.00147
12902		Cadmium chloride	271	3761	0.07217
13802		DSMA	51	1832	0.02786
14504		Dithane m-45	1082	4918	0.22006
14505		Dithane S-31 (Use 2 code nos. 014505 a	4883	24759	0.19721
27301		Tersan SP	97	2937	0.03312
29801		VEL 58-CS-11	159	9489	0.01676
29802		Banvel M (Use 2 code nos. 029802 and 0	243229	46126	5.27310
30001		Weed - Broom (Use 3 code nos. 012301,	874	10576	0.08263
30019		Banvel M (Use 2 code nos. 029802 and 0	6821	55339	0.12315
31501		MCPP	1638	25497	0.06423
31503		2-(2-Methyl-4-chlorophenoxy)propionic acid,	61	3340	0.01821
31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,	2613	6484	0.40301
31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	3805	43278	0.08791
34001		Marlate	117	18383	0.00637
35509		Tupersan	4994	23163	0.21561
36101		Treflan	25	5366	0.00469
43401		Acti-Aid	395	32144	0.01228
52001		Corrosive sublimate	5073	3910	1.29758
52201		Calomel	10146	3910	2.59516
56502		PCNB	832	6078	0.13686
56801		Sevin	6601	48810	0.13524
57701		AC 26691	872	22144	0.03937
57801		AG-500	4305	26100	0.16495
57901		Anthon	3683	15971	0.23061
59101		Douco 179	6440	68760	0.09366
66003		PMA	152	4918	0.03084
78701		DCPA	3560	24182	0.14722
78801		Diallate	106	3340	0.03163
79801		Arasan	52623	38449	1.36867
80803		AAtram (Use 2 code nos. 019101 and 080	348	2937	0.11862
80811		Anilazine	1502	9797	0.15327
81301		Merpan	0	2937	0.00000
81901		Bravo	24875	65177	0.38165
82053		Trichlorophenoxyacetic acid, butoxyethanol ester o	1215	3761	0.32315
84001		DDVP	38	4918	0.00764
84301		Binnell	32	3761	0.00862
86802		Socal Aquatic Solvent 3501	963	18512	0.05200
86803		Xylene range hydrocarbon solvent	515	.	.
99101		Benlate	1903	22032	0.08636
102001		NF-44	6493	13797	0.34542
103401		Cleary's 3336	2088	7901	0.26428
103601		CP-70139	2763	32403	0.08528
109001		RP-17623	22	4122	0.00524
109401	SRA 12869		14656	8828	1.66018
109801	P	RP-26019	9611	63190	0.15210
109901	P	Bayleton	390	8049	0.04846
113501	P	CGA-46988	525	6750	0.07775
		REGION TOTAL	455981	981892	

REGION=2

CHEM CODE		CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
6501		Aromatic petroleum derivative solvent	12945	78359.4	0.16520
6601		Aromatic petroleum distillate, oil, so	686	6600.1	0.10400
9801		Prefar	39465	50446.1	0.78232
12902		Cadmium chloride	3879	11533.3	0.33487
12903		Cadmium sebacate	141	3535.8	0.03980
13802		DSMA	1544	22750.8	0.06787
13803		MSMA	691	23166.7	0.02985
14504		Dithane m-45	24248	28401.2	0.85376
14505		Dithane S-31 (Use 2 code nos. 014505 a	45100	26580.3	1.69675
14506		EBDC, zinc salt of	33533	15805.2	2.12165
24401		Bluestone	104	3064.3	0.03410
27301		Tersan SP	2732	10914.4	0.25032
29801		VEL 58-CS-11	1058	6417.6	0.16485
29802		Banvel M (Use 2 code nos. 029802 and 0	4210	79198.2	0.05316
30001		Weed - Broom (Use 3 code nos. 012301,	13264	9294.0	1.42720
30010		2,4-Dichlorophenoxyacetic acid, alkanolami	436	4934.5	0.08838
30016		2,4-Dichlorophenoxyacetic acid, diethanola	0	1319.3	0.00000
30019		Banvel M (Use 2 code nos. 029802 and 0	25872	71767.9	0.36050
30033		2,4-Dichlorophenoxyacetic acid, triethanol	674	.	.
31501		MCPP	20581	29532.0	0.69689
31503		2-(2-Methyl-4-chlorophenoxy)propionic acid,	13849	28161.4	0.49178
31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,	0	4855.1	0.00000
31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	8253	39862.3	0.20703
32501		Di Syston	475	6128.7	0.07750
34001		Marlate	846	34321.9	0.02464
35509		Tupersan	14445	43969.1	0.32837
36101		Treflan	383	5705.3	0.06707
39904		Aquathol Plus	2843	22797.8	0.12469
39001		Vegadex	251	13193.2	0.01900
43401		Acti-Aid	1904	80646.3	0.02360
52001		Corrosive sublimate	528	23456.3	0.02251
52201		Calomel	1056	23456.3	0.04501
56502		PCNB	17751	36155.2	0.49098
56801		Sevin	11236	55573.6	0.20219
57701		AC 26691	3024	23934.3	0.12634
57801		AG-500	33011	45471.3	0.72597
57901		Anthon	48409	56069.6	0.86306
59101		Dowco 179	12946	73370.0	0.17645
68301		Potassium chromate	141	3535.8	0.03980
78701		DCPA	250106	39358.7	6.35454
78801		Diallate	132	.	.
79101	ASP 51		36	2488.1	0.01430
79801		Arasan	180670	80549.7	2.24296
80911		Anilazine	19317	62489.9	0.31713
81301		Merpan	1158	11583.3	0.10000

REGION=2

CHEM CODE		CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
31501		Bravo	79053	91927	0.85996
34301		Binnell	663	37693	0.17606
86802		Socal Aquatic Solvent 3501	11022	41178	0.26766
86803		Xylene range hydrocarbon solvent	19903	26195	0.75979
99101		Benlate	20307	77097	0.26340
101701		RH-315	58	2468	0.02328
102001		NF-44	8268	30598	0.27021
103401		Cleary's 3336	2169	14539	0.14916
103601		CP-70139	785	7544	0.10412
103901		BAS 351 H	214	21151	0.01010
105201		NC-6897	278	11583	0.02400
109001		RP-17623	1136	21448	0.05297
109401	SRA 12869		8615	27943	3.08306
109801	P	RP-26019	20407	6746	3.02485
109901	P	Bayleton	583	4070	0.14338
113501	P	CGA-48988	10217	31533	0.32404
114002		Vistar	546	2917	0.18732
		REGION TOTAL	132307	1949002	

REGION=3

CHEM CODE		CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
4401		Cytrol	58	26362	0.0022
6501		Aromatic petroleum derivative solvent	20835	47366	0.4399
6601		Aromatic petroleum distillate, oil, so	353	14822	0.2386
6602		Heavy aromatic naphtha	914	12387	0.7379
9601		Prefar	4556	149173	0.3054
13802		DSMA	1575	53165	0.2963
13803		MSMA	2009	33133	0.6066
14504		Dithane m-45	3449	44647	0.7725
14505		Dithane S-31 (Use 2 code nos. 014505 a	5702	58962	0.9671
14506		EBDC, zinc salt of	485	22017	0.2204
24401		Bluestone	326	37510	0.8609
27301		Tersan SP	230	19307	0.1196
29801		VEL 58-CS-11	217	35198	0.0618
29802		Banvel H (Use 2 code nos. 029802 and 0	302	72879	0.0415
30001		Weed - Broom (Use 3 code nos. 012301,	6	9883	0.0068
30016		2,4-Dichlorophenoxyacetic acid, diethanola	760	35885	0.2119
30019		Banvel H (Use 2 code nos. 029802 and 0	2758	96547	0.2857
31501		MCPP	103296	2411	42.8445
31503		2-(2-Methyl-4-chlorophenoxy)propionic acid,	564	29891	0.1887
31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,	1237	3568	0.3589
31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	644	5825	0.1106
32201		Reglone	116	3604	0.3222
32701		Fensulfothion	1534	497	3.0832
35509		Tupersan	359	3332	0.1078
36101		Treflan	189	28336	0.0669
43401		Acti-Aid	24	6182	0.0039
52001		Corrosive sublimate	204	4855	0.0421

REGION=3

CHEM CODE		CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
52201		Calomel	409	4858	0.08418
56502		PCNB	297	6228	0.04762
56801		Sevin	21886	89069	0.24571
57801		AG-500	36930	92185	0.40060
57901		Anthon	22909	54405	0.42108
59101		Dowco 179	14661	95610	0.15335
61601		1,1'-Dimethyl-4,4'-bipyridinium dichloride	1298	3790	0.34253
66003		PMA	1209	39883	0.03030
74801	DEF		1317	2760	0.47704
78701		DCPA	18796	29198	0.64377
79801		Diallate	284	3408	0.08322
79801		Arasan	28795	90002	0.31994
80307		CDT	273	4379	0.06226
80811		Anilazine	108054	46996	2.29922
81901		Bravo	111105	127232	0.87324
84001		DDVP	284	12387	0.02296
84301		Binnell	16244	48050	0.33808
84701		Banrot (Use 2 code nos. 084701 and 102	376	3608	0.10411
86602		Socal Aquatic Solvent 3501	19005	66262	0.28681
86603		Xylene range hydrocarbon solvent	1083	9184	0.11795
99101		Benlate	25579	104524	0.24472
102001		NF-44	833	13615	0.06120
103301		Orthene	3	3067	0.00087
103601		CP-70139	9340	104218	0.08962
103901		BAS 351 H	654	8724	0.07496
109001		RP-17623	15444	62296	0.24792
109401	SRA 12869		63190	60998	1.03594
109601	P	RP-26019	62499	128908	0.48483
109901	P	Bayleton	6603	54587	0.12096
113501	P	CGA-48968	12271	57099	0.21491
114002		Vistar	397	1796	0.22125
		REGION TOTAL	1939773	2449929	

REGION=4

CHEM CODE	CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
6501	Aromatic petroleum derivative solvent	103001	230008	0.4478
6601	Aromatic petroleum distillate, oil, so	5250	12465	0.4211
8711	Trimethylbenzyl ammonium resin, polybromide form o	2827	4812	0.5874
9801	Prefar	48061	74294	0.6469
10501	Acarin	131	5452	0.0241
12902	Cadmium chloride	299	9871	0.0303
13802	DSMA	16323	21442	0.7613
13803	MSMA	652450	257555	2.5332
14504	Dithane m-45	109612	209712	0.5227
14505	Dithane S-31 (Use 2 code nos. 014505 a	26163	62411	0.4192
24401	Bluestone	16368	4259	3.9600
24403	Cutrine algaecide	76	10131	0.0075
27301	Tersan SP	4019	34735	0.1157

REGION=4

CHEM CODE	CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
28901	Radapon	3441	21211	0.1622
28902	Dalapon, sodium salt of	1230	3933	0.3128
[illegible]	Dalapon, magnesium salt of	204	3933	0.0518
29601	VEL 58-CS-11	54	4436	0.0123
29802	Banvel M (Use 2 code nos. 029802 and 0	6875	140733	0.0489
30010	2,4-Dichlorophenoxyacetic acid, alkanolami	6709	11420	0.5874
30016	2,4-Dichlorophenoxyacetic acid, diethanola	3034	8369	0.3625
30019	Banvel M (Use 2 code nos. 029802 and 0	88102	317661	0.2773
31501	MCPP	1218	13264	0.0918
31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,	6379	32806	0.1944
31516	2-(2-Methyl-4-chlorophenoxy)propionic acid,	3999	8369	0.4778
31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,	9529	117106	0.0814
32701	Fensulfothion	5345	15022	0.3558
34001	Maclate	1237	3933	0.3144
34201	Diazoben	9146	31085	0.2942
35509	Tupersan	7937	32819	0.2418
36101	Treflan	221	15018	0.0147
39103	(Ethylenedinitrilo)tetraacetic acid, so	401	45082	0.0089
40501	Citrus oil	6011	45082	0.1333
42002	EDB	402067	34152	11.7730
43401	Acti-Aid	102	40769	0.0025
47501	Visco 1152 (Use 2 code nos. 047501 and	8015	45082	0.1778
47802	Bay 39007	94428	102542	0.9209
52001	Corrosive sublimate	627	4414	0.1420
52201	Calomel	1254	4414	0.2841
56502	PCNB	6830	19606	0.3483
56801	Sevin	61038	167277	0.3649
57001	MGK 264	2010	24854	0.0809
57701	AC 26691	14354	54321	0.2642
57801	AG-500	297849	246151	1.2100
57901	Anthon	19157	48715	0.3932
58201	Synklor	206	1260	0.1636
59101	Dowco 179	43044	219576	0.1960
63501	Pyrethrum Extract (Use 2 code nos. 063	87	3648	0.0239
63503	Amsco 140	475994	90509	5.2591
66003	PMA	85	2539	0.0335
67501	Butacide	1208	24854	0.0486
69001	Pyrethrum Extract (Use 2 code nos. 063	602	24854	0.0242
69129	Hyamine 2389	10018	45082	0.2222
69201	4-AP	0	19667	0.0000
76406	Sodium phosphate, tribasic	1002	45082	0.0222
78701	DCPA	20083	8647	2.3226
78801	Diallate	4580	.	.
79101	ASP 51	178	5209	0.0341
79801	Arasan	46795	125005	0.3743
80501	Chlorinated camphene, technical	19891	46807	0.4250
80603	AAtram (Use 2 code nos. 019101 and 080	2711	24227	0.1119
80607	CDT	652	3733	0.1745
80811	Amilazine	6256	25452	0.2458
81301	Merpan	8069	19153	0.4213
81901	Bravo	120443	194339	0.6198
82501	Trichlorophenoxy)propionic acid = silvex	5541	1561	3.5493

REGION=4

CHEM CODE		CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
84001		DDVP	10617	82118	0.12929
84301		Binnell	14119	71761	0.19675
84701		Banrot (Use 2 code nos. 084701 and 102	1304	17920	0.07275
86601		PCMX	84330	39130	2.15515
86802		Socal Aquatic Solvent 3501	91979	109587	0.83932
86803		Xylene range hydrocarbon solvent	2476	14398	0.17195
99101		Benlate	17483	109491	0.15967
100601		Bay 68138	90034	78919	1.14083
101101		Bay 94337	4287	62635	0.06844
101701		RH-315	30221	151710	0.19920
102001		NF-44	1324	17743	0.07463
103301		Orthene	18734	19372	0.96706
103401		Cleary's 3336	818	4319	0.18933
103601		CP-70139	43621	211227	0.20651
103901		BAS 351 H	17339	102284	0.16952
105201		NC-6897	34	19667	0.00173
106901		Methyl sulfanilylcarbamate = asulan	3339	32629	0.10233
[illegible]		RP-17623	8304	81585	0.10178
[illegible]	SRA 12869		108505	135377	0.80150
109801	P	RP-26019	22392	132908	0.16847
109901	P	Evleton	8953	48431	0.18487
112701	P	PP 581	0	23600	0.00000
113501	P	CGA-48988	4758	78011	0.06099
169108	Dimethylcocobenzyl ammonium chloride		85	.	.
		REGION TOTAL	3406377	5176807	

REGION=5

CHEM CODE	CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
6321	Calcium oxytetracycline	646	2514	0.2570
6501	Aromatic petroleum derivative solvent	7617	85479	0.0891
6601	Aromatic petroleum distillate, oil, so	790	7049	0.1121
6602	Heavy aromatic naphtha	1286	5145	0.2499
9001	Gamma-1,2,3,4,5,6-hexachlorocyclohexan	857	14973	0.0573
9801	Prefar	16866	40600	0.4154
10501	Acarin	14933	9488	1.5739
12902	Cadmium chloride	17704	7845	2.2567
12903	Cadmium sebacate	5091	21575	0.2360
12904	Cadmium succinate	370	.	.
13502	Standard lead arsenate	1604	9346	0.1717
13803	MSMA	1374	3550	0.3869
13804	OAMA	818	11461	0.0714
13805	DDAMA	818	11461	0.0714
14504	Dithane m-45	9847	17213	0.5721
14505	Dithane S-31 (Use 2 code nos. 014505 a	228542	27200	8.4024
24403	Cutrine algaecide	129	4116	0.0312
25902	Cyclohexanone	214	14973	0.0143
27301	Tersan SP	9260	46489	0.1992
29801	VEL 58-CS-11	7008	46669	0.1502

REGION=5

CHEM CODE		CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
29802		Banvel M (Use 2 code nos. 029802 and 0	20614	298003	0.0692
29803		Dicamba, diethanolamine salt of	113	3760	0.0301
30001		Weed - Broom (Use 3 code nos. 012301,	3107	6541	0.4750
30010		2,4-Dichlorophenoxyacetic acid, alkanolami	8234	24885	0.3309
30016		2,4-Dichlorophenoxyacetic acid, diethanola	9984	16479	0.6059
30019		Banvel M (Use 2 code nos. 029802 and 0	138415	358585	0.3860
30029		2,4-Dichlorophenoxyacetic acid, N-oleyl-1,	661	1196	0.5521
30063		2,4-Dichlorophenoxyacetic acid, octyl este	3720	5145	0.7230
31501		MCPP	35132	35709	0.9838
31503		2-(2-Methyl-4-chlorophenoxy)propionic acid,	2523	26007	0.0970
31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,	27466	49967	0.5497
31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	27771	197280	0.1408
32201		Reglone	49	4116	0.0118
35509		Tupersan	1225	7664	0.1598
36001		Karathane	7387	2763	2.6738
36101		Treflan	290	7475	0.0388
43401		Acti-Aid	7173	234165	0.0306
47802		Bay 39007	48	3411	0.0140
52001		Corrosive sublimate	63551	105374	0.6031
52201		Calomel	127101	105374	1.2062
56502		PCNB	21933	32017	0.6851
56801		Sevin	24436	59665	0.4095
57701		AC 26691	4078	45148	0.0903
57801		AG-500	76608	184254	0.4158
57901		Anthon	93102	95959	0.9702
58201		Synklor	3238	24460	0.1324
59101		Dowco 179	3447	101381	0.0340
63001		Dowicide 7	456617	10634	42.9398
63501		Pyrethrum Extract (Use 2 code nos. 063	2412	24955	0.0966
63503		Amsco 140	10435	23752	0.4393
66003		PMA	3680	64995	0.0566
68301		Potassium chromate	5091	21575	0.2360
76901		Strychnine alkaloid	0	8868	0.0000
78701		DCPA	83946	45746	1.8350
78801		Diallate	386	3646	0.1058
79101	ASP 51		371	4991	0.0744
79801		Arasan	244967	264864	0.9249
80811		Anilazine	7008	31327	0.2237
81901		Bravo	868842	231304	3.8427
84001		DDVP	40	5145	0.0078
84301		Binnell	20633	51879	0.3977
84701		Banrot (Use 2 code nos. 084701 and 102	982	9346	0.1051
86802		Socal Aquatic Solvent 3501	19104	97068	0.1968
86803		Xylene range hydrocarbon solvent	2968	17362	0.1710
90301	Nudrin		6	2232	0.0026
99101		Benlate	414898	191711	2.1642
100601		Bay 68138	2047	3550	0.5764
102001		NF-44	4996	48702	0.1026
103301		Orthene	614	3411	0.1800
103401		Cleary's 3336	7185	20220	0.3553
103601		CP-70139	16138	195214	0.0827
103901		BAS 351 H	189	9281	0.0203

REGION=6

CHEM CODE		CHEMICAL-NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
84701		Banrot (Use 2 code nos. 084701 and 102	3	.	.
86802		Socal Aquatic Solvent 3501	6915	59282	0.116642
86803		Xylene range hydrocarbon solvent	1984	10948	0.181247
99101		Benlate	220	.	.
100601		Bay 68138	0	3364	0.000000
101101		Bay 94337	273	11774	0.023175
101701		RH-315	4464	17248	0.258809
103601		CP-70139	27456	74027	0.370899
103901		BAS 351 H	232	6727	0.034488
105201		NC-6897	81	1080	0.075248
109001		RP-17623	12989	49800	0.260830
109401	SRA 12869		13354	16050	0.832044
109801	P	RP-26019	7078	24611	0.287614
113501	P	CGA-48988	16	5517	0.002862
		REGION TOTAL	445573	1190786	

REGION=7

CHEM CODE	CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
6501	Aromatic petroleum derivative solvent	6774	21144	0.32038
6602	Heavy aromatic naphtha	1243	1710	0.72702
9801	Prefar	34007	63619	0.53453
10501	Acarin	36	8532	0.00425
12902	Cadmium chloride	2567	9361	0.27420
12903	Cadmium sebacate	166	1976	0.08391
12904	Cadmium succinate	1492	2844	0.52478
13803	MSMA	17477	17068	1.02396
13804	OAMA	265	3880	0.06835
13805	DDAMA	265	3880	0.06835
14504	Dithane m-45	1751	4208	0.41617
14505	Dithane S-31 (Use 2 code nos. 014505 a	12123	31422	0.38582
27301	Tersan SP	310	15924	0.01944
29802	Banvel M (Use 2 code nos. 029802 and 0	8650	102595	0.08431
30001	Weed - Broom (Use 3 code nos. 012301,	28	4444	0.00640
30019	Banvel M (Use 2 code nos. 029802 and 0	115613	125606	0.91898
30029	2,4-Dichlorophenoxyacetic acid, N-oleyl-1,	57	4444	0.01281
31501	MCPP	4623	10564	0.43759
31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,	16087	23446	0.68611
31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,	20425	88125	0.23177
35509	Tupersan	4768	30195	0.15791
36101	Treflan	1476	1976	0.74677
43401	Acti-Aid	106	27713	0.00384
52001	Corrosive sublimate	378	6910	0.05472
52201	Calomel	756	6910	0.10944
56801	Sevin	8731	41121	0.21233
57701	AC 26691	8844	16691	0.52956
57801	AG-500	10543	18668	0.56479
57901	Anthon	18289	56358	0.32451
58201	Synklor	759	2917	0.26015

REGION=7

CHEM CODE		CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
59101		Dowco 179	2260	34523	0.065464
61601		1,1'-Dimethyl-4,4'-bipyridinium dichloride	161	1976	0.081357
63503		Amsco 140	221	2917	0.075377
66003		PMA	67	7850	0.008472
68301		Potassium chromate	166	1976	0.083907
73701		DCPA	21365	28490	0.749925
79801		Arasan	31722	68576	0.462574
80811		Anilazine	1817	14023	0.129540
81901		Bravo	48890	78478	0.622970
84001		DDVP	39	1710	0.022618
84301		Binnell	8579	44902	0.191066
86802		Socal Aquatic Solvent 3501	575	5390	0.106613
86803		Xylene range hydrocarbon solvent	15	2844	0.005112
99101		Benlate	10172	57661	0.176404
102001		NF-44	1244	1976	0.629300
103401		Cleary's 3336	2222	9576	0.232076
103601		CP-70139	5583	80911	0.069000
109001		RP-17623	1445	10296	0.140300
109401	SRA 12869		21223	29033	0.730969
109601	P	RP-26019	15523	64021	0.242469
109901	P	Bayleton	1260	15819	0.079666
113501	P	CGA-48988	1041	10968	0.094874
		REGION TOTAL	474196	1326569	

REGION=3

CHEM CODE	CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
6501	Aromatic petroleum derivative solvent	8627.4	14984	0.575763
9801	Prefar	1892.4	11479	0.164858
10501	Acarin	92.2	4050	0.022769
13802	DSMA	490.4	4050	0.121105
14505	Dithane S-31 (Use 2 code nos. 014505 a	668.6	6147	0.108762
27301	Tersan SP	19.5	7363	0.002644
29801	VEL 58-CS-11	1333.8	2196	0.607322
29802	Banvel H (Use 2 code nos. 029802 and 0	3937.8	60837	0.064727
30010	2,4-Dichlorophenoxyacetic acid, alkanolami	1550.0	7074	0.219105
30019	Banvel H (Use 2 code nos. 029802 and 0	29467.2	77379	0.380818
30063	2,4-Dichlorophenoxyacetic acid, octyl este	1573.7	7336	0.214518
31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,	1822.7	45760	0.039831
36101	Treflan	62.3	4050	0.015385
43401	Acti-Aid	46.7	2196	0.021277
52001	Corrosive sublimate	2562.0	24369	0.105135
52201	Calomel	5124.0	24369	0.210270
56801	Sevin	428.6	4050	0.105846
57701	AC 26691	308.5	12040	0.025621
57801	AG-500	9181.7	32733	0.280502
59101	Dowco 179	284.5	23421	0.012148
63503	Amsco 140	330.1	5376	0.061412
66003	PMA	387.0	16403	0.023594

REGION=8

CHEM CODE		CHEMICAL_NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
67501		Butacide	41.8	5376	0.007774
69001		Pyrethrum Extract (Use 2 code nos. 063	4.2	5376	0.000777
78701		DCPA	855.4	5233	0.163452
79801		Arasan	7319.8	18599	0.393553
81301		Merpan	54.5	4050	0.013462
81901		Bravo	350.1	13871	0.025241
84301		Binnell	5178.9	14423	0.359071
86802		Socal Aquatic Solvent 3501	363.8	4050	0.089846
99101		Benlate	6156.6	40539	0.151868
102001		NF-44	214.9	5794	0.037097
103601		CP-70139	5243.2	62694	0.083631
109601	P	RP-26019	200.5	5140	0.039015
		REGION TOTAL	96175.0	582806	

REGION=9

CHEM CODE	CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
6501	Aromatic petroleum derivative solvent	10701	16216	0.6599
6601	Aromatic petroleum distillate, oil, so	975	193	5.0456
6602	Heavy aromatic naphtha	9754	16875	0.5780
9801	Prefar	8056	20119	0.4004
10501	Acarin	106	193	0.5504
12301	Weed - Broom (Use 3 code nos. 012301,	211	.	.
12902	Cadmium chloride	1011	193	5.2360
12904	Cadmium succinate	331	862	0.3840
13803	MSMA	813	4540	0.1791
14505	Dithane S-31 (Use 2 code nos. 014505 a	248	9485	0.0262
24403	Cutrine algaecide	60	193	0.3124
28902	Dalapon, sodium salt of	1000	.	.
28903	Dalapon, magnesium salt of	166	.	.
29801	VEL 58-CS-11	1145	7107	0.1611
29802	Banvel M (Use 2 code nos. 029802 and 0	607	29039	0.0209
30001	Weed - Broom (Use 3 code nos. 012301,	146	2278	0.0639
30010	2,4-Dichlorophenoxyacetic acid, alkanolami	715	2278	0.3138
30019	Banvel M (Use 2 code nos. 029802 and 0	9683	35465	0.2732
31301	DCNA	11124	37255	0.2986
31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,	11156	7985	1.3972
31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,	3335	29039	0.1148
32201	Reglone	181	.	.
35509	Tupersan	1007	13487	0.0746
36101	Treflan	52	.	.
43401	Acti-Aid	224	37296	0.0060
56502	PCNB	2046	7451	0.2746
56801	Sevin	1256	3898	0.3221
57701	AC 26691	11274	2471	4.5630
57801	AG-500	21640	41773	0.5181
57901	Anthon	1932	.	.
59101	Douco 179	1818	48535	0.0375
63001	Domicide 7	291	.	.

REGION=9

CHEM CODE	CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
63502	White mineral oil	99670	9111	10.9401
66003	PMA	144	4782	0.0302
78701	DCPA	573	4419	0.1297
79038	Fatty alcohol (100% C10 = n-decanol)	304	9111	0.0333
79801	Arasan	26593	55923	0.4755
80807	CDT	828	20695	0.0400
80811	Anilazine	5808	9209	0.6307
81901	Bravo	6844	17382	0.5088
84001	DDVP	56	3375	0.0167
84301	Binnell	1083	9162	0.1182
84701	Banrot (Use 2 code nos. 084701 and 102	219	9715	0.0226
86602	Socal Aquatic Solvent 3501	2241	6889	0.3253
86803	Xylene range hydrocarbon solvent	22	2278	0.0098
99101	Benlate	3035	21514	0.1411
101701	RH-315	319	2900	0.1099
102001	NF-44	1833	5846	0.3135
103401	Cleary's 3336	276	193	1.4286
103601	CP-70139	17781	72688	0.2446
109801	RP-26019	1259	18143	0.0694
	REGION TOTAL	283959	657561	

REGION=10

CHEM CODE	CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
4401	Cytrol	72	3849	0.01883
6501	Aromatic petroleum derivative solvent	488	5778	0.08440
9801	Prefar	1858	4747	0.39132
14504	Dithane m-45	13098	17332	0.75572
24403	Cutrine algaecide	31	8777	0.00352
27301	Tersan SP	1364	17288	0.07888
29801	VEL 58-CS-11	1744	13502	0.12914
29802	Banvel M (Use 2 code nos. 029802 and 0	2490	41925	0.05939
30001	Weed - Broom (Use 3 code nos. 012301,	5059	8755	0.57783
30016	2,4-Dichlorophenoxyacetic acid, diethanola	3375	14890	0.22666
30019	Banvel M (Use 2 code nos. 029802 and 0	4161	34021	0.12232
30063	2,4-Dichlorophenoxyacetic acid, octyl este	298	1410	0.21126
31516	2-(2-Methyl-4-chlorophenoxy)propionic acid,	9098	20446	0.44495
31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,	4631	20050	0.23098
32501	Di Syston	10	5556	0.00178
43401	Acti-Aid	48	10815	0.00442
56502	PCNB	6316	14824	0.42607
56801	Sevin	334	5556	0.06012
57701	AC 26691	103	1410	0.07310
57801	AG-500	2736	28583	0.09573
57901	Anthon	330	4009	0.08230
59101	Dowco 179	259	5778	0.04490
66003	PMA	512	24941	0.02053
78701	DCPA	62	5556	0.01113
79101	ASP 51	112	5854	0.01920

REGION=10

CHEM CODE		CHEMICAL NAME(ACTIVE INGREDIENT)	POUNDS	ACRES	DENSITY (LBS/ACRE)
79801		Arasan	2663	16253	0.16383
86802		Socal Aquatic Solvent 3501	537	22244	0.02412
99101		Benlate	1158	20165	0.05741
102001		NF-44	0	.	.
103001		R-7165	515	33336	0.01546
103401		Cleary's 3336	5854	4747	1.23315
103601		CP-70139	2935	32339	0.09076
109001		RP-17623	3	5556	0.00062
109801	P	RP-26019	2870	17492	0.16410
109901	P	Bayleton	117	5854	0.02000
		REGION TOTAL	75241	483639	
		GRAND TOTAL	12327544	19019244	

COMMAND ?

APPENDIX G

MEAN NUMBER OF APPLICATIONS/YEAR

BY

CHEMICAL

	NUMBER OF APPLICATIONS PAST 12 MONTHS
	MEAN
CHEMICAL CODE	
4401	1.00
6321	1.50
6501	8.14
6601	3.09
6602	3.19
8711	3.00
9001	2.00
9801	1.61
10501	1.54
12301	3.00
12902	4.90
12903	8.78
12904	4.31
13502	1.00
13802	4.28
13803	6.54
13804	2.65
13805	2.65
13806	1.00
14504	6.26
14505	3.58
14506	2.35

(CONTINUED)

CHEMICAL CODE	NUMBER OF APPLICATIONS PAST 12 MONTHS MEAN
24401	3.97
24403	7.21
25902	2.00
27301	4.22
28901	2.00
28902	1.00
28903	1.00
29801	1.48
29802	2.22
29803	1.00
30001	1.52
30010	3.59
30016	1.29
30019	2.78
30029	1.51
30033	1.00
30063	1.60
31301	12.00
31501	1.34
31503	1.68
31516	1.44
31519	2.35

(CONTINUED)

CHEMICAL CODE	NUMBER OF APPLICATIONS PAST 12 MONTHS MEAN
32201	2.01
32501	1.37
32701	1.14
34001	19.14
34201	2.00
35509	1.65
36001	5.00
36101	1.36
38904	4.00
39001	2.00
39103	1.00
40501	1.00
42002	1.00
43401	5.44
47501	1.00
47802	4.75
52001	1.85
52201	1.85
56502	3.09
56801	3.51
57001	4.29
57701	4.77

(CONTINUED)

CHEMICAL CODE	NUMBER OF APPLICATIONS PAST 12 MONTHS MEAN
57801	3.20
57901	2.59
58201	4.25
59101	4.26
61601	2.36
63001	2.34
63501	2.13
63502	60.00
63503	5.48
66003	2.94
67501	3.53
68301	8.78
69001	3.53
69129	1.00
69201	1.00
74801	4.00
76406	1.00
76901	15.00
78701	1.21
78801	8.99
79038	60.00
79101	4.88

(CONTINUED)

CHEMICAL CODE	NUMBER OF APPLICATIONS PAST 12 MONTHS MEAN
79801	5.89
80501	3.00
80803	1.00
80804	3.00
80807	1.87
80811	3.59
81301	4.20
81901	5.78
82053	1.00
82501	2.00
84001	26.20
84301	1.48
84701	3.09
86801	3.14
86802	3.03
86803	2.45
90301	2.00
99101	4.00
100601	1.58
101101	6.36
101701	1.14
102001	4.45

(CONTINUED)

MEAN # APPLICATIONS BY CHEMICAL

CHEMICAL CODE	NUMBER OF APPLICATIONS PAST 12 MONTHS MEAN
103001	1.00
103301	3.43
103401	5.55
103601	3.81
103901	2.74
105201	4.81
106201	4.00
106901	5.33
109001	1.14
109401	1.43
109801	4.79
109901	2.64
112701	1.00
113501	2.52
114002	2.27
169108	1.00

OMMAND ?

APPENDIX H

SEVERITY OF PEST PROBLEM

BY

CHEMICAL

		SEVERITY OF PEST PROBLEM		
		MAJOR	MINOR	MAJOR AND MINOR
	AMT SUM	AMT SUM	AMT SUM	AMT SUM
CHEMICAL CODE				
4401	130	58	72	.
6321	646	646	.	.
6501	190516	161364	28520	632
6601	13704	8787	4917	.
6602	21424	12194	9230	.
8711	2827	2827	.	.
9001	857	857	.	.
9801	210510	180868	29642	.
10501	15321	14902	418	.
12301	211		211	.
12902	25731	23921	1810	.
12903	5398	5257	141	.
12904	2194	1824	370	.
13502	1604	1604	.	.
13802	35676	34957	719	.
13803	831936	757424	74511	.
13804	1083	1083	.	.
13805	1083	1083	.	.
13806	4855	4855	.	.
14504	216725	164440	52285	.

(CONTINUED)

		SEVERITY OF PEST PROBLEM		
		MAJOR	MINOR	MAJOR AND MINOR
	AMT	AMT	AMT	AMT
	SUM	SUM	SUM	SUM
CHEMICAL CODE				
14505	376763	322452	54311	.
14506	38386	36649	1738	.
24401	20234	16972	3262	.
24403	296	205	91	.
25902	214	214	.	.
27301	20208	13675	6533	.
28901	3441	.	3441	.
28902	2231	.	2231	.
28903	369	.	369	.
29801	18715	10618	8096	.
29802	297262	30658	266604	.
29803	113	.	113	.
30001	22546	10116	12430	.
30010	19064	9788	9276	.
30016	23998	16458	7540	.
30019	462006	312901	149105	.
30029	718	.	718	.
30033	674	.	674	.
30063	5592	1872	3720	.
31301	11124	11124	.	.

(CONTINUED)

		SEVERITY OF PEST PROBLEM		
		MAJOR	MINOR	MAJOR AND MINOR
	AMT	AMT	AMT	AMT
	SUM	SUM	SUM	SUM
CHEMICAL CODE				
31501	1096157	1055323	40833	.
31503	55696	36627	19069	.
31516	56054	38878	17176	.
31519	89274	64863	24411	.
32201	1620	1572	49	.
32501	485	475	10	.
32701	23043	23043	.	.
34001	2199	2199	.	.
34201	9146	9146	.	.
35509	37967	24992	12975	.
36001	7387	7387	.	.
36101	4404	1876	2528	.
38904	2843	2843	.	.
39001	251	.	251	.
39103	401	401	.	.
40501	6011	6011	.	.
42002	402067	392717	9350	.
43401	10305	8062	2243	.
47501	8015	8015	.	.
47802	94476	93906	570	.

(CONTINUED)

		SEVERITY OF PEST PROBLEM		
		MAJOR	MINOR	MAJOR AND MINOR
	AMT	AMT	AMT	AMT
	SUM	SUM	SUM	SUM
CHEMICAL CODE				
52001	73159	70555	2604	.
52201	146318	141110	5208	.
56502	56005	35216	20789	.
56801	144301	100652	43649	.
57001	2010	1998	12	.
57701	92654	68499	24155	.
57801	461865	379584	82281	.
57901	215975	162754	53221	.
58201	4203	876	3327	.
59101	91885	78728	12160	997
61601	2983	1459	1524	.
63001	456909	456617	291	.
63501	2698	2499	199	.
63502	99670	99670	.	.
63503	487427	483103	4325	.
66003	6236	4322	1914	.
67501	1349	1300	49	.
68301	5398	5257	141	.
69001	626	618	8	.
69129	10018	10018	.	.

(CONTINUED)

		SEVERITY OF PEST PROBLEM		
		MAJOR	MINOR	MAJOR AND MINOR
	AMT SUM	AMT SUM	AMT SUM	AMT SUM
CHEMICAL CODE				
69201	0	.	0	.
74801	1317	1317	.	.
76406	1002	1002	.	.
76901	0	0	.	.
78701	400016	283743	116273	.
78801	5487	4863	623	.
79038	304	304	.	.
79101	754	534	220	.
79801	635185	503107	132078	.
80501	19891	16118	3773	.
80803	3059	2602	457	.
80804	655	.	655	.
80807	2004	1075	928	.
80811	150262	139514	10748	.
81301	16355	5091	11264	.
81901	1295535	1182093	113175	267
82053	1215	1215	.	.
82501	5541	.	5541	.
84001	11074	10966	108	.
84301	85208	59694	25514	.

(CONTINUED)

		SEVERITY OF PEST PROBLEM		
		MAJOR	MINOR	MAJOR AND MINOR
	AMT	AMT	AMT	AMT
	SUM	SUM	SUM	SUM
CHEMICAL CODE				
84701	2884	2108	776	.
86801	84330	84330	.	.
86802	111878	91823	17727	2328
86803	28967	24854	4113	.
90301	6	.	6	.
99101	500912	472151	28760	.
100601	92080	76971	15109	.
101101	4489	4126	363	.
101701	33789	29530	4259	.
102001	25206	21646	3560	.
103001	515	.	515	.
103301	19350	19350	.	.
103401	20611	7057	13554	.
103601	138736	65918	72817	.
103901	18001	7959	10042	.
105201	393	393	.	.
106201	4940	.	4940	.
106901	3339	657	2682	.
109001	40014	37313	2701	.
109401	374718	343911	30807	.

(CONTINUED)

		SEVERITY OF PEST PROBLEM		
		MAJOR	MINOR	MAJOR AND MINOR
	AMT	AMT	AMT	AMT
	SUM	SUM	SUM	SUM.
CHEMICAL CODE				
109801	815694	746065	69629	.
109901	51633	48319	3314	.
112701	0	.	0	.
113501	32752	31670	1082	.
114002	6342	.	6342	.
169108	142	85	57	.

APPENDIX I

MEAN EFFECTIVENESS RATING

BY

CHEMICAL

	POUNDS ACTIVE INGRED	EFFECT.
	SUM	MEAN
CHEMICAL CODE		
4401	130	2.00
6321	646	1.00
6501	190516	1.64
6601	13704	1.63
6602	21424	2.10
8711	2827	1.00
9001	857	2.00
9801	210510	1.99
10501	15321	1.30
12301	211	2.00
12902	25731	1.40
12903	5398	1.50
12904	2194	1.33
13502	1604	1.00
13802	35676	2.08
13803	831936	1.90
13804	1083	2.67
13805	1083	2.67
13806	4855	2.00
14504	216725	1.73
14505	376763	1.88
14506	38386	1.81

(CONTINUED)

	POUNDS ACTIVE INGRED	EFFECT.
	SUM	MEAN
CHEMICAL CODE		
24401	20234	2.68
24403	296	1.81
25902	214	2.00
27301	20208	1.58
28901	3441	3.00
28902	2231	2.67
28903	369	2.67
29801	18715	1.73
29802	297262	1.63
29803	113	1.00
30001	22546	1.94
30010	19064	2.00
30016	23998	1.60
30019	462006	1.70
30029	718	2.49
30033	674	2.00
30063	5592	2.30
31301	11124	1.00
31501	1096157	1.83
31503	55696	1.91
31516	56054	1.68
31519	89274	1.64

(CONTINUED)

	POUNDS ACTIVE INGRED	EFFECT.
	SUM	MEAN
CHEMICAL CODE		
32201	1620	1.74
32501	485	1.37
32701	23043	1.72
34001	2199	1.31
34201	9146	3.00
35509	37967	1.89
36001	7387	2.00
36101	4404	2.06
38904	2843	2.00
39001	251	1.00
39103	401	2.00
40501	6011	2.00
42002	402067	1.12
43401	10305	1.79
47501	8015	2.00
47802	94476	2.00
52001	73159	1.39
52201	146318	1.39
56502	56005	1.58
56801	144301	1.72
57001	2010	1.43
57701	92654	1.56

(CONTINUED)

	POUNDS ACTIVE INGRED	EFFECT.
	SUM	MEAN
CHEMICAL CODE		
57801	461865	1.69
57901	215975	1.64
58201	4203	2.20
59101	91885	1.67
61601	2983	1.00
63001	456909	2.00
63501	2698	2.30
63502	99670	1.00
63503	487427	1.62
66003	6236	1.78
67501	1349	1.23
68301	5398	1.50
69001	626	1.23
69129	10018	3.00
69201	0	1.00
74801	1317	1.00
76406	1002	2.00
76901	0	3.00
78701	400016	1.74
78801	5487	1.42
79038	304	1.00
79101	754	1.45

(CONTINUED)

	POUNDS ACTIVE INGRED	EFFECT.
	SUM	MEAN
CHEMICAL CODE		
79801	635185	1.72
80501	19891	1.90
80803	3059	1.75
80804	655	1.00
80807	2004	1.72
80811	150262	1.75
81301	16355	1.91
81901	1295535	1.57
82053	1215	2.00
82501	5541	2.00
84001	11074	1.99
84301	85208	2.19
84701	2884	1.37
86801	84330	2.00
86802	111878	1.75
86803	28967	1.47
90301	6	1.00
99101	500912	1.85
100601	92080	1.52
101101	4489	1.41
101701	33789	1.38
102001	25206	1.53

(CONTINUED)

	POUNDS ACTIVE INGRED	EFFECT.
	SUM	MEAN
CHEMICAL CODE		
103001	515	2.00
103301	19350	1.43
103401	20611	1.56
103601	138736	1.30
103901	18001	1.68
105201	393	1.31
106201	4940	1.00
106901	3339	3.00
109001	40014	1.74
109401	374718	1.36
109801	815694	1.49
109901	51633	1.41
112701	0	1.00
113501	32752	1.21
114002	6342	1.43
169108	142	1.00

COMMAND ?

APPENDIX J

ITEM BY ITEM RESPONSE FREQUENCIES

SAMPLE AND PROJECTED TOTAL COURSES

QUESTION	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
TYPE OF COURSE		
NO RESP	550	16
REGULATION	10807	319
EXECUTIVE	1162	34
PAR 3	801	23
NUMBER OF HOLES, FIRST COURSE		
NO RESP	80	2
1-9 HOLES	3522	102
10-18 HOLES	9375	278
19-27 HOLES	136	4
28-36 HOLES	207	6
NUMBER OF HOLES, SECOND COURSE		
NO RESP	12255	360
1-9 HOLES	701	21
10-18 HOLES	364	11
NUMBER OF HOLES, THIRD COURSE		
NO RESP	13093	385
1-9 HOLES	196	6
10-18 HOLES	31	1
SPONSORSHIP-FEE ARRANGEMENT		
NO RESP	80	2
PRIVATE	4547	135

(CONTINUED)

QUESTION	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
SPONSORSHIP-FEE ARRANGEMENT		
DAILY FEE	4659	137
MUNICIPAL	2630	77
GOVT OPERATED	685	20
SEMI-PRIVATE	649	19
SCHOOL & PUBLIC	34	1
MULT COURSES - CATGRS	34	1
SEASONAL STATUS		
OPEN ALL YEAR	7652	228
OPEN SEASONALLY	5519	160
SKIING IF SNOW	69	2
NO RESP	80	2
NUMBER OF MONTHS OPEN		
NO RESP	80	2
1-9 MONTHS	4903	142
10-11 MONTHS	649	19
12 MONTHS	7688	229
ACREAGE OF TEES		
NO RESP	1029	30
0-.5 ACRES	1405	41
.5-1 ACRES	2104	61
1-1.5 ACRES	2121	62
1.5-2 ACRES	1972	58

(CONTINUED)

QUESTION	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
ACREAGE OF TEES		
2-2.5 ACRES	1216	36
2.5-3 ACRES	901	27
3-5 ACRES	1710	51
5-80 ACRES	861	26
ACREAGE OF GREENS		
NO RESP	721	21
0-.5 ACRES	981	28
.5-1 ACRES	896	27
1-1.5 ACRES	1166	34
1.5-2 ACRES	1604	47
2-2.5 ACRES	2170	64
2.5-3 ACRES	2137	63
3-5 ACRES	2618	77
5-80 ACRES	1026	31
ACREAGE OF TRAPS		
NO RESP	3524	103
0-.5 ACRES	3271	94
.5-1 ACRES	1899	56
1-1.5 ACRES	1006	30
1.5-2 ACRES	1123	34
2-2.5 ACRES	92	3
2.5-3 ACRES	531	16
3-5 ACRES	917	27

(CONTINUED)

QUESTION	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
ACREAGE OF TRAPS		
5-80 ACRES	957	29
ACREAGE OF FAIRWAYS		
NO RESP	949	28
0-20 ACRES	1613	47
20-30 ACRES	2158	64
30-40 ACRES	2505	75
40-50 ACRES	2072	60
50-75 ACRES	2350	69
75-100 ACRES	1063	31
100-300 ACRES	610	18
ACREAGE OF ROUGHS		
NO RESP	2387	70
0-20 ACRES	2585	75
20-30 ACRES	1149	34
30-40 ACRES	1490	43
40-50 ACRES	1345	40
50-75 ACRES	2044	61
75-100 ACRES	1466	43
100-300 ACRES	854	26
ACREAGE OF WATER HAZARDS		
NO RESP	3569	104
0-20 ACRES	9176	271

(CONTINUED)

QUESTION	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
ACREAGE OF WATER HAZARDS		
20-30 ACRES	272	8
30-40 ACRES	139	4
40-50 ACRES	99	3
50-75 ACRES	65	2
ACREAGE OF OUT-OF-BOUNDS		
NO RESP	8653	253
0-20 ACRES	2743	81
20-30 ACRES	509	15
30-40 ACRES	169	5
40-50 ACRES	364	11
50-75 ACRES	350	11
75-100 ACRES	226	7
100-300 ACRES	307	9
ACREAGE - TOTAL		
NO RESP	2110	62
0-20 ACRES	367	10
20-30 ACRES	461	14
30-40 ACRES	660	19
40-50 ACRES	588	17
50-75 ACRES	1403	42
75-100 ACRES	1494	43
100-300 ACRES	6237	185

(CONTINUED)

QUESTION	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
PROBLEMS WITH DRIFT-LAST 12 MONTHS		
NO RESPONSE	146	4
YES	169	5
NO	12695	375
NO PESTCIDES USED	310	8
PESTCDES GIVING DRIFT PROB-FIRST MENTION		
A06-GLYPHOSPHATE	34	1
B01-CYCLOHEXAMIDE	34	1
B05-MANCOZEB	33	1
B14-IPRODIONE	34	1
C01-CHLOROPYRIFOS	34	1
NO PROBLEMS CITED	13150	387
PESTCDES GIVING DRIFT PROB-2ND MENTION		
A04-DICAMBA	34	1
A15-DSMA	34	1
B09-CHLOROTHALONIL	33	1
NO RESPONSE	13219	389
UNDESIRABLE SIDE EFFECTS,LAST 12 MONTHS		
NO RESPONSE	187	5
YES	507	15

(CONTINUED)

QUESTION	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
UNDESIRABLE SIDE EFFECTS,LAST 12 MONTHS		
NO	12315	364
NO PESTCIDES USED	310	8
SPECIFY SIDE EFFECTS		
TERSAN SP BURNS	34	1
DYRENE RASH	33	1
SKIN IRRIT/NOAPPITE	68	2
RASH	34	1
B16-NAUSEA	34	1
C2 & A9 HEADACHE	34	1
PRIMCIDE POISNING	34	1
FERTLZER EYE SWELL	34	1
SENCOR,A1,15 GRASS	134	4
NEMACUR BIRDS	34	1
A5 HANGS ON	33	1
NO PESTCDES USED	12813	377
HOW DISPOSE OF CONTAINERS-FIRST MENTION		
NO PESTCIDES USED	180	5
OTHER/OTH PERSON	68	2
BURN-INCINERATOR	1374	40
BURY-SPECIAL AREA	2309	69

(CONTINUED)

QUESTION	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
HOW DISPOSE OF CONTAINERS-FIRST MENTION		
STORE	508	15
SHIP APPROVED SITE	1752	52
TRASH	6340	187
WASH-PUNCH-CRUSH	166	5
RE-USE	34	1
AS DRCTED OR RETURN	179	5
TRANSPORT OFF-SITE	99	3
NO PESTCDES USED	310	8
HOW DISPOSE OF CONTAINERS-SECOND MENTION		
NO PESTCIDES USED	9901	292
OTHER/OTH PERSON	73	2
BURN-INCINERATOR	34	1
BURY-SPECIAL AREA	242	7
STORE	66	2
SHIP APPROVED SITE	124	4
TRASH	1135	34
WASH-PUNCH-CRUSH	1052	31
RE-USE	167	5
AS DRCTED OR RETURN	36	1
TRANSPORT OFF-SITE	178	5

(CONTINUED)

QUESTION	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
HOW DISPOSE OF CONTAINERS-SECOND MENTION		
NO PESTCDES USED	310	8
HOW DISPOSE OF PESTICIDE-FIRST MENTION		
NO PESTCIDES USED	530	15
USE ALL	6939	206
BURN-INCINERATOR	239	7
BURY-SPECIAL AREA	624	18
STORE	2152	63
SHIP APPROVED SITE	485	14
TRASH	1415	42
WASH/WASH&DUMP	204	6
RINSE & USE	160	5
AS DIRECTED	68	2
WASH-DUMP DESIG PIT	67	2
OTHER UNSPECFIED	126	4
NO PESTCDES USED	310	8
HOW DISPOSE OF PESTICIDE-SECOND MENTION		
NO PESTCIDES USED	11635	344
USE ALL	270	8
BURY-SPECIAL AREA	65	2
STORE	34	1

(CONTINUED)

QUESTION	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
HOW DISPOSE OF PESTICIDE-SECOND MENTION		
TRASH	65	2
WASH/WASH&DUMP	757	22
RINSE & USE	30	1
AS DIRECTED	36	1
WASH-DUMP DESIG PIT	76	2
OTHER UNSPECFIED	42	1
NO PESTCDES USED	310	8

OMMAND ?

	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
HOW USUALLY STORE PESTICIDES		
USED UP;NOT STORE	118	3
SEPARATE AREA	3371	100
LOCKED STRGE AREA	7345	218
LOCKED SEPARATE	1330	39
SOME EACH WAY	110	3
SEP AREA LOCKED	104	3
WORK SHED ETC	146	4
WORK-OFFICE AREA	113	3
OPEN AREA;ON COURSE	23	1
NO PESTCDES USED	660	18
LABELING-SAFETY PRECAUTIONS		
YES	12201	360
NO	235	7
SOMETIMES	428	13
NO PESTCDES USED	456	12
SAFETY LABEL-COMMENT		
LABEL, NOT TEXT	34	1
CONFUSED	68	2
IMPROVE C-2	30	1
NO PESTCDES USED	13187	388

(CONTINUED)

	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
LABELING-DISPOSL PROCEDURES		
YES	10389	307
NO	1222	36
SOMETIMES	1119	33
NO PESTCDES USED	589	16
DISPOSL LABEL-COMMENT		
NEEDS IMPROVEMNT	68	2
GENERAL,VAGUE	144	4
LABEL, NOT TEXT	69	2
CONFUSED	105	3
NOT ENOUGH	75	2
INCORRECT	23	1
NOT ON FUNGCIDES	34	1
PAPER BAG DSPSAL	34	1
NO PESTCDES USED	12768	376
LABELING-DRIFT HAZARDS		
YES	10680	315
NO	996	30
SOMETIMES	1087	32
NO PESTCDES USED	557	15
DRIFT LABEL-COMMENT		
GENERAL,VAGUE	34	1

(CONTINUED)

	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
DRIFT LABEL-COMMENT		
LABEL, NOT TEXT	69	2
CONFUSED	77	2
NEARBY PLANTS	34	1
MORE ON LD FACTOR	34	1
NOT FUNGICIDES	34	1
NO PESTCDES USED	13038	384
LABELING-STORAGE REQUIRMNTS		
YES	11125	329
NO	631	19
SOMETIMES	1041	30
NO PESTCDES USED	523	14
STORAGE LABEL-COMMENT		
GENERAL,VAGUE	68	2
LABEL, NOT TEXT	69	2
CONFUSED	32	1
MOISTURE TEMP ETC	102	3
NOT RE METAL CONTANR	34	1
NOT SPECIFY LOCKED	33	1
NO PESTCDES USED	12981	382
LABELING-APPLICATION RATE		
YES	12221	361

(CONTINUED)

	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
LABELING-APPLICATION RATE		
NO	171	5
SOMETIMES	440	13
NO PESTCDES USED	488	13
APPLIC LABEL-COMMENT		
GENERAL,VAGUE	42	1
LABEL, NOT TEXT	34	1
CONFUSED	34	1
MORE RE: AMOUNTS	34	1
NOT ON A6,C2	34	1
NO RATE GIVEN	34	1
AGRICUL,NOT TURF	35	1
NO PESTCDES USED	13072	385
LABELING-TOXIC HAZ & SYMPTM		
YES	11512	340
NO	626	19
SOMETIMES	727	21
NO PESTCDES USED	456	12
TOXIC LABEL-COMMENT		
GENERAL,VAGUE	106	3
LABEL, NOT TEXT	69	2
NOT RE: SUMPTOMS	68	2

(CONTINUED)

	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
TOXIC LABEL-COMMENT		
INCOMPLETE	66	2
NO PESTCDES USED	13011	383
LABELING-ANTIDOTE		
YES	11288	333
NO	626	19
SOMETIMES	883	26
NO PESTCDES USED	522	14
ANTIDOTE LABEL-COMMENT		
GENERAL,VAGUE	34	1
LABEL, NOT TEXT	69	2
CONFUSED	38	1
SOME GIVE NONE	68	2
NO PESTCDES USED	13111	386
SAFETY-PROTECTIVE CLOTHING		
YES	8616	254
NO	4080	121
SOMETIMES	101	3
NO PESTCDES USED	523	14
SAFETY-HAND WASHING		
YES	12762	377
NO	34	1

(CONTINUED)

	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
SAFETY-HAND WASHING		
NO PESTCDES USED	524	14
SAFETY-WASHING CLOTHES		
YES	9862	290
NO	2676	81
SOMETIMES	190	5
AVAILABLE	69	2
NO PESTCDES USED	524	14
SAFETY-SHOWERS		
YES	8721	258
NO	3649	108
SOMETIMES	150	4
AVAILABLE	210	6
NO PESTCDES USED	591	16
SAFETY-RESPIRATORY DEVICE		
YES	8636	257
NO	3629	106
SOMETIMES	464	13
AVAILABLE	68	2
NO PESTCDES USED	524	14
SAFETY-GOGGLES		
YES	7279	217
NO	4846	142

(CONTINUED)

	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
SAFETY-GOGGLES		
SOMETIMES	565	16
AVAILABLE	140	4
NO PESTCDES USED	490	13
SAFETY-MASKS		
YES	7900	234
NO	4415	130
SOMETIMES	451	13
AVAILABLE	68	2
NO PESTCDES USED	487	13
SAFETY-OTHER		
GLOVES - BOOTS	4031	118
NO	2906	84
WHEN COURSE CLOSED	144	4
AVOID WIND,DRIFT	302	9
CARE IN MIXING	32	1
OTHER	205	6
GLOVES ETC SOMETIMES	34	1
NO PESTCDES USED	5667	169
IS RESPONDENT A CERTIFIED APPLICATOR?		
YES	9552	283
NO	3135	92
EXPIRED	68	2

(CONTINUED)

	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
IS RESPONDENT A CERTIFIED APPLICATOR?		
OTHER STAFF	76	2
NO PESTCDES USED	489	13
RESP CONTRACT FOR PEST CONTROL SVCE?		
YES	1791	54
NO	10985	323
NO RESPONSE	544	15
NUMBER TIMES USE PEST CONTROL SERVICE		
0	708	21
1	1055	32
2	134	4
3	93	3
4	69	2
5	31	1
NO PESTCDES USED	11230	329
PER WHAT TIME PERIOD USE CONTROL SERVICE		
PER WEEK	34	1
PER MO.	499	15
PER YEAR	748	23
AS NEEDED	334	10
NO PESTCDES USED	11705	343

(CONTINUED)

	PROJECTED NATIONAL TOTAL	SAMPLE TOTAL
V15N		
NO RESPONSE	11262	331
CLUBHSE-PESTS	196	6
NEMATODES	238	7
GYPSY MOTH	204	7
AQUATIC	271	8
SPRAYING TREES	271	8
MOSQUITOES	67	2
MOLES GOPHERS	69	2
SPIDERS,CRICKETS	66	2
TERMITES	66	2
CRAB GRASS,FERT ETC	97	3
CAN'T DO SELF	204	6
NO PESTCDES USED	310	8

APPENDIX K

ALPHABETICAL LISTING OF CHEMICALS

WITH CHEMICAL CODE NUMBERS

CHEMICAL (ACTIVE INGREDIENT) NAME	CHEM CODE
Acarin	10501
Acti-Aid	43401
Amsco 140	63503
Anilazine	80311
Anthon	57901
Aquathol Plus	38904
Arasan	79801
Aromatic petroleum derivative solvent	6501
Aromatic petroleum distillate, oil, so	6601
AAtram (Use 2 code nos. 019101 and 080	80803
AC 26691	57701
AG-500	57801
Banrot (Use 2 code nos. 084701 and 102	84701
Banvel M (Use 2 code nos. 029802 and 0	29802
Banvel M (Use 2 code nos. 029802 and 0	30019
Bay 39007	47802
Bay 68138	100601
Bay 94337	101101
Benlate	99101
Binnell	84301
Bluestone	24401
Bravo	81901
Butacide	67501
BAS 351 H	103901
BTS-27419	106201
Cadmium chloride	12902
Cadmium sebacate	12903
Cadmium succinate	12904
Calcium oxytetracycline	6321
Calomel	52201
Chlorinated camphene, techinical	80501
Citrus oil	40501
Cleary's 3336	103401
Corrosive sublimate	52001
Cutrine algaecide	24403
Cyclohexanone	25902
Cytrol	4401
CDT	80807
CMA	13806
CP-70139	103601
Dalapon, magnesium salt of	28903
Dalapon, sodium salt of	28902
Di Syston	32501
Diallate	78801
Diazoben	34201
Dicamba, diethanolamine salt of	29803
Dithane m-45	14504
Dithane S-31 (Use 2 code nos. 014505 a	14505
Dowco 179	59101
Dowicide 7	63001
DCNA	31301
DCPA	78701
DDAMA	13805

CHEMICAL (ACTIVE INGREDIENT) NAME	CHEM CODE
DDVP	84001
DSMA	13802
EBDC, zinc salt of	14506
EDB	42002
Fatty alcohol (100% C10 = n-decanol)	79038
Fensulfothion	32701
Gamma-1,2,3,4,5,6-hexachlorocyclohexan	9001
Heavy aromatic naphtha	6602
Hyamine 2389	69129
Karathane	36001
Marlate	34001
Merpan	81301
Methyl sulfanilylcarbamate = asulam	106901
MCPP	31501
MGK 264	57001
MSMA	13803
NC-6897	105201
NF-44	102001
Orthene	103301
OAMA	13804
Potassium chromate	68301
Prefar	9801
Pyrethrum Extract (Use 2 code nos. 063	63501
Pyrethrum Extract (Use 2 code nos. 063	69001
PCMX	86801
PCNB	56502
PMA	66003
R-7165	103001
Reslone	32201
RH-315	101701
RP-17623	109001
Sevin	56801
Socal Aquatic Solvent 3501	86802
Sodium phosphate, tribasic	76406
Standard lead arsenate	13502
Strychnine alkaloid	76901
Synklor	58201
Tersan SP	27301
Treflan	36101
Tupersan	35509
Vegadex	39001
Visco 1152 (Use 2 code nos. 047501 and	47501
Vistar	114002
VEL 58-CS-11	29801
Weed - Broom (Use 3 code nos. 012301,	12301
Weed - Broom (Use 3 code nos. 012301,	30001
White mineral oil	63502
Xylene range hydrocarbon solvent	86803
(Ethylenedinitrilo)tetraacetic acid, so	39103
4-AP	69201
2,4-Dichlorophenoxyacetic acid, alkanolami	30010
2,4-Dichlorophenoxyacetic acid, diethanola	30016
2,4-Dichlorophenoxyacetic acid, octyl este	30063

	CHEMICAL (ACTIVE INGREDIENT) NAME	CHEM CODE
	2,4-Dichlorophenoxyacetic acid, triethanol	30033
	2,4-Dichlorophenoxyacetic acid, N-oleyl-1,	30029
	1,1'-Dimethyl-4,4'-bipyridinium dichloride	61601
	2-(2-Methyl-4-chlorophenoxy)propionic acid,	31503
	2-(2-Methyl-4-chlorophenoxy)propionic acid,	31516
	2-(2-Methyl-4-chlorophenoxy)propionic acid,	31519
P	Bayleton	109901
P	CGA-48988	113501
P	PP 581	112701
P	RP-26019	109801
ASP 51		79101
Dimethylcocobenzyl ammonium chloride		169108
DEF		74801
G-31435		80804
Nudrin		90301
Radapon		28901
SRA 12869		109401
Trichlorophenoxy)propionic acid = silvex		82501
Trichlorophenoxyacetic acid, butoxyethanol ester o		82053
Trimethylbenzyl ammonium resin, polybromide form o		8711

APPENDIX L

NUMERICAL LISTING OF CHEMICAL CODE NUMBERS AND CHEMICAL NAMES

CHEM CODE	CHEMICAL (ACTIVE INGREDIENT) NAME
4401	Cytrol
6321	Calcium oxytetracycline
6501	Aromatic petroleum derivative solvent
6601	Aromatic petroleum distillate, oil, so
6602	Heavy aromatic naphtha
8711	Trimethylbenzyl ammonium resin, polybromide form o
9001	Gamma-1,2,3,4,5,6-hexachlorocyclohexan
9801	Prefar
10501	Acarin
12301	Weed - Broom (Use 3 code nos. 012301,
12902	Cadmium chloride
12903	Cadmium sebacate
12904	Cadmium succinate
13502	Standard lead arsenate
13802	DSMA
13803	MSMA
13804	OAMA
13805	DDAMA
13806	CMA
14504	Dithane m-45
14505	Dithane S-31 (Use 2 code nos. 014505 a
14506	EBDC, zinc salt of
24401	Bluestone
24403	Cutrine algaecide
25902	Cyclohexanone
27301	Tersan SP
28901	Radapon
28902	Dalapon, sodium salt of
28903	Dalapon, magnesium salt of
29801	VEL 58-CS-11
29802	Banvel M (Use 2 code nos. 029802 and 0
29803	Dicamba, diethanolamine salt of
30001	Weed - Broom (Use 3 code nos. 012301,
30010	2,4-Dichlorophenoxyacetic acid, alkanolami
30016	2,4-Dichlorophenoxyacetic acid, diethanola
30019	Banvel M (Use 2 code nos. 029802 and 0
30029	2,4-Dichlorophenoxyacetic acid, N-oleyl-1,
30033	2,4-Dichlorophenoxyacetic acid, triethanol
30063	2,4-Dichlorophenoxyacetic acid, octyl este
31301	DCNA
31501	MCPP
31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,
31516	2-(2-Methyl-4-chlorophenoxy)propionic acid,
31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,
32201	Reslone
32501	Di Syston
32701	Fensulfothion
34001	Marlate
34201	Diazoben
35509	Tupersan
36001	Karathane
36101	Treflan
38904	Aquathol Plus

CHEM	CHEMICAL (ACTIVE INGREDIENT) NAME
39001	Vesadex
39103	(Ethylenedinitrilo)tetraacetic acid, so
40501	Citrus oil
42002	EDB
43401	Acti-Aid
47501	Visco 1152 (Use 2 code nos. 047501 and
47802	Bay 39007
52001	Corrosive sublimate
52201	Calomel
56502	PCNB
56801	Sevin
57001	MGK 264
57701	AC 26691
57801	AG-500
57901	Anthon
58201	Synklor
59101	Dowco 179
61601	1,1'-Dimethyl-4,4'-bipyridinium dichloride
63001	Dowicide 7
63501	Pyrethrum Extract (Use 2 code nos. 063
63502	White mineral oil
63503	Amsco 140
66003	PMA
67501	Butacide
68301	Potassium chromate
69001	Pyrethrum Extract (Use 2 code nos. 063
69129	Hyamine 2389
69201	4-AP
74801	DEF
76406	Sodium phosphate, tribasic
76901	Strychnine alkaloid
78701	DCPA
78801	Diallate
79038	Fatty alcohol (100% C10 = n-decanol)
79101	ASP 51
79801	Arasan
80501	Chlorinated camphene, technical
80803	AAtram (Use 2 code nos. 019101 and 080
80804	G-31435
80807	CDT
80811	Anilazine
81301	Merpan
81901	Bravo
82053	Trichlorophenoxyacetic acid, butoxyethanol ester o
82501	Trichlorophenoxy)propionic acid = silvex
84001	DDVP
84301	Binnell
84701	Banrot (Use 2 code nos. 084701 and 102
86801	PCMX
86802	Socal Aquatic Solvent 3501
86803	Xylene range hydrocarbon solvent
90301	Nudrin
99101	Benlate

CHEM CODE		CHEMICAL (ACTIVE INGREDIENT) NAME
100601		Bay 68138
101101		Bay 94337
101701		RH-315
102001		NF-44
103001		R-7465
103301		Orthene
103401		Clearys 3336
103601		CP-70139
103901		BAS 351 H
105201		NC-6897
106201		BTS-27419
106901		Methyl sulfanilylcarbamate = asulam
109001		RP-17623
109401	SRA 12869	
109801	P	RP-26019
109901	P	Bayleton
112701	P	PP 581
113501	P	CGA-43988
114002		Vistar
169108	Dimethylcocobenzyl ammonium chloride	

APPENDIX M

STANDARD ERROR TERMS

FOR

NATIONAL USAGE PROJECTIONS

OBS.	CHEM	CHEMNAME	STDERR	SUM
1	4401	Cytrol	0.044	97
2	6321	Calcium oxytetracycline	0.405	6053
3	6501	Aromatic petroleum derivative solvent	1.230	9215217
4	6601	Aromatic petroleum distillate, oil, so	2.227	489299
5	6602	Heavy aromatic naphtha	1.651	1324664
6	8711	Trimethylbenzyl ammonium resin, polybromide form o	0.000	228983
7	9001	Gamma-1,2,3,4,5,6-hexachlorocyclohexan	0.000	7078
8	9801	Prefar	2.315	12311542
9	10501	Acarin	4.395	419352
10	12301	Weed - Broom (Use 3 code nos. 012301,	0.000	319
11	12902	Cadmium chloride	10.070	2501448
12	12903	Cadmium sebacate	3.102	141894
13	12904	Cadmium succinate	1.633	46993
14	13502	Standard lead arsenate	0.000	37617
15	13802	DSMA	3.576	1596900
16	13803	MSMA	17.400	212977233
17	13804	OAMA	0.188	11539
18	13805	DDAMA	0.188	11539
19	13806	CMA	0.000	246462
20	14504	Dithane m-45	2.016	19233787
21	14505	Dithane S-31 (Use 2 code nos. 014505 a	18.486	74284338
22	14506	EBDC, zinc salt of	21.506	6599298
23	24401	Bluestone	21.443	4000
24	24403	Cutrine algaecide	0.096	
25	25902	Cyclohexanone	0.000	442
26	27301	Tersan SP	0.663	296525
27	28901	Radapon	0.000	84826
28	28902	Dalapon, sodium salt of	1.020	47151
29	28903	Dalapon, magnesium salt of	0.169	1292
30	29301	VEL 58-CS-11	0.773	283638
31	29802	Banvel M (Use 2 code nos. 029802 and 0	6.393	13116131
32	29803	Dicamba, diethanolamine salt of	0.000	125
33	30001	Weed - Broom (Use 3 code nos. 012301,	1.441	865367
34	30010	2,4-Dichlorophenoxyacetic acid, alkanolami	1.960	876225
35	30016	2,4-Dichlorophenoxyacetic acid, diethanola	1.846	1063491
36	30019	Banvel M (Use 2 code nos. 029802 and 0	1.174	23460621
37	30029	2,4-Dichlorophenoxyacetic acid, N-oleyl-1,	1.080	7554
38	30033	2,4-Dichlorophenoxyacetic acid, triethanol	0.000	6417
39	30063	2,4-Dichlorophenoxyacetic acid, octyl este	3.509	224823
40	31301	DCNA	0.000	505252
41	31501	MCPP	154.082	1026508623
42	31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,	2.808	2682254
43	31516	2-(2-Methyl-4-chlorophenoxy)propionic acid,	2.372	3518479
44	31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,	0.353	1618807
45	32201	Reslone	1.172	19070
46	32501	Di Syston	0.300	2096
47	32701	Fensulfothion	9.877	2265649
48	34001	Marlate	0.428	9870
49	34201	Diazoben	0.000	34
50	35509	Tupersan	0.999	102
51	36001	Karathane	0.000	1594834
52	36101	Treflan	0.626	33978
53	38904	Aquathol Plus	0.000	57126

	HEM		CHEMNAME	STDERR	SUMTOT
54	39001		Vegade..	0.000	592
55	39103		(Ethylenedinitrilo)tetraacetic acid, so	0.000	672
56	40501		Citrus oil	0.000	151140
57	42002		EDB	28.093	578962683
58	43401		Acti-Aid	0.216	24540
59	47501		Visco 1152 (Use 2 code nos. 047501 and	0.000	268692
60	47302		Bay 39007	15.479	15016713
61	52001		Corrosive sublimate	6.505	4895345
62	52201		Calomel	13.009	19581379
63	56502		PCNB	2.125	2639002
64	56801		Sevin	1.056	5375163
65	57001		MGK 264	0.624	16533
66	57701		AC 26691	3.209	5079577
67	57801		AG-500	2.318	43705467
68	57901		Anthon	4.730	18052928
69	58201		Synklor	0.745	50746
70	59101		Dowco 179	0.415	1471134
71	61601		1,1'-Dimethyl-4,4'-bipyridinium dichloride	1.938	89022
72	63001		Dowicide 7	220.140	1005361891
73	63501		Pyrethrum Extract (Use 2 code nos. 063	1.405	30495
74	63502		White mineral oil	0.000	80787415
75	63503		Amsco 140	40.638	217864740
	64003		PMA	0.173	28673
	67501		Butacide	0.229	4037
78	68301		Potassium chromate	3.102	141894
79	69001		Pyrethrum Extract (Use 2 code nos. 063	0.117	867
80	69129		Hyamine 2389	0.000	419832
81	69201		4-AP	0.000	0
82	74801	DEF		0.000	50764
83	77306		Sodium phosphate, tribasic	0.000	4198
84	76901		Strychnine alkaloid	0.000	0
85	78701		DCPA	16.372	104514070
86	78801		Diallate	4.028	174831
87	79038		Fatty alcohol (100% C10 = n-decanol)	0.000	749
88	79101	ASP 51		0.231	2432
89	79801		Arasan	3.831	60683455
90	80501		Chlorinated camphene, technical	4.671	1133609
91	80803		AAtram (Use 2 code nos. 019101 and 080	1.438	35042
92	80804	G-31435		0.000	13444
93	80807		CDT	0.310	16794
94	80811		Anilazine	9.504	13971977
95	81301		Merpan	1.637	541773
96	81901		Bravo	12.779	253946705
97	82053	Trichlorophenoxyacetic acid, buto:yethanol ester		0.000	44964
98	82501	Trichlorophenoxy)propionic acid = silve		0.000	879663
99	84001		DDVP	0.739	168867
100	84301		Binnell	0.891	3302991
101	84701		Banrot (Use 2 code nos. 084701 and 102	0.280	21995
	86801		PCMX	9.130	29108003
	86802		Socal Aquatic Solvent 3501	2.379	7322398
104	86803		Xylene range hydrocarbon solvent	2.866	1104458
105	90301	Nudrin		0.000	1
106	99101		Benlate	9.340	54715813

OBS	CHEM		CHEMNAME	STDERR	SUMTOT
107	100601		Bay 68138	5.4111	12820444
108	101101		Bay 94337	0.8696	42623
109	101701		RH-315	1.2714	1208013
110	102001		NF-44	1.1455	465847
111	103001		R-7165	0.0000	1067
112	103301		Orthene	7.9321	1521860
113	103401		Cleary's 3336	1.6699	736300
114	103601		CP-70139	0.4178	2755281
115	103901		BAS 351 H	1.1388	369009
116	105201		NC-6897	0.2388	678
117	106201		BTS-27419	0.0000	78336
118	106901		Methyl sulfanilylcarbamate = asulam	3.3363	106477
119	108001		RP-17623	1.0734	810774
120	109401	SRA 12869		5.1404	63622512
121	109801	P	RP-26019	14.0808	112456508
122	109901	P	Bayleton	2.2130	1581046
123	112701	P	PP 581	0.0000	0
124	113501	P	CGA-48988	1.0011	661606
125	114002		Vistar	7.7575	314806
126	150108	Dimethylcocobenzyl ammonium chloride		0.0509	295

COMMAND ?

APPENDIX N

STANDARD ERROR TERMS

FOR

REGIONAL USAGE PROJECTIONS

OBS	REGION	CHEM	CHEMNAME
1	1	6501	Aromatic petroleum derivative solvent
2	1	6601	Aromatic petroleum distillate, oil, so
3	1	9801	Prefar
4	1	10501	Acarin
5	1	12902	Cadmium chloride
6	1	13802	DSMA
7	1	14504	Dithane m-45
8	1	14505	Dithane S-31 (Use 2 code nos. 014505 a
9	1	27301	Tersan SP
10	1	29801	VEL 58-CS-11
11	1	29802	Banvel M (Use 2 code nos. 029802 and 0
12	1	30001	Weed - Broom (Use 3 code nos. 012301,
13	1	30019	Banvel M (Use 2 code nos. 029802 and 0
14	1	31501	MCPP
15	1	31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,
16	1	31516	2-(2-Methyl-4-chlorophenoxy)propionic acid,
17	1	31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,
18	1	34001	Marlate
19	1	35509	Tupersan
20	1	36101	Treflan
21	1	43401	Acti-Aid
22	1	52001	Corrosive sublimate
23	1	52201	Calomel
24	1	56502	PCNB
25	1	56801	Sevin

OBS	STDERR	SUMTOT
1	0.7883	108300
2	1.9725	92524
3	2.7375	584359
4	0.0000	2
5	0.0000	2243
6	0.0000	79
7	0.0000	41288
8	1.4427	94521
9	0.0000	288
10	0.1187	257
11	88.4456	125292200
12	1.9086	12558
13	0.6135	87586
14	1.0166	16862
15	0.0000	130
16	0.0000	207889
17	0.4406	35855
18	0.0025	46
19	0.8531	70915
20	0.0456	10
21	0.1264	436
22	0.0000	907200
23	0.0000	3628800
24	0.5025	5267
25	0.6393	73698

REGION	CHEM		CHEMNAME	STDERR	SUMT
1	57701		AC 26691	0.2452	2314
1	57801		AG-500	1.0334	73190
1	57901		Anthon	1.2648	82592
1	59101		Dowco 179	0.3922	56331
1	66003		PMA	0.0000	811
1	78701		DCPA	1.5899	79244
1	78801		Diallate	0.0000	393
1	79801		Arasan	13.3471	7845223
1	80803		AAtram (Use 2 code nos. 019101 and 080	0.0000	3695
1	80811		Anilazine	1.1335	24067
1	81301		Merpan	0.0000	0
1	81901		Bravo	1.4845	914917
1	82053	Trichlorophenoxyacetic acid, butoxyethanol ester o		0.0000	44964
1	84001		DDVP	0.0000	50
	84301		Binnell	0.0000	32
	84802		Socal Aquatic Solvent 3501	0.2925	5642
1	86803		Xylene range hydrocarbon solvent	0.0000	8083
1	99101		Benlate	0.3240	13777
1	102001		NF-44	4.9975	220921
1	103401		Cleary's 3336	1.2951	46451
1	103601		CP-70139	0.5657	23983
1	109001		RP-17623	0.0000	14
1	109401	SRA 12869		8.0904	3785600
1	109801	P	RP-26019	0.6592	135975
1	109901	P	Bayleton	0.3642	1544
1	113501	P	CGA-48988	0.5434	4485
2	6501		Aromatic petroleum derivative solvent	2.7559	407394
2	6601		Aromatic petroleum distillate, oil, so	1.1530	6661
2	9801		Prefar	17.3620	5085924
2	12902		Cadmium chloride	0.0000	644778
2	12903		Cadmium sebacate	0.0000	560
2	13802		DSMA	1.3709	22608
2	13803		MSMA	0.9535	10246
2	14504		Dithane m-45	26.0133	5573594
2	14505		Dithane S-31 (Use 2 code nos. 014505 a	26.3149	11557794
2	14506		EBDC, zinc salt of	53.6977	19183438
2	24401		Bluestone	0.0000	309
2	27301		Tersan SP	0.7117	37306
2	29801		VEL 58-CS-11	1.4375	8620
2	29802		Banvel M (Use 2 code nos. 029802 and 0	0.5291	32059
	30001		Weed - Broom (Use 3 code nos. 012301,	1.1341	995030
2	30010	2,4-Dichlorophenoxyacetic acid, alkanolami		0.0000	8151
2	30016	2,4-Dichlorophenoxyacetic acid, diethanola		0.0000	0
2	30019		Banvel M (Use 2 code nos. 029802 and 0	2.4205	1267721
2	30033	2,4-Dichlorophenoxyacetic acid, triethanol		0.0000	6417
2	31501		MCPP	0.7559	1563608

OBS	REGION	CHEM		CHEMNAME
72	2	31503		2-(2-Methyl-4-chlorophenoxy)propionic acid,
73	2	31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,
74	2	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,
75	2	32501		Di Syston
76	2	34001		Marlate
77	2	35509		Tupersan
78	2	36101		Treflan
79	2	38904		Aquathol Plus
80	2	39001		Vesadex
81	2	43401		Acti-Aid
82	2	52001		Corrosive sublimate
83	2	52201		Calomel
84	2	56502		PCNB
85	2	56801		Sevin
86	2	57701		AC 26691
87	2	57801		AG-500
88	2	57901		Anthon
89	2	59101		Dowco 179
90	2	68301		Potassium chromate
91	2	78701		DCPA
92	2	78801		Diallate
93	2	79101	ASP 51	
94	2	79801		Arasan
95	2	80811		Anilazine
96	2	81301		Merpan

OBS	STDERR	SUMTOT
72	9.6907	1164565
73	0.0000	0
74	1.7389	199890
75	0.0000	3189
76	0.2996	4675
77	3.3040	889113
78	0.9071	2490
79	0.0000	57126
80	0.0000	592
81	0.3094	7921
82	0.7284	3981
83	1.4568	15925
84	8.0130	1786101
85	2.7399	358749
86	2.1493	59742
87	7.9374	3883661
88	7.1978	7125195
89	1.2079	233283
90	0.0000	560
91	63.5380	183221847
92	0.0000	492
93	0.0000	54
94	41.8258	75195529
95	3.0341	981434
96	0.0000	57500

OBS	REGION	CHEM		CHEMNAME
97	2	81901		Bravo
98	2	84301		Binnell
99	2	86802		Socal Aquatic Solvent 3501
100	2	86803		Xylene range hydrocarbon solvent
101	2	99101		Benlate
102	2	101701		RH-315
103	2	102001		NF-44
104	2	103401		Cleary's 3336
105	2	103601		CP-70139
106	2	103901		BAS 351 H
107	2	105201		NC-6897
108	2	109001		RP-17623
109	2	109401	SRA 12869	
110	2	109801	P	RP-26019
111	2	109901	P	Bayleton
112	2	113501	P	CGA-48988
113	2	114002		Vistar
114	3	4401		Cytrol
115	3	6501		Aromatic petroleum derivative solvent
116	3	6601		Aromatic petroleum distillate, oil, so
117	3	6602		Heavy aromatic naphtha
	3	9801		Prefar
	3	13802		DSMA
120	3	13803		MSMA
121	3	14504		Dithane m-45

OBS	STDERR	SUMTOT
97	6.740	10418868
98	1.633	178572
99	4.119	518501
100	8.617	1770220
101	2.895	855067
102	0.000	144
103	4.149	251721
104	0.717	50021
105	1.315	154641
106	0.105	653
107	0.000	3312
108	1.845	15708
109	38.539	39562944
110	39.597	62155995
111	1.733	152672
112	6.611	635523
113	14.999	507564
114	0.000	24
115	5.725	1427261
	0.000	368817
	4.275	820743
118	0.907	1798588
119	5.009	647656
120	10.530	1971102
121	3.428	3508732

OBS	REGION	CHEM	CHEMNAME
122	3	14505	Dithane S-31 (Use 2 code nos. 014505 a
123	3	14506	EBDC, zinc salt of
124	3	24401	Bluestone
125	3	27301	Tersan SP
126	3	29801	VEL 58-CS-11
127	3	29802	Banvel M (Use 2 code nos. 029802 and 0
128	3	30001	Weed - Broom (Use 3 code nos. 012301,
129	3	30016	2,4-Dichlorophenoxyacetic acid, diethanola
130	3	30019	Banvel M (Use 2 code nos. 029802 and 0
131	3	31501	MCPP
132	3	31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,
133	3	31516	2-(2-Methyl-4-chlorophenoxy)propionic acid,
134	3	31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,
135	3	32201	Reglone
136	3	32701	Fensulfothion
137	3	35509	Tupersan
138	3	36101	Treflan
139	3	43401	Acti-Aid
140	3	52001	Corrosive sublimate
141	3	52201	Calomel
142	3	56502	PCNB
143	3	56801	Sevin
144	3	57801	AG-500
145	3	57901	Anthon
146	3	59101	Dowco 179

OBS	STDERR	SUMTOT
122	7.514	7382731
123	1.021	139089
124	0.000	313632
125	0.855	31199
126	0.684	19435
127	0.295	16007
128	0.080	67
129	0.031	568236
130	1.669	1020071
131	937.405	6068185677
132	1.732	135151
133	3.578	1629426
134	0.740	94102
135	0.000	39843
136	0.000	6889591
137	1.247	76081
138	1.809	26071
139	0.036	143
140	0.000	1224
141	0.000	4896
142	0.000	2592
143	1.506	777703
144	2.624	2221799
145	5.811	1719338
146	1.465	354113

	REGION	CHEM		CHEMNAME
147	3	61601		1,1'-Dimethyl-4,4'-bipyridinium dichloride
148	3	66003		PMA
149	3	74801	DEF	
150	3	78701		DCPA
151	3	78801		Diallate
152	3	79801		Arasan
153	3	80807		CDT
154	3	80811		Anilazine
155	3	81901		Bravo
156	3	84001		DDVP
157	3	84301		Binnell
158	3	84701		Banrot (Use 2 code nos. 084701 and 102
159	3	86802		Socal Aquatic Solvent 3501
160	3	86803		Xylene ranse hydrocarbon solvent
161	3	99101		Benlate
162	3	102001		NF-44
163	3	103301		Orthene
164	3	103601		CP-70139
165	3	103901		BAS 351 H
166	3	109001		RP-17623
167	3	109401	SRA 12869	
168	3	109801	P	RP-26019
	3	109901	P	Bayleton
	3	113501	P	CGA-48988
	3	114002		Vistar

RS	STDERR	SUMTOT
147	0.0000	49652
148	0.8394	10612
149	0.0000	50764
150	4.5003	1485477
151	0.0000	2355
152	2.4137	1348776
153	0.0000	2176
154	34.4044	27197496
155	4.8402	13516526
156	0.1330	794
157	2.6670	974885
158	0.0000	4159
159	2.4090	886863
160	0.0000	17177
161	1.3781	963003
162	0.7095	6952
163	0.0000	0
164	0.4042	115682
165	0.6311	6261
166	2.6434	542603
	8.3170	9716828
	3.7126	4384513
169	1.3493	126727
170	2.1339	339547
171	0.0000	4624

OBS	REGION	CHEM	CHEMNAME
172	4	6501	Aromatic petroleum derivative solvent
173	4	6601	Aromatic petroleum distillate, oil, so
174	4	8711	Trimethylbenzyl ammonium resin, polybromide form o
175	4	9801	Prefar
176	4	10501	Acarin
177	4	12902	Cadmium chloride
178	4	13802	DSMA
179	4	13803	MSMA
180	4	14504	Dithane m-45
181	4	14505	Dithane S-31 (Use 2 code nos. 014505 a
182	4	24401	Bluestone
183	4	24403	Cutrine algaecide
184	4	27301	Tersan SP
185	4	28901	Radapon
186	4	28902	Dalapon, sodium salt of
187	4	28903	Dalapon, magnesium salt of
188	4	29801	VEL 58-CS-11
189	4	29802	Banvel M (Use 2 code nos. 029802 and 0
190	4	30010	2,4-Dichlorophenoxyacetic acid, alkanolami
191	4	30016	2,4-Dichlorophenoxyacetic acid, diethanola
192	4	30019	Banvel M (Use 2 code nos. 029802 and 0
193	4	31501	MCPP
194	4	31503	2-(2-Methyl-4-chlorophenoxy)propionic aci
195	4	31516	2-(2-Methyl-4-chlorophenoxy)propionic acid,
196	4	31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,

OBS	STDERR	SUMTOT
172	2.4596	7776737
173	6.1376	263212
174	0.0000	228983
175	8.7397	3980337
176	0.0000	505
177	0.2834	1274
178	15.5403	2544654
179	31.5061	238664206
180	2.5288	9569169
181	3.1961	1625547
182	0.0000	8330850
183	0.0000	167
184	1.7766	59428
185	0.0000	84826
186	0.0000	43364
187	0.0000	1188
188	0.0000	87
189	0.5038	54289
190	5.3788	429812
191	2.4401	131801
192	1.4986	4045201
193	1.5505	14472
194	1.1829	132615
195	1.0662	230708
196	0.6356	132495

OBS	REGION	CHEM	CHEMNAME
197	4	32701	Fensulfothion
198	4	34001	Marlate
199	4	34201	Diazoben
200	4	35509	Tupersan
201	4	36101	Treflan
202	4	39103	(Ethylenedinitrilo)tetraacetic acid, so
203	4	40501	Citrus oil
204	4	42002	EDB
205	4	43401	Acti-Aid
206	4	47501	Visco 1152 (Use 2 code nos. 047501 and
207	4	47802	Bay 39007
208	4	52001	Corrosive sublimate
209	4	52201	Calomel
210	4	56502	PCNB
211	4	56801	Sevin
212	4	57001	MGK 264
213	4	57701	AC 26691
214	4	57801	AG-500
215	4	57901	Anthon
216	4	58201	Synklor
7	4	59101	Dowco 179
	4	63501	Pyrethrum Extract (Use 2 code nos, 063
217	4	63503	Amsco 140
220	4	66003	PMA
221	4	67501	Butacide

OBS	STDERR	SUMTOT
197	2.5501	163721
198	0.0000	43829
199	0.0000	342400
200	3.0945	263491
201	0.0930	697
202	0.0000	672
203	0.0000	151140
204	28.0929	578962683
205	0.0119	25
206	0.0000	268692
207	16.3725	15967139
208	0.0975	5753
209	0.1950	23012
210	1.2015	150417
211	2.7420	3678357
212	0.6245	16533
213	2.2923	653722
214	7.0129	54454046
5	4.0917	980105
6	0.0000	1220
217	1.1338	1258780
218	0.0000	217
219	67.6692	360640730
220	0.0000	212
221	0.3753	5970

OBS	REGION	CHEM	CHEMNAME
222	4	69001	Pyrethrum Extract (Use 2 code nos. 063
223	4	69129	Hyamine 2389
224	4	69201	4-AP
225	4	76406	Sodium phosphate, tribasic
226	4	78701	DCPA
227	4	78801	Diallate
228	4	79101	ASP 51
229	4	79801	Arasan
230	4	80501	Chlorinated camphene, techinical
231	4	80803	AAtram (Use 2 code nos. 019101 and 080
232	4	80807	CDT
233	4	80811	Anilazine
234	4	81301	Merpan
235	4	81901	Bravo
236	4	82501	Trichlorophenoxy)propionic acid = silvex
237	4	84001	DDVP
238	4	84301	Binnell
239	4	84701	Banrot (Use 2 code nos. 084701 and 102
240	4	86801	PCMX
241	4	86802	Socal Aquatic Solvent 3501
242	4	86803	Xylene range hydrocarbon solvent
243	4	99101	Benlate
244	4	100601	Bay 68138
245	4	101101	Bay 94337
246	4	101701	RH-315

OBS	STDERR	SUMTOT
222	0.1869	1481
223	0.0000	419832
224	0.0000	0
225	0.0000	4198
226	35.8338	5905169
227	0.0000	600944
228	0.2705	453
229	1.5285	2103182
230	4.6709	1133609
231	1.6369	31369
232	0.0000	12165
233	1.1323	189393
234	2.2305	233166
235	6.8463	11862614
236	0.0000	879663
237	0.9560	230692
238	1.4342	415728
239	0.3632	9719
240	9.1296	29108003
241	7.6794	9134620
242	2.0074	58290
243	1.2413	442932
244	5.7791	13661764
245	1.0036	43880
246	1.5117	1137730

	REGION	CHEM		CHEMNAME
247	4	102001		NF-44
248	4	103301		Orthene
249	4	103401		Cleary's 3336
250	4	103601		CP-70139
251	4	103901		BAS 351 H
252	4	105201		NC-6897
253	4	106901		Methyl sulfanilylcarbamate = asulam
254	4	109001		RP-17623
255	4	109401	SRA 12869	
256	4	109801	P	RP-26019
257	4	109901	P	Bayleton
258	4	112701	P	PP 581
259	4	113501	P	CGA-48988
260	4	169108	Dimethylcocobenzyl ammonium chloride	
261	5	6321		Calcium oxytetracycline
262	5	6501		Aromatic petroleum derivative solvent
263	5	6601		Aromatic petroleum distillate, oil, so
264	5	6602		Heavy aromatic naphtha
265	5	9001		Gamma-1,2,3,4,5,6-hexachlorocyclohexan
266	5	9801		Prefar
267	5	10501		Acarin
	5	12902		Cadmium chloride
	5	12903		Cadmium sebacate
270	5	12904		Cadmium succinate
271	5	13502		Standard lead arsenate

	STDERR	SUMTOT
247	0.136	12836
248	10.354	2011046
249	0.733	9792
250	1.006	1302851
251	1.547	454334
252	0.000	7
253	3.336	106477
254	0.810	117637
255	6.459	13544730
256	0.722	483766
257	2.565	234728
258	0.000	0
259	0.279	38393
260	0.000	212
261	0.405	6053
262	0.354	105772
263	0.232	9025
264	0.000	47774
265	0.000	7078
6	2.197	692574
7	20.210	2172080
268	29.660	4579883
269	4.364	189393
270	0.000	3966
271	0.000	37617

OBS	REGION	CHEM	CHEMNAME
272	5	13803	MSMA
273	5	13804	OAMA
274	5	13805	DDAMA
275	5	14504	Dithane m-45
276	5	14505	Dithane S-31 (Use 2 code nos. 014505 a
277	5	24403	Cutrine algaecide
278	5	25902	Cyclohexanone
279	5	27301	Tersan SP
280	5	29801	VEL 58-CS-11
281	5	29802	Banvel M (Use 2 code nos. 029802 and 0
282	5	29803	Dicamba, diethanolamine salt of
283	5	30001	Weed - Broom (Use 3 code nos. 012301,
284	5	30010	2,4-Dichlorophenoxyacetic acid, alkanolami
285	5	30016	2,4-Dichlorophenoxyacetic acid, diethanola
286	5	30019	Banvel M (Use 2 code nos. 029802 and 0
287	5	30029	2,4-Dichlorophenoxyacetic acid, N-oleyl-1,
288	5	30063	2,4-Dichlorophenoxyacetic acid, octyl este
289	5	31501	MCPP
290	5	31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,
291	5	31516	2-(2-Methyl-4-chlorophenoxy)propionic acid,
292	5	31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,
293	5	32201	Reslone
294	5	35509	Tupersan
295	5	36001	Karathane
296	5	36101	Treflan

OBS	STDERR	SUMTOT
272	0.000	55152
273	0.000	9784
274	0.000	9784
275	5.809	705024
276	153.911	254400966
277	0.000	478
278	0.000	442
279	1.798	226675
280	1.325	110153
281	0.393	202642
282	0.000	125
283	2.415	70361
284	3.077	489718
285	3.984	482032
286	1.414	7245871
287	0.000	12611
288	0.000	399936
289	6.101	3589059
290	1.259	37051
291	4.070	1685752
292	0.715	560455
293	0.000	69
294	0.356	21818
295	0.000	1594834
296	0.056	614

OBS	REGION	CHEM		CHEMNAME
297	5	43401		Acti-Aid
298	5	47802		Bay 39007
299	5	52001		Corrosive sublimate
300	5	52201		Calomel
301	5	56502		PCNB
302	5	56801		Sevin
303	5	57701		AC 26691
304	5	57801		AG-500
305	5	57901		Anthon
306	5	58201		Synklor
307	5	59101		Dowco 179
308	5	63001		Dowicide 7
309	5	63501		Pyrethrum Extract (Use 2 code nos. 063
310	5	63503		Amsco 140
311	5	66003		PMA
312	5	68301		Potassium chromate
313	5	76901		Strychnine alkaloid
314	5	78701		DCPA
315	5	78801		Diallate
316	5	79101	ASP 51	
317	5	79801		Arasan
3	5	80811		Anilazine
9	5	81901		Bravo
320	5	84001		DDVP
321	5	84301		Binnell

OBS	STDERR	SUMTOT
297	0.5220	29443
298	0.0000	67
299	10.1162	5863405
300	20.2323	23453620
301	5.5290	1546343
302	3.2698	967927
303	0.3196	40337
304	4.2130	4743664
305	16.6382	12658794
306	0.9145	38095
307	0.1329	13831
308	0.0000	3012260134
309	1.8941	33611
310	4.5227	524634
311	0.3072	23209
312	4.3637	189393
313	0.0000	0
314	15.5277	17137407
315	0.0000	4300
6	0.0000	3987
317	6.6738	26819246
318	0.8576	158896
319	44.4255	425356946
320	0.0000	46
321	3.3627	1130907

OBS	REGION	CHEM		CHEMNAME
322	5	84701		Banrot (Use 2 code nos. 084701 and 102
323	5	86802		Socal Aquatic Solvent 3501
324	5	86803		Xylene range hydrocarbon solvent
325	5	90301	Nudrin	
326	5	99101		Benlate
327	5	100601		Bay 68138
328	5	102001		NF-44
329	5	103301		Orthene
330	5	103401		Cleary's 3336
331	5	103601		CP-70139
332	5	103901		BAS 351 H
333	5	106201		BTS-27419
334	5	109001		RP-17623
335	5	109401	SRA 12869	
336	5	109801	P	RP-26019
337	5	109901	P	Bayleton
338	5	113501	P	CGA-48988
339	5	114002		Vistar
340	5	169108	Dimethylcocobenzyl ammonium chloride	
341	6	6501		Aromatic petroleum derivative solvent
342	6	9801		Prefar
343	6	13802		DSMA
344	6	13803		MSMA
345	6	13806		CMA
346	6	14504		Dithane m-45

OBS	STDERR	SUMTOT
322	0.0000	14100
323	1.4699	556610
324	1.6122	51091
325	0.0000	1
326	29.5913	121667707
327	0.0000	122400
328	0.6603	60728
329	0.0000	11016
330	3.0939	301278
331	0.5206	180149
332	0.1127	521
333	0.0000	78336
334	0.0685	1518
335	6.0825	11093858
336	49.0859	150973084
337	7.2295	1689651
338	1.3423	89995
339	0.0000	6659
340	0.0000	94
341	5.9552	737103
342	2.0049	111404
343	1.0178	17430
344	7.8202	21209030
345	0.0000	246462
346	3.4609	1726759

OBS	REGION	CHEM		CHEMNAME
347	6	14505		Dithane S-31 (Use 2 code nos. 014505 a
348	6	27301		Tersan SP
349	6	29801		VEL 58-CS-11
350	6	29802		Banvel M (Use 2 code nos. 029802 and 0
351	6	30010		2,4-Dichlorophenoxyacetic acid, alkanolami
352	6	30019		Banvel M (Use 2 code nos. 029802 and 0
353	6	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,
354	6	32201		Reglone
355	6	32701		Fensulfothion
356	6	43401		Acti-Aid
357	6	52001		Corrosive sublimate
358	6	52201		Calomel
359	6	56801		Sevin
360	6	57701		AC 26691
361	6	57801		AG-500
362	6	57901		Anthon
363	6	59101		Dowco 179
364	6	61601		1,1'-Dimethyl-4,4'-bipyridinium dichloride
365	6	63501		Pyrethrum Extract (Use 2 code nos. 063
366	6	63503		Amsco 140
367	6	67501		Butacide
368	6	69001		Pyrethrum Extract (Use 2 code nos. 063
369	6	78701		DCPA
370	6	79101	ASP 51	
371	6	79801		Arasan

OBS	STDERR	SUMTOT
347	0.0000	126976
348	0.0000	303
349	0.0000	511470
350	1.0281	36126
351	0.0000	63307
352	1.0643	466638
353	0.9185	39700
354	0.0000	1628
355	0.0000	174375
356	0.0287	28
357	0.0000	1744
358	0.0000	6975
359	6.2023	349809
360	19.2679	12691447
361	1.2944	577142
362	3.3126	341167
363	1.9883	155317
364	0.0000	72861
365	0.0000	1242
366	0.0000	1254
367	0.0000	62
368	0.0000	2
369	0.0000	12305
370	0.0274	47
371	1.8020	410196

OBS	REGION	CHEM		CHEMNAME
372	6	80804	G-31435	
373	6	80807		CDT
374	6	81301		Merpan
375	6	81901		Bravo
376	6	84301		Binnell
377	6	84701		Banrot (Use 2 code nos. 084701 and 102
378	6	86802		Socal Aquatic Solvent 3501
379	6	86803		Xylene range hydrocarbon solvent
380	6	99101		Benlate
381	6	100601		Bay 68138
382	6	101101		Bay 94337
383	6	101701		RH-315
384	6	103601		CP-70139
385	6	103901		BAS 351 H
386	6	105201		NC-6897
387	6	109001		RP-17623
388	6	109401	SRA 12869	
389	6	109801	P	RP-26019
390	6	113501	P	CGA-48988
391	7	6501		Aromatic petroleum derivative solvent
392	7	6602		Heavy aromatic naphtha
393	7	9801		Prefar
394	7	10501		Acarin
395	7	12902		Cadmium chloride
396	7	12903		Cadmium sebacate

OBS	STDERR	SUMTOT
372	0.0000	13444
373	0.1024	992
374	2.7307	392344
375	2.1563	569911
376	2.2274	655582
377	0.0000	0
378	0.9447	111991
379	1.0764	41176
380	0.0000	1519
381	0.0000	0
382	0.5208	1097
383	2.5981	156271
384	3.0676	1438454
385	0.0000	844
386	0.0000	182
387	4.5489	481160
388	19.0605	1864702
389	2.8113	256386
390	0.0000	8
391	2.1065	593655
392	0.0000	46369
393	5.8560	2189461
394	0.0000	13
395	0.0000	170446
396	0.0000	825

OBS	REGION	CHEM	CHEMNAME
397	7	12904	Cadmium succinate
398	7	13803	MSMA
399	7	13804	OAMA
400	7	13805	DDAMA
401	7	14504	Dithane m-45
402	7	14505	Dithane S-31 (Use 2 code nos. 014505 a
403	7	27301	Tersan SP
404	7	29802	Banvel M (Use 2 code nos. 029802 and 0
405	7	30001	Weed - Broom (Use 3 code nos. 012301,
406	7	30019	Banvel M (Use 2 code nos. 029802 and 0
407	7	30029	2,4-Dichlorophenoxyacetic acid, N-oleyl-1,
408	7	31501	MCPP
409	7	31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,
410	7	31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,
411	7	35509	Tupersan
412	7	36101	Treflan
413	7	43401	Acti-Aid
414	7	52001	Corrosive sublimate
415	7	52201	Calomel
416	7	56801	Sevin
417	7	57701	AC 26691
	7	57801	AG-500
	7	57901	Anthon
420	7	58201	Synklor
421	7	59101	Dowco 179

OBS	STDERR	SUMTOT
397	0.0000	66825
398	9.7482	1832878
399	0.0000	2110
400	0.0000	2110
401	0.2977	45999
402	2.6761	501864
403	0.1469	867
404	0.7402	94688
405	0.0000	24
406	8.6554	13217591
407	0.0000	97
408	6.0934	276427
409	12.4499	1463444
410	1.2681	603424
411	2.7014	128468
412	0.0000	65348
413	0.0350	52
414	0.3349	2144
415	0.6698	8577
6	1.6967	233241
17	7.8381	1011753
418	4.2222	466119
419	1.8396	784983
420	0.0000	14898
421	0.5882	14374

OBS	REGION	CHEM		CHEMNAME	STDER	SUMT
432	7	61601		1,1'-Dimethyl-4,4'-bipyridinium dichloride	0.0000	776
433	7	63503		Amsco 140	0.0000	1267
434	7	66003		PMA	0.0571	61
435	7	68301		Potassium chromate	0.0000	825
436	7	78701		DCPA	6.9035	3055564
437	7	79801		Arasan	2.7512	1663660
438	7	80811		Anilazine	0.7275	42688
439	7	81901		Bravo	3.3092	3456859
440	7	84001		DDVP	0.0000	45
441	7	84301		Binnell	1.1884	189793
442	7	86802		Socal Aquatic Solvent 3501	0.0000	8543
443	7	86803		Xylene range hydrocarbon solvent	0.0000	6
444	7	99101		Benlate	1.1503	219566
445	7	102001		NF-44	0.0000	46406
446	7	103401		Cleary's 3336	0.1161	63991
447	7	103601		CP-70139	0.6685	5
448	7	109001		RP-17623	1.3115	2
449	7	109401	SRA 12869		11.1292	2462148
450	7	109801	P	RP-26019	1.4901	448561
451	7	109901	P	Bayleton	0.2499	9530
452	7	113501	P	CGA-48988	0.2922	6497
443	8	6501		Aromatic petroleum derivative solvent	12.6861	792591
44	8	9801		Prefar	2.5908	38136
445	8	10501		Acarin	0.0000	272
446	8	13802		DSMA	0.0000	7684
447	8	14505		Dithane S-31 (Use 2 code nos. 014505 a	0.0000	10496
448	8	27301		Tersan SP	0.0400	6
449	8	29801		VEL 58-CS-11	0.0000	56830
450	8	29802		Banvel M (Use 2 code nos. 029802 and 0	0.9510	45071
451	8	30010		2,4-Dichlorophenoxyacetic acid, alkanolami	0.5540	28205
452	8	30019		Banvel M (Use 2 code nos. 029802 and 0	3.8416	1686167
153	8	30063		2,4-Dichlorophenoxyacetic acid, octyl este	1.8284	39559
454	8	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	0.7811	13015
455	8	36101		Treflan	0.0000	124
456	8	43401		Acti-Aid	0.0000	70
457	8	52001		Corrosive sublimate	0.8175	62243
458	8	52201		Calomel	1.6350	248972
459	8	56801		Sevin	0.0000	5869
460	8	57701		AC 26691	0.3400	1013
461	8	57801		AG-500	3.9728	377968
462	8	59101		Dowco 179	0.1165	4
463	8	63503		Amsco 140	0.0000	
464	8	66003		PMA	0.1103	1422
465	8	67501		Butacide	0.0000	41
466	8	69001		Pyrethrum Extract (Use 2 code nos. 063	0.0000	0
467	8	78701		DCPA	0.0000	23376

	REGION	CHEM		CHEMNAME
468	8	79801		Arasan
469	8	81301		Merpan
470	8	81901		Bravo
471	8	84301		Binnell
472	8	86802		Socal Aquatic Solvent 3501
473	8	99101		Benlate
474	8	102001		NF-44
475	8	103601		CP-70139
476	8	109801	P	RP-26019
477	9	6501		Aromatic petroleum derivative solvent
478	9	6601		Aromatic petroleum distillate, oil, so
179	9	6602		Heavy aromatic naphtha
480	9	9801		Prefar
481	9	10501		Acarin
482	9	12301		Weed - Broom (Use 3 code nos. 012301,
483	9	12902		Cadmium chloride
484	9	12904		Cadmium succinate
485	9	13803		MSMA
486	9	14505		Dithane S-31 (Use 2 code nos. 014505 a
487	9	24403		Cutrine algaecide
488	9	28902		Dalapon, sodium salt of
489	9	28903		Dalapon, magnesium salt of
	9	29801		VEL 58-CS-11
1	9	29802		Banvel M (Use 2 code nos. 029802 and 0
492	9	30001		Weed - Broom (Use 3 code nos. 012301,

OBS	STDERR	SUMTOT
468	4.5947	394202
469	0.0000	95
470	0.3679	1439
471	3.8015	285604
472	0.0000	4229
473	2.6052	157411
474	0.0000	1476
475	1.1420	74154
476	0.0000	1285
477	6.8062	607224
478	0.0000	27144
479	0.1569	543785
480	1.8949	370923
481	0.0000	323
482	0.0000	319
483	0.0000	29232
484	0.0000	3133
485	1.3302	10080
486	0.0489	881
87	0.0000	104
88	0.0000	14297
489	0.0000	392
490	0.6875	12998
491	0.1863	1377
492	0.0000	690

OBS	REGION	CHEM	CHEMNAME
493	9	30010	2,4-Dichlorophenoxyacetic acid, alkanolami
494	9	30019	Banvel M (Use 2 code nos. 029802 and 0
495	9	31301	DCNA
496	9	31503	2-(2-Methyl-4-chlorophenoxy)propionic acid,
497	9	31519	2-(2-Methyl-4-chlorophenoxy)propionic acid,
498	9	32201	Reslone
499	9	35509	Tupersan
500	9	36101	Treflan
501	9	43401	Acti-Aid
502	9	56502	PCNB
503	9	56801	Sevin
504	9	57701	AC 26691
505	9	57801	AG-500
506	9	57901	Anthon
507	9	59101	Dowco 179
508	9	63001	Dowicide 7
509	9	63502	White mineral oil
510	9	66003	PMA
511	9	78701	DCPA
512	9	79038	Fatty alcohol (100% C10 = n-decanol)
513	9	79801	Arasan
514	9	80807	CDT
515	9	80811	Amilazine
516	9	81901	Bravo
517	9	84001	DDVP

OBS	STDERR	SUMTOT
493	0.0000	16613
494	1.5814	252073
495	0.0000	505252
496	12.1617	1778490
497	1.0982	41588
498	0.0000	936
499	0.5661	5935
500	0.0000	77
501	0.0378	113
502	0.7262	63689
503	1.1973	22524
504	22.8930	1938038
505	1.6759	774362
506	1.4660	53312
507	0.2630	8216
508	0.0000	607
509	0.0000	80787415
510	0.1115	207
511	0.0372	5342
512	0.0000	749
513	2.5999	1041247
514	0.0000	6528
515	5.0716	321393
516	2.5847	372519
517	0.0000	91

OBS	REGION	CHEM		CHEMNAME	STDERR	SUMTOT
518	9	84301		Binnell	0.41980	11655
519	9	84701		Banrot (Use 2 code nos. 084701 and 102	0.13203	733
520	9	86802		Socal Aquatic Solvent 3501	1.39664	39487
521	9	86803		Xylene ranse hydrocarbon solvent	0.00000	16
522	9	99101		Benlate	1.66737	52659
523	9	101701		RH-315	0.61840	1654
524	9	102001		NF-44	1.42161	32004
525	9	103401		Cleary's 3336	0.00000	2176
526	9	103601		CP-70139	1.50476	403431
527	9	109801	P	RP-26019	0.88658	15099
528	10	4401		Cytrol	0.00000	127
529	10	6501		Aromatic petroleum derivative solvent	0.67843	2969
530	10	9801		Prefar	0.00000	88365
531	10	14504		Dithane m-45	4.36048	827132
	10	24403		Cutrine alsaecide	0.04165	12
	10	27301		Tersan SP	1.06773	15584
534	10	29801		VEL 58-CS-11	0.85744	25414
535	10	29802		Banvel M (Use 2 code nos. 029802 and 0	0.31012	16822
536	10	30001		Weed - Broom (Use 3 code nos. 012301,	1.34828	318153
537	10	30016		2,4-Dichlorophenoxyacetic acid, diethanola	1.70487	91523
538	10	30019		Banvel M (Use 2 code nos. 029802 and 0	0.89880	61334
539	10	30063		2,4-Dichlorophenoxyacetic acid, octyl este	0.00000	2140
540	10	31516		2-(2-Methyl-4-chlorophenoxy)propionic acid,	2.57967	498787
541	10	31519		2-(2-Methyl-4-chlorophenoxy)propionic acid,	2.15046	104433
542	10	32501		Di Syston	0.00000	2
543	10	43401		Acti-Aid	0.03772	18
544	10	56502		PCNB	1.61855	240413
545	10	56801		Sevin	0.00000	2690
546	10	57701		AC 26691	0.00000	256
547	10	57801		AG-500	0.62174	30633
548	10	57901		Anthon	0.00000	2624
549	10	59101		Dowco 179	0.36097	840
550	10	66003		PMA	0.06476	903
551	10	78701		DCPA	0.00000	92
552	10	79101	ASP 51		0.00000	323
553	10	79801		Arasan	0.51560	43407
554	10	86802		Socal Aquatic Solvent 3501	0.12905	1791
555	10	99101		Benlate	0.15439	8327
556	10	102001		NF-44	0.00000	0
557	10	103001		R-7165	0.00000	1067
	10	103401		Cleary's 3336	0.00000	877500
559	10	103601		CP-70139	0.36068	30345
560	10	109001		RP-17623	0.00000	0
561	10	109801	P	RP-26019	0.44965	39722
562	10	109901	P	Bayleton	0.00000	351