

*National Pesticide
Telecommunications
Network*

1997 Annual Report

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Telecommunications
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**1997 Annual Report:
April 1, 1997 - March 31, 1998**

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DISCLAIMER

Material presented in this report is based on information as provided to NPTN by individuals who have contacted NPTN for information or to report an incident. None of this information has been verified or substantiated by independent investigation by NPTN staff, laboratory analysis, or any other means. Thus, if a person alleges/reports a pesticide incident, it likely will be recorded as an incident by NPTN. NPTN qualifies the information by assigning a Certainty Index (CI; an indication of the degree of certainty that the purported incident was related to pesticide exposure) ranging from 1 = "definite" to 5 = "unrelated." NPTN makes no claims or guarantees as to the accuracy of the CI or other information presented in its reports, other than that NPTN has done its best to accurately document and report the information provided to NPTN.

National Pesticide Telecommunications Network
1997 Annual Report: April 1, 1997 - March 31, 1998

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Executive Summary - NPTN 1997 Annual Report

Note: For a complete record of the accomplishments of NPTN for the 1997 operational year, the reader is directed to: the 12 monthly reports and 4 quarterly reports (submitted earlier), in addition to the "1997 Annual Report." This annual report covers the NPTN grant year: April 1 through March 31.

Operations -

- The NPTN World Wide Web site is an increasingly popular source of information to NPTN clientele - during this operational year the site received 105,343 hits; an additional 16,931 hits were received by the National Antimicrobial Information Network (NAIN) web site. NPTN received 340 inquiries via email.
- NPTN answered 21,837 calls during its third operational year. Eighty percent of the inquiries were received between March and October, coinciding with that part of the year where most pest pressures are the highest. Table 3.1
- The majority of calls (93.3%) were for information only, i.e., not related to an incident; 4.8% related to exposure concerns, and 1.9% concerned other non-health-related pesticide incidents. Table 3.7
- The greatest number of calls (38.2%) were health-related, whereas 22.9% were for information about pesticide usage, and 9.4% were of a regulatory nature. Table 3.6. Examples of "health-related" calls include:
 - Callers house is treated every 30 days. She has two, 4 month old infants. Is it ok?
 - Having Vikane treatment on house and is concerned about perishable foods and the refrigerator. If sulfuryl fluoride is not reactive and doesn't leave a residual, why do I have to seal up my refrigerator and cover or remove perishable foods?
 - Caller's husband wants to treat side of porch for termites. Caller is pregnant and wants to know how dangerous this is.
 - Caller and family live on 2 and 3rd story of house. Landlord lives in basement. PCO treated house by drilling and trenching. Caller wanted to know what precautions to take and health effects.
- Of the 21,837 calls, 7.1% of calls (1,559) involved pesticide incidents, while 41.0% (8,953 calls) were for information about specific pesticide active ingredients or products, and 48.0% (10,482 calls) were for general information about pesticides and pesticide-related issues. Table 3.2. Examples of pesticide incidents calls include:
 - Caller went into the house while the foggers were active. She became sick. She vomited and had diarrhea. Her eyes and lungs had a burning sensation. She now has numbness on her face and hands. She is no longer ill. Wanted to know if symptoms will go away.
 - Veterinarian called about an 8 wk old beagle (about 3 lbs), who was experiencing seizures, salivation, pin-pt eyes. Owner a PCO who brings pesticide into house at night to keep product from freezing. Dog licks owners boots and (nozzle of canister?).
 - Caller had home sprayed for carpet beetles. Pesticide was sprayed heavily everywhere in apartment and even sprayed on clothes, furniture and bed. Also used a fogger. Applicator mixed the pesticide in the apartment sink. Occupants are having problems with burning sensations in eyes, nose and lips.
 - Caller is a local exterminator who has been dealing with pesticides for at least 12 years. He has suffered a myriad of symptoms (pneumonia 9 times in one year). He left the company for 4 months and felt great and then went back for 45 days and now has recurring symptoms, extreme fatigue, rash on both forearms, cough, excessive sweating.
- Of the 1,559 incident calls, 12.9% of the calls were assigned a certainty index of 1 or 2; thus, judged to have been either definitely or probably caused by the pesticide in question. Table 3.12
- The active ingredient - chlorpyrifos - generated more inquiries (1,777) (corresponding to 8.1% of all calls, and 19.9% of pesticide-specific calls) than any other single active ingredient. Of these, 15.8% (281) were incident calls and 84.5% were inquiries for general information. Of the 281 chlorpyrifos incident calls, 15.7% were assigned a certainty index of 1(definite) or 2 (probable). The relatively large number of calls about chlorpyrifos is likely related to its being one of the most widely used chemicals in and around the home. Table 3.10 and Figure 3.4

NPTN Executive Summary - 1997

- For the remaining active ingredients (in the top25) involved in incidents, there were a total of 802 incidents, with 11.2% of them assigned a certainty index of 1 or 2. It is interesting to note that the proportion of chlorpyrifos incidents assigned a certainty index of 1 or 2 was not much different than for the remaining top 24 pesticides taken as a group. Most of the reported incidents involved humans (69.9%) and 16.9% involved animals. Table 3.11 and Figure 3.5
- There were 1,689 victims involved in the incidents reported to NPTN - 67.6% were human, 19.0% animal, and 13.4% other (e.g., building, environment). Of the human victims, 35.7% were male, 50.5% female, 10.5% groups, and 3.2% where gender was not stated. Table 3.14 and Table 3.15
- Of the 1,142 human victims in incident calls, information about symptoms was given for 1,042. Of these, 62.5% were symptomatic (symptoms matched those for pesticide in question), 15.7% were asymptomatic, and 21.8% reported atypical symptoms. Table 3.16
- Amongst the 1,142 human victims, two deaths were reported, with none of the incidents judged to have a certainty index of 1 or 2, making it unlikely that these deaths were a result of pesticide exposure. Of the 321 animal victims, there were 34 deaths, with 12 of the incidents assigned a certainty index of 1 or 2, indicating likely pesticide involvement. Table 3.17
- Victim ages were available for 830 of the 1,142 human victims. Fifteen and eight tenths of a percent of the victims were less than 5 years old, 9.8% were between the ages of 5 - 14, 4.0% were between 15 - 24, 60.4% were between the ages of 25 - 64, and 10.0% over age 64. Table 3.18
- Most of the calls (83.8%; 18,305) to NPTN came from the general public, while 5.2% calls came from federal/state/local agencies, 3.2% from medical personnel, 3.2% from information providers, and 2.8% from consumer users. Table 3.5
- Of the known locations (1,559) where incidents occurred, 73.6% were the home or yard, while 8.4% were agriculturally related and 4.8% involved an office building or school. Table 3.12
- Most of the calls to NPTN (82.4%; 17,948) were answered by providing verbal information to the caller. Other actions taken by pesticide specialists were to refer callers to EPA and SLA (6.4%), to County Extension Service (2.2%), Oregon Poison Center (0.2%), National Animal Poison Control Center (0.4%), National Antimicrobial Information Network (1.0%), and other organizations (4.2%). Some callers (3.4%) received information via mail or FAX. Table 3.8
- There were 21,005 inquiries to NPTN via telephone - information from AT&T phone logs indicated that many more calls were placed to the NPTN 800# than could be answered by the number of pesticide specialists on staff. Table 3.3
- The largest number of calls were received from California, Texas, and New York - states ranked 1, 3, 2 respectively, in terms of population. Table 3.9, Figure 3.2
- By EPA region, 12.7% of the calls came from Region 6, 11.9% from Region 9, 11.8% from Region 4, 11.6% from Region 3, and 10.5% from Region 2. Figure 3.3

Organization -

- During its third year of operation, NPTN hired 9.0 FTE pesticide specialists at the rank of Faculty Research Assistant. NPTN initiated recruitment for 2.0 FTE pesticide specialists (one to serve as NPTN Project Coordinator) - this search will be completed next operational year. Five pesticide specialists left NPTN for other professional or domestic opportunities.
- The name of the Antimicrobial Complaint System (ACS) was changed to the National Antimicrobial Information Network (NAIN). Additional funding was obtained from U.S. EPA and Oregon State University to allow expansion of NPTN service to include Saturdays and Sundays; this expanded service began on June 28, 1997.
- NPTN completed development of pesticide-related fact sheets on Permethrin, Fipronil, and Pets and Pesticides, and initiated development of several others. NPTN continued its weekly training sessions for pesticide specialists. Extensive efforts were put forth to market NPTN to a broader base of clientele, including poster presentations of NPTN at several professional meetings and a mailing to 3,200 public health officials. Resource files were updated and new hard copy and electronic resources were acquired.

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Note: The complete record of the accomplishments of NPTN for the 1997 operational year include the 12 monthly reports and 4 quarterly reports (submitted earlier), in addition to this "1997 Annual Report."

1. NPTN Mission Statement

The primary mission of the National Pesticide Telecommunications Network is to serve as a source of objective, science-based pesticide information on a wide variety of pesticide-related subjects, including:

- pesticide products
- recognition and management of pesticide poisonings
- toxicology
- environmental chemistry
- referrals for laboratory analyses, investigation of pesticide incidents, and emergency treatment
- safety practices
- health and environmental effects
- clean-up and disposal referrals.

A major goal of NPTN is to promote informed decision making on the part of the caller.

Service provided by NPTN is available from 6:30am - 4:30 PM Pacific Time, 7 days per week (excluding holidays), principally through a toll free telephone number available to anyone in the United States and its territories. NPTN is sponsored cooperatively by Oregon State University and the U.S. Environmental Protection Agency.

NPTN is open to questions from the public and professionals. It is staffed by highly qualified and trained pesticide specialists who have the toxicology and environmental chemistry training needed to provide knowledgeable answers to questions about pesticides. NPTN pesticide specialists deliver information in a user-friendly manner and are adept at communicating scientific information to the lay public. Pesticide specialists can help callers interpret and understand toxicology and environmental chemistry information about pesticides. The service provided by NPTN and its associated projects are strictly informational and have no regulatory or enforcement capabilities.

1.1 Objectives

The stated objectives of NPTN are:

- 1) To operate a toll free telephone service to callers in the United States, Puerto Rico, and the Virgin Islands. A recording device is provided to capture off-hour calls.
- 2) To serve as a source of factual, unbiased information on pesticide chemistry, toxicology, and environmental fate to all who call including industry, government, medical, and agricultural personnel, as well as the general public.
- 3) To provide the medical community with diagnostic and crisis management assistance involving pesticide incidents in situations pertaining to both human and animal patients.
- 4) To acquire accurate and complete information on all calls considered to be pesticide incidents.
- 5) To computerize all call information as well as pesticide incident data for easy retrievability.

1.2 History

The pesticide information service began in 1978 with the Texas Tech University Health Sciences center associated Pesticide Hazard Assessment Project (PHAP) in San Benito, Texas. This service was originally used to report pesticide incidents in EPA Region VI through the Pesticide Incident Monitoring System (PIMS). Later, callers from across the U.S. began using the service to obtain information on pesticides. In 1980, the network was designated as the National Pesticide Information Clearinghouse (NPIC). In 1984, the NPIC added the 24 hour responsibilities of South Carolina's National Pesticide Telecommunications Network (NPTN) and changed its name to NPTN. The NPTN system remained in San Benito until April 1985 when it moved to the Department of Preventive Medicine and Community Health of the Texas Tech University Health Sciences Center in Lubbock, Texas. NPTN remained at Texas Tech through March, 1995. Following a competitive renewal process for the grant supporting the Cooperative Agreement between the U.S. Environmental Protection Agency and the co-sponsoring university, NPTN moved to Oregon State University on April 1, 1995.

1.3 Inquiries and Resources

NPTN receives inquiries from across the U.S. and from Puerto Rico, the Virgin Islands, Canada, Mexico, and numerous other countries. Most of the inquiries to NPTN are from the general public. The nature of the inquiries range from requests for information about: health implications of pesticide use; pesticide toxicology, environmental chemistry, regulations, and use practices; product information; environmental effects of pesticides; pesticide safety, protective equipment, cleanup and disposal; pesticide regulations; and current pesticide-related issues in the news.

NPTN maintains an extensive collection of hard-copy and electronic resources for pesticide information, used as necessary by the pesticide specialists in answering inquiries. Included in this collection are: NPTN's AI file containing information on over 200 pesticide active ingredients; numerous compendia of pesticide information (e.g., Handbook of Pesticide Toxicology, Code of Federal Regulations - 40 CFR Parts 150 - 189, Pest Control Operations, Toxicology - The Science of Poisons, Farm Chemicals Handbook, WHO Environmental Health Criteria series, Herbicide Handbook, The Pesticide Manual, Common-Sense Pest Control, pesticide product labels - to name but a few); electronic access to EXTTOXNET (EXTension TOXicology NETwork), CHEMBANK (HSDB, RTECS, IRIS), and PESTBANK; and on-line literature searching (e.g., Medline, Toxline).

1.4 Associated Projects

In addition to its basic service described above, NPTN administers a related sub-project - NAIN (National Antimicrobial Information Network). NAIN, previously known as ACS (Antimicrobial Complaint Service), provides information (via its own toll free telephone line and a World Wide Web site) to medical professionals and the public on disinfectants, sanitizers, and sterilants, each classified as pesticides by the U.S. EPA.

1.5 Funding

Funding for NPTN and NAIN is provided principally by the U.S. Environmental Protection Agency, with substantial support being provided by Oregon State University in the form of cost sharing, salary support, and facilities.

2. Update

2.1 Personnel Update

During the 1997 operational year, NPTN hired 9.0 full-time pesticide specialists and began recruitment for two additional full-time pesticide specialists, one as Project Coordinator. Five pesticide specialists left NPTN for other professional or domestic opportunities. Other part-time staff, including graduate students and other student help, were hired. Presently, NPTN employs 10 full time pesticide specialists.

2.2 Call Update

NPTN responded to 21,837 telephone inquiries, 1559 of which were classified as incidents. Incident calls were reviewed by Dr. Sheldon Wagner and/or a senior pesticide specialist. A pesticide spill, a misapplication, a contamination of a non-target entity, or any purported exposure to a pesticide (regardless of injury) is classified as an incident (regardless of certainty index). Based on the information provided by the caller, and with reference to established criteria, a certainty index is assigned by NPTN to indicate whether the incident was either definitely (1), probably (2), possibly (3), or unlikely (4) to have been caused by exposure to a pesticide, or whether the incident was unrelated (5) to pesticides. A certainty index of 0 reflects those calls where the caller reported being exposed to a pesticide but no symptoms were present. Incidents with a certainty index of 1 or 2 are listed in NPTN's monthly reports.

2.3 Achievements

Facilities -

A speed-dial phone connection was made to the Foreign Language Department on the Oregon State University (OSU) campus. This department has agreed to provide translational services for NPTN. Five new personal computers were purchased to meet the needs of the expanding staff. A new room was obtained for NPTN group meetings. New file cabinets were obtained for organization of NPTN ongoing projects. Four space heaters were purchased. Five standing floor lamps were purchased. A bottled water dispenser was installed at NPTN. A new Omnilock was placed on one of the NPTN rooms. A new NPTN staff directory was developed.

Operations -

NPTN expanded its days of operation (on June 28, 1997) to include service on Saturday and Sunday - thus NPTN now takes calls seven days per week. A computer program was written to routinely backup all Pesticide Incident Database (PID) log files. This task previously was done by hand. The Antimicrobial Complaint System (ACS) name was changed to the National Antimicrobial Information Network (NAIN).

Resources -

NPTN acquired several pesticide-related reports, books, and documents, including: CD ROM databanks - PestBank, ChemBank, Merck Index and MSDS viewer, and Pesticide Product Label System from EPA. Books - The Dose Makes the Poison, 2nd Edition; Pesticide Profiles: Toxicity, Impact and Environmental Fate; Environmental Law Handbook; Identification of Pests; Vet Clinics of North America; Carcinogen Ratings for Food Use Pesticides; the World Health Organization's Environmental Health Criteria for Rodenticides, Thallium, and Stoddard Solvent, Toxicology of the Immune System, Fate and Transport of Organic Chemicals in the Environment, Practical Crop Protection, Backyard Pest Management, How Herbicides Work, The Redbook and Taxonomy Field Guide from the National Pest Control Association, Crop Protection with Chemicals, and the Pacific Northwest Pest Control Manuals. EPA documents - Post Application Exposure and Monitoring Guidelines, EPA Headquarters Directory, Environmental Health Threats to Children, US EPA Health Advisory for Drinking Water Standards. Other - Threshold Limit Values and Biological Exposure Indices (TLV/ BEI).

An area was allocated for viewing video tapes (with TV/ VCR), to be used in training of specialists. A new phone list of pesticide manufacturers was compiled by NPTN. Work continued on the reorganization and updating of the active ingredient files and on the updating of the label and MSDS files.

Project and Information Review -

A fact sheet priority list was compiled which lists the active ingredients under development at NPTN. Several active ingredient fact sheets were started: fipronil, imidacloprid, pyrethrins and pyrethroids, cypermethrin, 2,4-D, glyphosate, dicamba, pendimethalin, diazinon, the borates, and chlorinated phenols. General fact sheets on Pet Care and Pesticide Registration, Routes of Pesticide Exposure, Pesticides in Drinking Water, General Pesticide Facts, Environmental Estrogens, Signal Words, Pesticide Formulations, Pesticide Labels, and NPTN FAQ's were also started. The Permethrin and Fipronil Fact Sheets were finalized for distribution to the general public. An internal-use comparison fact sheet on fipronil and imidacloprid was written. A standard operating procedure for writing fact sheets was finalized. A fact sheet progress status report is now generated monthly.

The InfoBase, a project to create a computerized databank for all of NPTN's resources, was started. All NPTN work stations were provided with plastic encased resource sheets for quick access to log codes and common pest control product registration numbers and active ingredients. Various hard copy resources were reorganized. Less important resource books were moved to another room. Old copies of magazines and articles are now filed in the phone room. Efforts continue to review and update the active ingredient files. The list of general files was updated for improved accessibility. The NPTN world wide web site was updated with new information and an increased level of user-friendliness. New log sheet codes with a database entry program were presented to the specialists. These new codes are designed to be more efficient and gain more searchable information from the call.

The first draft of an NPTN publicity package was finished. A professional display was purchased and constructed for NPTN and NAIN to use at scientific conferences. NPTN's referral's database was updated with correct phone numbers and addresses. The NPTN pesticide specialist's training manual was updated with a section on pesticide formulations, and a new section was added which involves NPTN trainees receiving mock calls from specialists. Trainees now are required to work with multiple specialists before taking calls. A section on Internet resources was added. New standard operating procedures were established for active ingredient working file creation and review. A new FQPA information page was added to the NPTN Internet web site. A new version of the NPTN brochure was created.

Training -

Weekly group meetings, a principal training activity for pesticide specialists, were continued throughout the year. DowElanco representatives provided an informational meeting to discuss issues surrounding picloram. Dr. Wagner gave a brief discussion of methyl parathion to help specialists address concerns over health issues. Dr. Wagner discussed the possibility of three synthetic pyrethroids causing cholinesterase inhibition. Specialists and directors participated in a seminar to improve communication and productivity. Directors gave an informal presentation on the Food Quality Protection Act and how it might stimulate calls to NPTN.

Frank Davido and Sherri Street from EPA held group and individual discussions with the specialists and directors informing us of EPA's expectations for our service and current issues in the EPA. They answered questions about the structure of the EPA and functions of individual offices and groups within offices. Dr. Wagner gave presentations on Multiple Chemical Sensitivity and an epidemiological study on the insect repellent DEET. Dr. Miller and two specialists attended a conference on conversational skills sponsored by Oregon State University. Two of the specialists followed a local pesticide applicator on his daily routine for additional training. A pesticide specialist gave a presentation on the classes of rodenticides. Another pesticide specialist gave a presentation on the factors influencing environmental fate of synthetic organic pesticides.

Dr. Terry Miller gave a presentation on the method by which pesticide tolerances are set. A full-day presentation was given by representatives from DowElanco on their products Dursban, Vikane, and Recruit. These presentations focused on toxicological issues and product stewardship. Representatives answered questions posed by NPTN specialists as well. A discussion of incident coding was conducted for the new specialists to insure accuracy and consistency in coding. NPTN cooperatively sponsored a lecture series with the OSU Environmental Health Sciences Center. Speakers for January, February, and March included Dr. Art Craigmill, Dr. Nancy Kerkvliet, and Dr. Wayne Landis. Dr. Craigmill discussed communicating issues of toxicological risk, Dr. Kerkvliet spoke about endocrine disruptors and Dr. Landis discussed modeling for ecological risk. A pesticide specialist gave an internal seminar on respirators, safety equipment and pesticide residue sampling techniques. Another pesticide specialist gave a seminar on the Food Quality Protection Act. The NPTN directors and several specialists attended the pesticide applicator training short course in Eugene, OR. Dr. Miller and Terry Brock attended a professional meeting on the Food Quality Protection Act in St. Louis, MO. Dr. Jack DeAngeles, the OSU extension urban pest specialist, met with NPTN specialists to discuss issues related to pest management.

Publicity -

NPTN marketing efforts were continued - activities included: A poster-type display was created for use at professional meetings. This poster was displayed at the American Public Health Association annual meeting in Indianapolis, IN. NPTN developed and sent out a publicity letter, brochure, and flyer to approximately 3,200 public health officials. A presentation about NPTN and what types of questions we answer was given to the Western Regional Epidemiological Network in Ashland, OR. The NAIN specialist attended the 1997 APIC meeting in New Orleans, LA. She handed out 400 NAIN brochures. NPTN collected several articles in which the 1-800 number was listed for consumers to use, and compiled a file of all mail and e-mail responses on the quality of NPTN's service.

Other -

Terry Miller, Jeff Jenkins, and Sheldon Wagner went to Washington, DC March 12 & 13, 1998, to meet with Frank Davido and Sherri Street and other Office of Pesticide Programs staff to discuss NPTN accomplishments, future goals, and other items. NPTN conducted an analysis of its call load and calls. Conclusions include: 1) Pattern of incoming calls is somewhat unpredictable, 2) Call load is greatest during the times: 06:30 AM-14:30 PM, and 3) Call load is greatest during June-August, with as many as 25 calls/30 min.

3. Traffic Report

3.1 Traffic Report Narrative

NPTN answered 21,837 inquiries during its third year of operation (April 1997 - March 1998) at Oregon State University. Most of the calls received by NPTN are quite sophisticated, requiring extensive expertise on the part of the pesticide specialists to be able to provide answers which are objective, science-based, and accurate, and, at the same time, are presented in an understandable way to the caller. A monthly summary of calls is provided in Table 3.1. Also included in Table 3.1 is a listing of the total number of calls by calendar year, including 1997. The types of calls received by NPTN are shown in Table 3.2.

The means by which people contact NPTN is shown in Table 3.3. The telephone is by far the most important verbal contact route. However, many people access NPTN through its World Wide Web site - during this year, the web site received 105,343 hits. During the same time, there were 16,931 hits to the web site of an NPTN sub-project, the National Antimicrobial Information Network (NAIN) (Table 3.4 and Figure 3.1). In addition, there were 340 direct inquiries to NPTN via email. The variety of callers to NPTN is shown in Table 3.5. The predominant number of calls received by NPTN are from the general public. The types of questions posed to the NPTN Pesticide Specialists are sorted in Table 3.6. Most of the callers requested information about health related issues. Most of these information calls and the others listed in Table 3.6 were prompted by concern/knowledge of the caller (Table 3.7). The reasons for incident calls are also shown in Table 3.7. The outcome of most calls to NPTN is that the caller receives verbal information from a Pesticide Specialist (Table 3.8). A large number of callers receive written information as well as verbal information. In addition, many calls are forwarded on to either EPA, NPMMP (National Pesticide Medical Monitoring Program), or a state lead agency (such as the Department of Agriculture).

The callers to NPTN represent all 50 states as well as Canada and other foreign nations. Table 3.9 shows the number of calls from each of the states, Puerto Rico, the Virgin Islands, and other locations. The 10 states from which most of the calls are from is presented in Figure 3.2. Residents from Texas, California, and New York initiate the greatest number of calls. Also shown in Table 3.9 and presented graphically in Figure 3.3 are the number of calls from each of the EPA regions.

Questions or comments about chlorpyrifos generate a greater number of calls to NPTN than any other pesticide active ingredient. The total number of calls as well as the number of information and incident calls for the 25 most asked about pesticide active ingredients is presented in Table 3.10. For incident calls, the value shown in parentheses indicates the number of incidents with a certainty index of 1 (definite) or 2 (probable). The 10 active ingredients mentioned most often in calls is graphically represented in Figure 3.4. The 25 active ingredients most frequently mentioned in incident calls are listed in Table 3.11. Incident calls are further represented by victim type. The 10 active ingredients most often mentioned in incident calls are graphically represented in Figure 3.5. The locations where pesticide exposures were purported to have taken place are shown in Table 3.12. The environmental impact of the pesticides involved in incidents is shown in Table 3.13.

The incident calls are further categorized by whether the incident involved a human, animal, or building/other. Incidents are further classified in Table 3.14. The incident calls for each victim type are categorized by the certainty index. The certainty index is an estimate by NPTN as to whether the incident was either definitely (1), probably (2), possibly (3), or unlikely (4) to have been caused by exposure to a pesticide, or whether the incident was unrelated (5) to pesticides. A certainty index of 0 reflects those calls where the caller reported being exposed to a pesticide but no symptoms were present. For human victims presented in Table 3.14, the certainty index is further categorized by gender or group. Table 3.15 lists the descriptions for the victims involved in incidents. Reported symptoms are shown in Table 3.16. The number

of deaths, life threatening, or interesting/strange cases due to a potential pesticide exposure is shown in Table 3.17. Victim ages are provided in Table 3.18.

3.2 Traffic Report Tables and Figures

Table 3.1 NPTN Monthly Telephone Calls

Month	Number of Calls				
	1995	1996	1997	1998	1999
April	1,560	2,015	2,129		
May	1,494	2,215	2,199		
June	1,612	2,111	2,441		
July	1,763	2,114	2,536		
August	2,004	1,950	2,282		
September	1,633	1,638	1,904		
October	1,699	1,642	1,712		
November	1,289	1,094	1,131		
December	895	858	1,060		
January	1,098	1,114	1,153		
February	1,217	1,263	1,353		
March	1,511	1,557	1,937		
Calendar ¹⁾ Year Total =	13,949	19,463	21,328		
Grant ²⁾ Year Total =	17,775	19,571	21,837		

¹⁾ April 1 through December 31 for 1995; January 1 through December 31, other years.

²⁾ April 1 through March 31.

Table 3.2 Summary of Types of Calls Received by NPTN

Type of Call	Number of Calls				
	1995	1996	1997	1998	1999
Information - Specific Pesticide	7,215	7,757	8,953		
Information - General Pesticide	7,973	9,243	10,482		
Incidents	1,944	1,749	1,559		
Human Victims	1,327	1,067	1,026		
Animal Victims	276	327	311		
Building/Other	331	355	221		
Other - Non-Pesticide	643	822	843		
Grant Year Total =	17,775	19,571	21,837		

Table 3.3 Origin of Calls to NPTN

Origin of Call	Number of Calls				
	1995	1996	1997	1998	1999
Telephone	17,104	18,901	21,005		
Voice Mail	373	455	542		
Mail	117	129	126		
Walk In	7	10	6		
Other	174	76	158		
Grant Year Total =	17,775	19,571	21,837		

Table 3.4 Web Site Hits for NPTN and NAIN - 1997

Month	# of Hits NPTN	# of Hits NAIN
April	5687	158
May	5182	299
June	6531	377
July	8393	1461
August	9153	1492
September	8482	1462
October	10418	1263
November	7864	1258
December	9763	1224
January	11084	2349
February	11931	1675
March	10855	3913
Total =	105,343	16,931

Figure 3.1 Web Site Hits for NPTN and NAIN - 1997

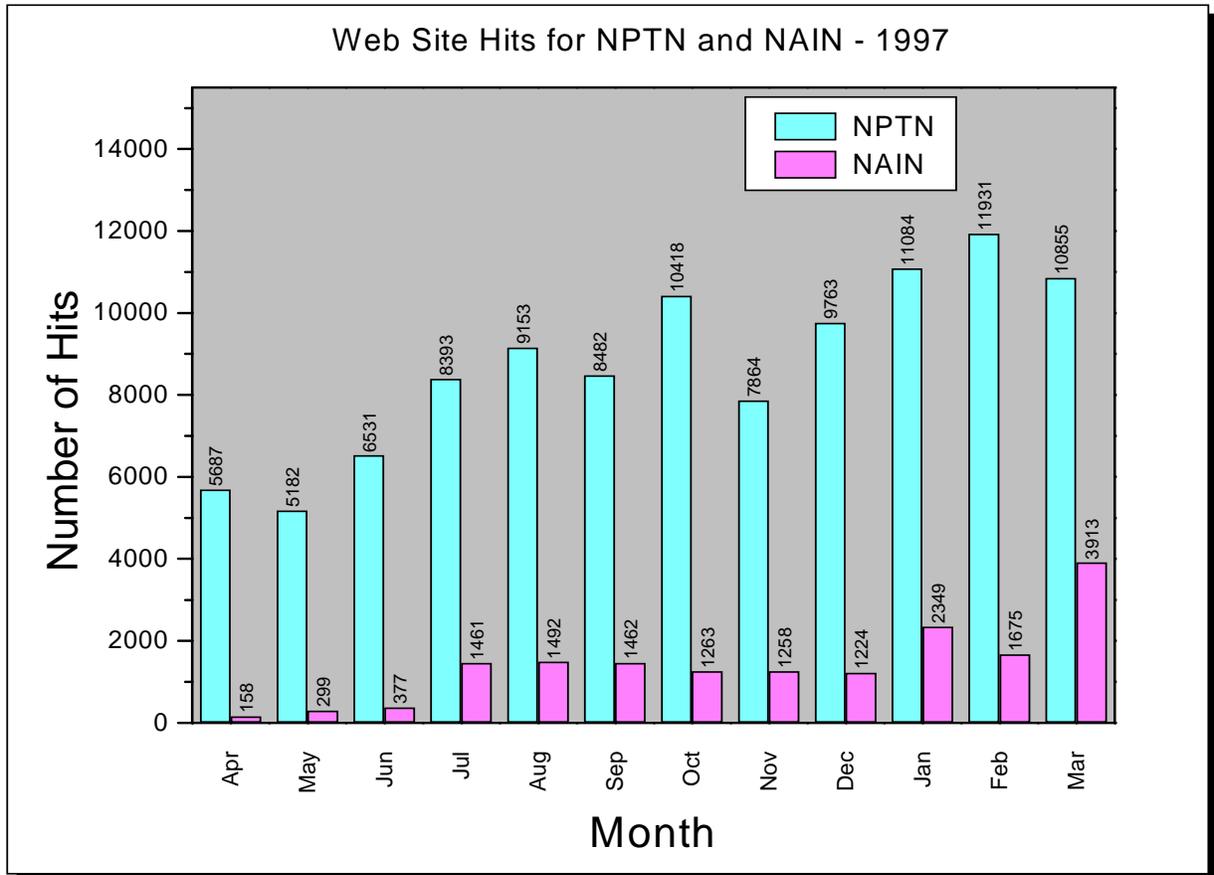


Table 3.5 Type of Caller to NPTN

Type of Caller	Number of Calls				
	1995	1996	1997	1998	1999
General Public	15,357	16,743	18,304		
Federal/State/Local Agency					
Health Agency	122	101	120		
Government Agency	360	446	637		
Enforcement Agency	39	50	67		
Schools/Libraries	239	222	280		
Fire Department	27	26	26		
Medical Personnel					
Human Medical	336	423	532		
Animal Vet./Clinic	92	147	159		
Migrant Clinic	9	10	16		
Information Groups					
Media	127	165	228		
Unions/Info. Service	51	96	104		
Environmental Org.	119	139	191		
Pesticide Mfg./Mktg. Co.	128	136	158		
Consumer Users					
Lawyer/Insurance	98	143	129		
Lab./Consulting	222	176	149		
Pest Control	186	167	227		
Retail Store	55	49	57		
Farm	51	65	67		
Other	157	267	386		
Grant Year Total =	17,775	19,571	21,837		

Table 3.6 Type of Question Asked by Callers to NPTN

Type of Question	Number of Calls				
	1995	1996	1997	1998	1999
Health Related					
Health	8,225	8,363	7,997		
Treatment	172	158	238		
Testing Lab.	73	97	114		
Usage Information					
Pest/Crop	1,211	1,267	1,437		
Chemical	912	1,202	1,865		
Pros and Cons	162	181	185		
Safety/Application	278	655	1,040		
Cleanup	273	283	312		
Harvest Intervals	143	69	105		
Lawn Care	58	51	54		
Compliance					
Regulations	1,107	1,201	1,567		
Complaints	223	233	279		
Disposal	210	166	197		
General	1,519	1,845	1,026		
NPTN Questions	973	1,033	1,407		
Non-Pesticide Related	460	127	5		
Other	1,776	2,640	4,009		
Grant Year Total =	17,775	19,571	21,837		

Table 3.7 Reason for Inquiry to NPTN

Reason for Inquiry	Number of Calls				
	1995	1996	1997	1998	1999
Information Calls					
Concern/Knowledge	15,019	17,313	20,020		
Incident Calls					
Exposures					
Dermal - Acute	249	239	201		
Dermal - Chronic	34	32	13		
Ingestion - Acute	160	175	178		
Ingestion - Chronic	7	8	3		
Inhalation - Acute	244	241	176		
Inhalation - Chronic	45	61	43		
Exposure Possible	445	357	311		
Exposure/Unknown/Many	72	54	83		
Occupational	79	39	42		
Accidents					
Misapplic. - Homeowner	152	116	101		
Misapplic. - PCO	132	84	111		
Misapplic. - Other	31	22	39		
Spill - Indoor	65	47	55		
Spill - Outdoor	24	18	15		
Contamination - Home	37	25	21		
Contamination - Other	36	26	16		
Drift	81	81	59		
Fire - Home	3	2	1		
Fire - Other	3	0	0		
Industrial Accident	0	0	0		
Odor Only	53	80	58		
Testing Laboratory	6	2	1		
Other	103	76	36		
N/A-Unknown	695	473	254		
Grant Year Total =	17,775	19,571	21,837		

Table 3.8 Action Taken by NPTN

Action Taken	Number of Calls				
	1995	1996	1997	1998	1999
Verbal Information	11,590	15,078	17,948		
Referrals to:					
EPA, State Lead Agencies, National Pesticide Medical Monitoring Program	1,763	1,363	1,404		
County Extension	711	500	490		
Oregon Poison Center	69	45	42		
National Animal Poison Control Center	100	152	77		
Antimicrobial Complaint System	103	208	214		
Other Organizations	2,001	1,086	915		
Mailed Information, Brochure, Publication	1,098	802	576		
Other/FAXED Information	340	337	171		
Grant Year Total =	17,775	19,571	21,837		

Table 3.9 Listing of States and Foreign Nations Using NPTN During 1997 Operational Year

EPA Region	State Code	State	Number of Calls
		Not recorded	979
10	AK	Alaska	13
4	AL	Alabama	250
6	AR	Arkansas	110
9	AZ	Arizona	275
9	CA	California	2692
FN	CN	Canada	79
8	CO	Colorado	282
1	CT	Connecticut	448
3	DC	District of Columbia	427
3	DE	Delaware	49
4	FL	Florida	1151
FN	FN	Foreign	67
4	GA	Georgia	387
9	HI	Hawaii	68
7	IA	Iowa	145
10	ID	Idaho	80
5	IL	Illinois	510
5	IN	Indiana	219
7	KS	Kansas	176
4	KY	Kentucky	169
6	LA	Louisiana	158
1	MA	Massachusetts	1135
3	MD	Maryland	693
1	ME	Maine	56
5	MI	Michigan	351
5	MN	Minnesota	241
7	MO	Missouri	373
4	MS	Mississippi	66
8	MT	Montana	60
4	NC	North Carolina	411

Table 3.9 Listing of States and Foreign Nations Using NPTN During 1997 Operational Year (continued) -

EPA Region	State Code	State	Number of Calls
8	ND	North Dakota	15
7	NE	Nebraska	115
1	NH	New Hampshire	78
2	NJ	New Jersey	455
6	NM	New Mexico	106
9	NV	Nevada	65
2	NY	New York	1866
5	OH	Ohio	488
6	OK	Oklahoma	149
10	OR	Oregon	836
3	PA	Pennsylvania	909
2	PR	Puerto Rico	30
1	RI	Rhode Island	45
4	SC	South Carolina	123
8	SD	South Dakota	26
4	TN	Tennessee	202
6	TX	Texas	2571
8	UT	Utah	57
3	VA	Virginia	668
2	VI	Virgin Islands	7
1	VT	Vermont	69
10	WA	Washington	463
5	WI	Wisconsin	258
3	WV	West Virginia	96
8	WY	Wyoming	20
Grant Year Total =			21,837

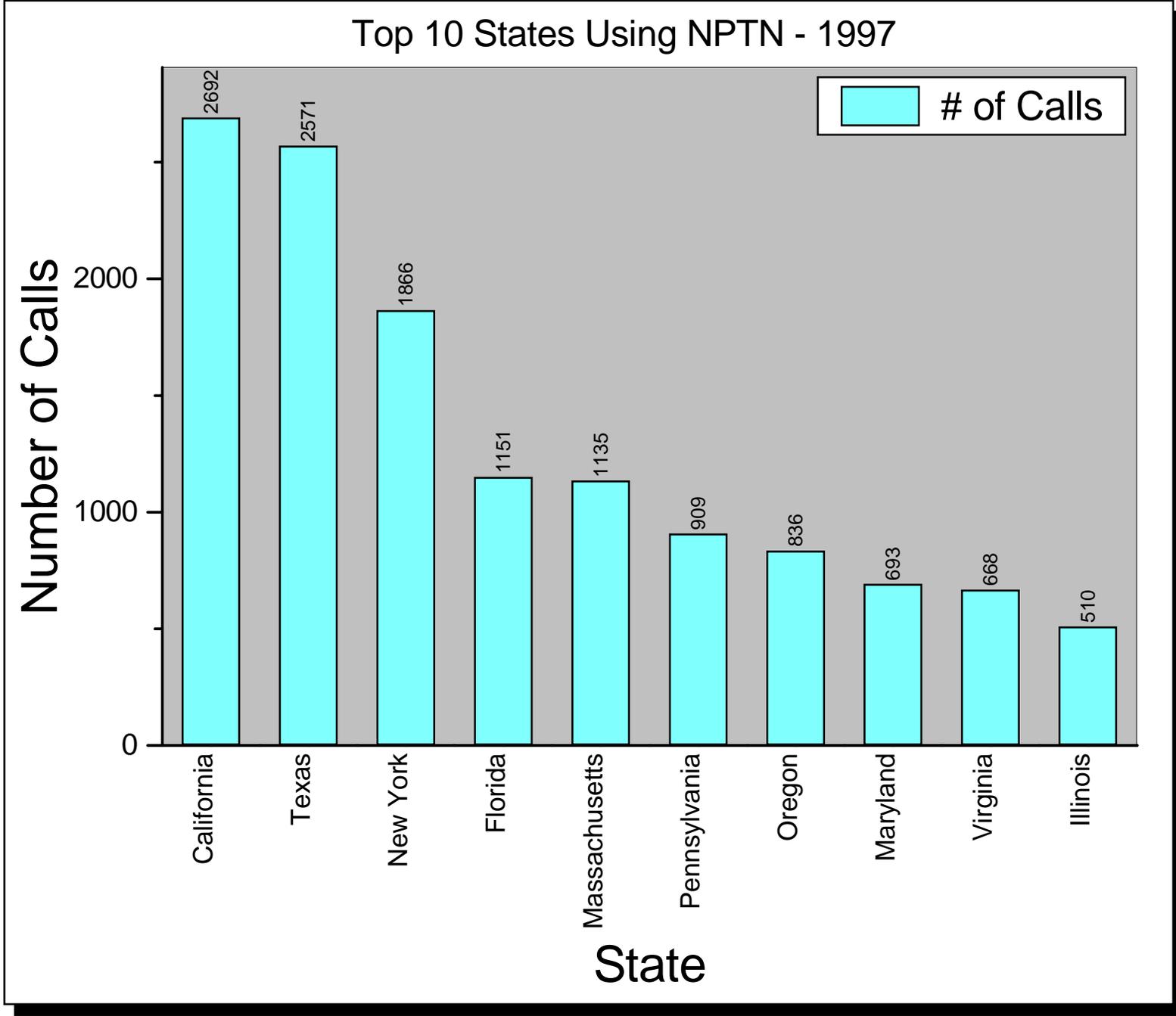


Figure 3.2 Top 10 States Using NPTN

Calls to NPTN by EPA Region - 1997

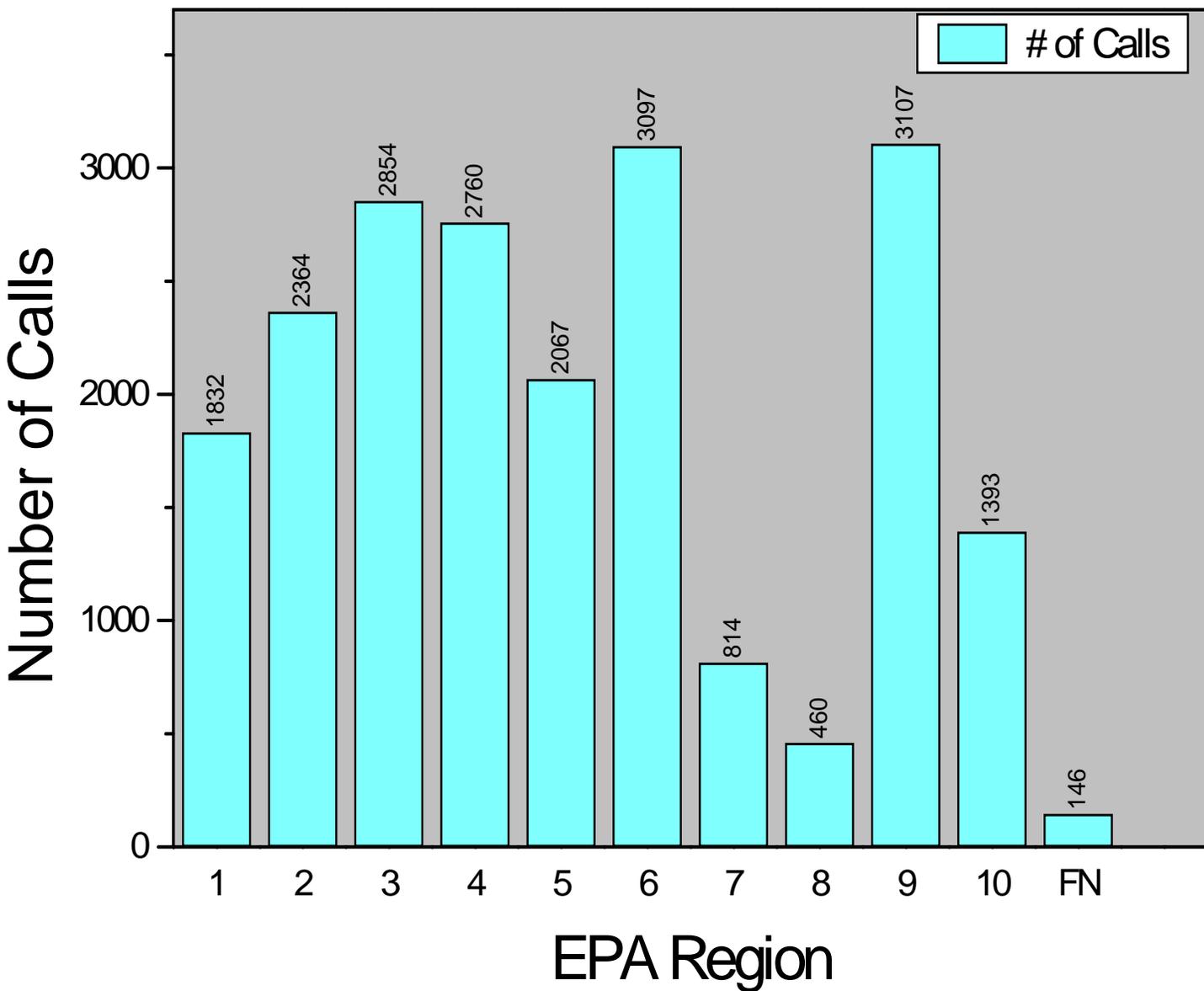


Figure 3.3 Calls to NPTN by EPA Region

Table 3.10 Top 25 Active Ingredients for All Calls to NPTN in the 1997 Operational Year

Active Ingredient	Total Calls	Incident Calls ¹⁾	Information Calls
Chlorpyrifos	1,777	281 (44)	1,501
Permethrin	827	95 (16)	734
Pyrethrins	812	93 (17)	722
Diazinon	716	132 (11)	588
Boric Acid	587	14 (1)	579
Bendiocarb	434	29 (5)	405
Imidacloprid	385	19 (1)	366
Glyphosate	383	47 (2)	337
Cyfluthrin	363	29 (1)	335
Malathion	363	60 (6)	303
Cypermethrin	347	38 (1)	311
Chlordane	274	21 (3)	253
Carbaryl	260	37 (3)	223
2,4-D	247	35 (5)	213
Sulfuryl Fluoride	208	3 (2)	205
Hydramethylnon	164	24 (0)	141
Lambda-Cyhalothrin	152	14 (2)	138
DEET	146	18 (3)	128
Hexaflumuron	141	0 (0)	142
Esfenvalerate	137	15 (4)	122
Methoprene	129	12 (2)	118
Acephate	124	26 (2)	98
DDT	110	6 (0)	105
Fipronil	105	14 (1)	92
Pendimethalin	104	21 (2)	83
Total - Above Pesticides =	9,295	1,083 (134)	8,242
All Other Pesticides =	1,251	769	735

¹⁾ First number represents the total of purported incidents regardless of certainty index - numbers in parentheses indicate the total of incidents with certainty index of 1 (definite) or 2 (probable).

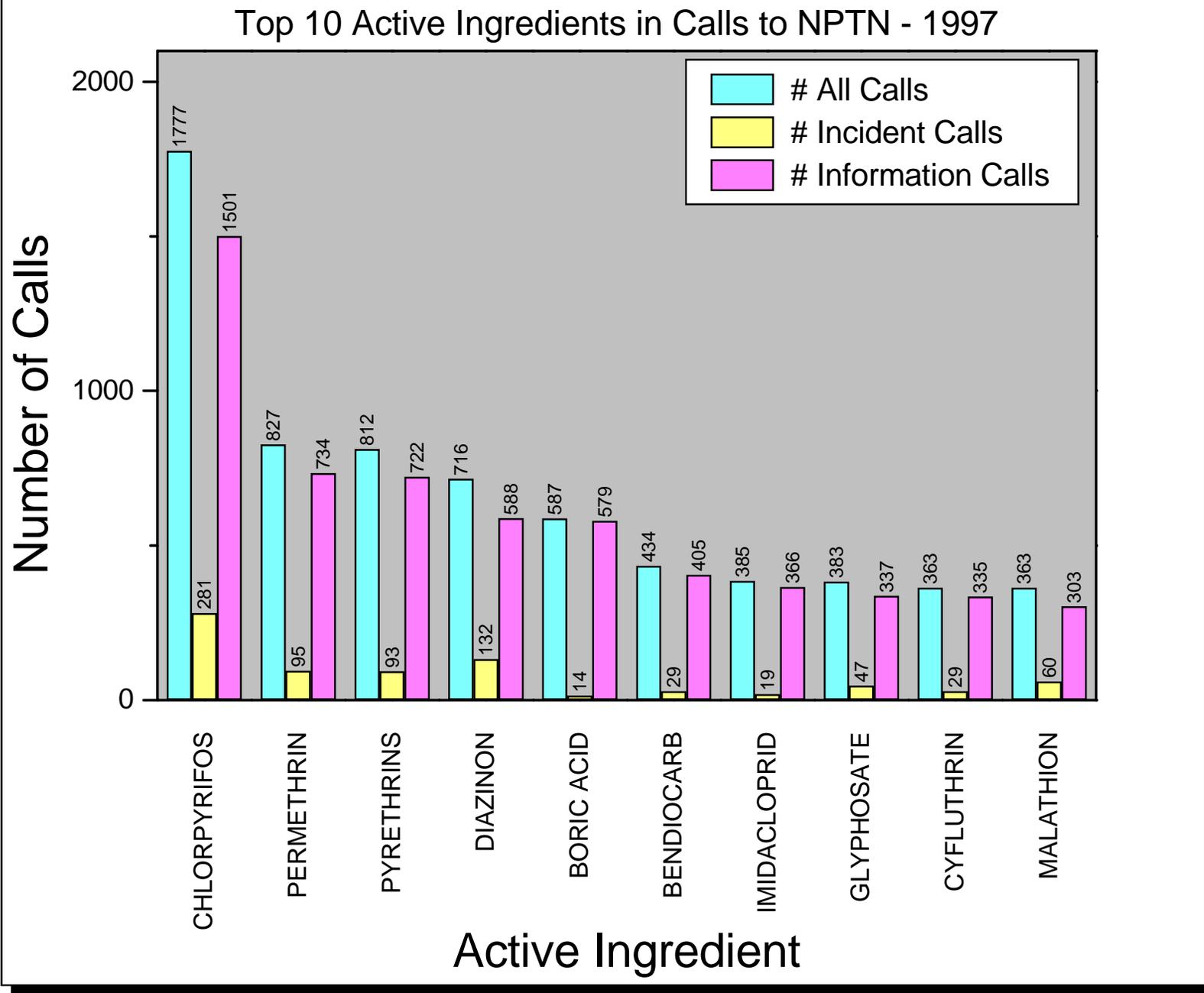


Figure 3.4 Top 10 Active Ingredients in All Calls

Table 3.11 Top 25 Active Ingredients for Incident Calls in the 1997 Operational Year

Active Ingredient	Total Incidents¹⁾	Human Incidents	Animal Incidents	Other Incidents	Information Calls
Chlorpyrifos	281 (44)	218 (37)	30 (6)	49 (1)	1,511
Diazinon	132 (11)	80 (6)	21 (5)	33 (0)	492
Permethrin	95 (16)	60 (4)	20 (12)	8 (0)	484
Pyrethrins	93 (17)	79 (13)	11 (4)	11 (0)	657
Malathion	60 (6)	42 (5)	5 (0)	26 (2)	187
Glyphosate	47 (2)	28 (2)	12 (0)	10 (0)	327
Cypermethrin	38 (1)	27 (0)	5 (1)	10 (0)	212
Carbaryl	37 (3)	24 (2)	7 (1)	11 (0)	256
2,4-D	35 (5)	24 (5)	3 (0)	16 (1)	151
Bendiocarb	29 (5)	26 (4)	1 (1)	6 (0)	293
Cyfluthrin	29 (1)	21 (1)	4 (0)	5 (0)	394
Acephate	26 (2)	18 (2)	3 (0)	14 (0)	234
Hydramethylnon	24 (0)	6 (0)	18 (0)	4 (0)	394
Chlordane	21 (3)	17 (3)	1 (0)	8 (0)	99
Pendimethalin	21 (2)	14 (2)	6 (0)	2 (0)	93
Imidacloprid	19 (1)	9 (1)	8 (0)	2 (0)	123
DEET	18 (3)	17 (3)	1 (0)	6 (0)	62
Piperonyl Butoxide	17 (5)	13 (5)	4 (0)	5 (0)	228
Propetamphos	17 (3)	12 (3)	1 (0)	0 (0)	17
Resmethrin	16 (7)	15 (6)	1 (1)	0 (0)	109
Esfenvalerate	15 (4)	12 (4)	2 (0)	1 (0)	186
Boric Acid	14 (1)	9 (1)	3 (0)	3 (0)	70
Bromadiolone	14 (0)	0 (0)	14 (0)	4 (0)	19
Fipronil	14 (1)	6 (0)	8 (1)	3 (0)	16
Lambda-Cyhalothrin	14 (2)	10 (2)	1 (0)	1 (0)	48
Total - Above Pesticides =	1,126 (145)	787 (111)	190 (32)	238 (4)	6,662
All Other Pesticides =	726	512	128	117	1,104

¹⁾ First number represents the total of purported incidents regardless of certainty index - numbers in parentheses indicate the total of incidents with certainty index of 1 (definite) or 2 (probable).

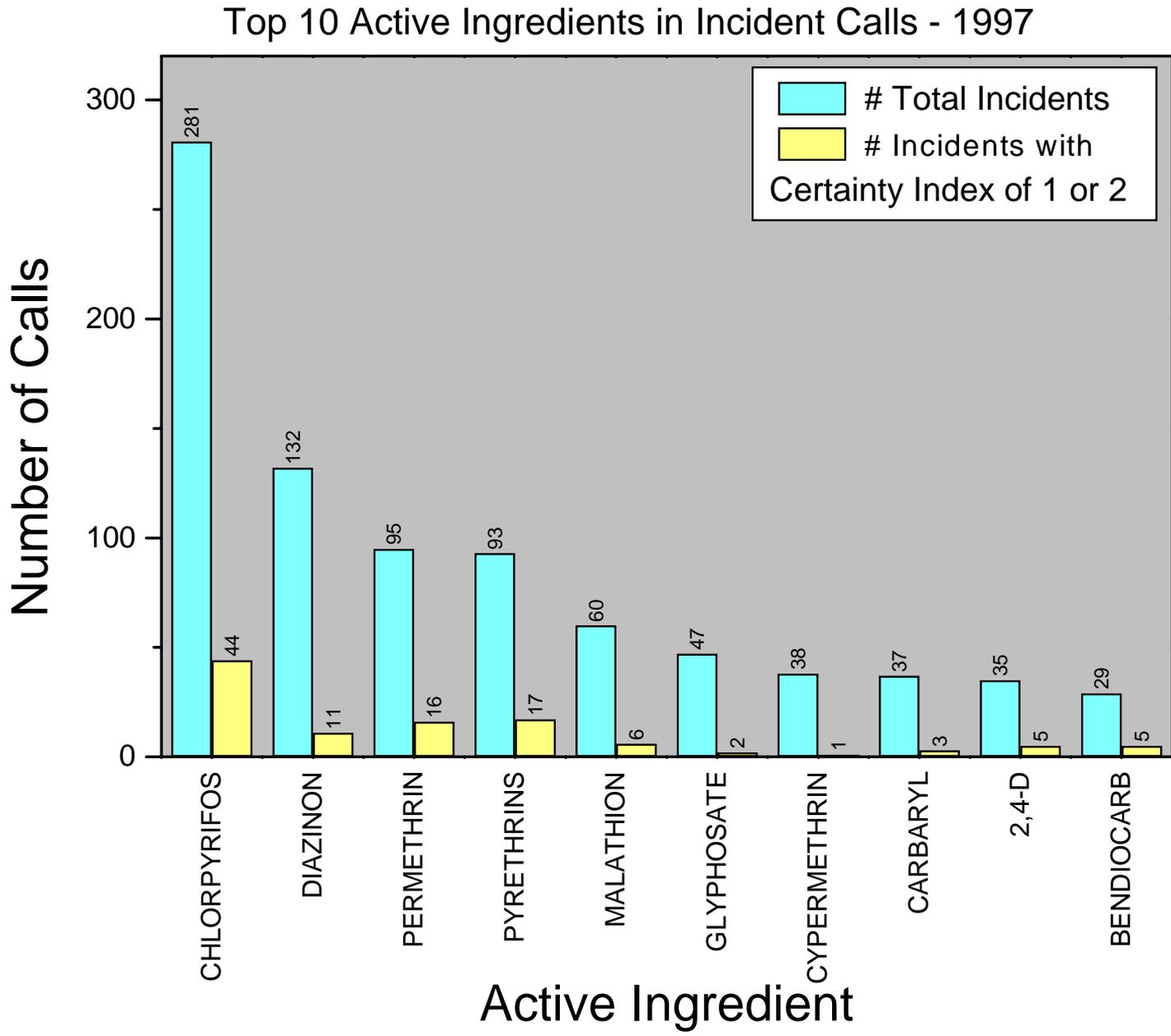


Figure 3.5 Top 10 Active Ingredients in Incident Calls

Table 3.12 Location Where Exposure to a Pesticide Occurred

Location	Number of Incident ¹⁾ Calls				
	1995	1996	1997	1998	1999
Unclear/Unknown	975 (139)	482 (40)	14 (3)		
Home or Yard	730 (152)	902 (152)	1,148 (129)		
Agriculturally Related	92 (19)	115 (21)	131 (22)		
Industrially Related	10 (2)	16 (3)	11 (0)		
Office Building, School	51 (9)	52 (9)	75 (10)		
Pond, Lake, Stream Related	8 (3)	4 (1)	6 (3)		
Nursery, Greenhouse	7 (1)	9 (1)	10 (1)		
Food Service/Restaurants	6 (3)	6 (0)	4 (1)		
Retail Store/Business	4 (2)	15 (6)	14 (3)		
Roadside/Right-of-Way	10 (1)	15 (0)	17 (1)		
Park/Golf Course	8 (0)	7 (1)	7 (0)		
Other	43 (16)	126 (20)	122 (28)		
Total =	1,944 (347)	1,749 (254)	1,559 (201)		

¹⁾ First number represents the total of purported incidents regardless of certainty index - numbers in parentheses indicate the total of incidents with certainty index of 1 (definite) or 2 (probable).

Table 3.13 Reported Environmental Impact from Pesticide Incidents Reported

Environmental Impact	Number of Incident ¹⁾ Calls				
	1995	1996	1997	1998	1999
Air	29 (6)	32 (4)	35 (8)		
Water	24 (5)	19 (1)	15 (1)		
Soil	17 (2)	22 (3)	41 (6)		
Food Crops/Process	68 (4)	60 (3)	44 (4)		
Property	105 (24)	131 (19)	120 (14)		
Poultry/Livestock	11 (2)	9 (4)	7 (0)		
Plants/Trees	31 (1)	26 (2)	44 (4)		
Not Applicable	1,647 (297)	1,431 (215)	1,211 (154)		
Other	11 (6)	19 (3)	42 (10)		
Total =	1,943 (347)	1,749 (254)	1,559 (201)		

¹⁾ First number represents the total of purported incidents regardless of certainty index - numbers in parentheses indicate the total of incidents with certainty index of 1 (definite) or 2 (probable).

Table 3.14 Incident Calls Sorted by Certainty Index for the 1997 Operational Year

CI for All Categories of Victims					Breakdown of Human Victim Incident Calls			
Certainty Index	Humans	Animals	Other	Total	Male	Female	Groups	Gender Not Stated
Total Calls in Operational Year = 21,837								
Non-Incident Calls = 20,762								
Information Only (0)	170	107	219	496	58	76	20	16
Definite (1)	11	12	0	23	8	1	1	1
Probable (2)	169	45	4	218	72	77	16	4
Possible (3)	536	107	3	646	180	281	63	12
Unlikely (4)	249	50	0	299	87	138	20	4
Unrelated (5)	7	0	0	7	3	4	0	0
Total =	1,142	321	226	1,689	408	577	120	37

Table 3.15 Description of Victims Involved in Reported Incidents

Description of Victims	Number of Victims				
	1995	1996	1997	1998	1999
All females -					
Female	625 (112)	562 (91)	555 (76)		
Female-pregnant	68 (5)	36 (2)	22 (1)		
Female suicide attempt	2 (1)	1 (0)	2 (1)		
Total all females =	695 (118)	599 (93)	579 (78)		
All males -					
Male	460 (103)	397 (75)	407 (79)		
Male suicide attempt	2 (1)	0 (0)	1 (1)		
Total all males =	462 (104)	397 (75)	408 (80)		
All groups -					
Family	144 (40)	90 (15)	88 (10)		
Non-family group	54 (13)	33 (5)	32 (7)		
Total all groups =	198 (53)	123 (20)	120 (17)		
Gender not stated -					
Child - sex unknown	33 (4)	16 (4)	15 (1)		
Adult - sex unknown	0 (0)	0 (0)	0 (0)		
Other - sex unknown	15 (1)	4 (0)	22 (4)		
Total gender not stated =	48 (5)	20 (4)	37 (5)		
Total all humans =	1,403 (280)	1,139 (192)	1,144 (180)		
All animals -					
Single animal	242 (66)	273 (57)	259 (42)		
Group of animals	50 (15)	47 (13)	57 (15)		
Wildlife	18 (4)	19 (4)	6 (1)		
Total all animals =	310 (85)	339 (74)	322 (58)		
Other victims:					
Building-home/office	134 (16)	147 (7)	88 (2)		
Other places	208 (9)	214 (6)	138 (2)		
Total other victims =	342 (25)	361 (13)	226 (4)		
Total all victims =	2,055 (390)	1,839 (279)	1,692 (242)		

¹⁾ First number represents the total of purported incidents regardless of certainty index - numbers in parentheses indicate the total of incidents with certainty index of 1 (definite) or 2 (probable).

Table 3.16 Reported Symptoms of Victims Involved in Incident Calls

Reported Symptoms	Number of Victims ¹⁾				
	1995	1996	1997	1998	1999
Human symptoms -					
Symptomatic	721 (263)	605 (187)	651 (202)		
Asymptomatic	258 (48)	145 (29)	164 (16)		
Atypical	264 (22)	221 (21)	227 (17)		
Total humans =	1,243 (333)	971 (237)	1,042 (235)		
Animal symptoms -					
Symptomatic	152 (81)	169 (70)	162 (64)		
Asymptomatic	77 (10)	78 (8)	108 (6)		
Atypical	53 (6)	54 (5)	54 (3)		
Total animals =	282 (97)	301 (83)	324 (73)		
Total symptoms =	1,525 (430)	1,272 (320)	1,366 (308)		

¹⁾ First number represents the total of purported incidents regardless of certainty index - numbers in parentheses indicate the total of incidents with certainty index of 1 (definite) or 2 (probable).

Table 3.17 Additional Outcomes for Victims Involved in Incidents

Additional Outcome	Number of Victims ¹⁾				
	1995	1996	1997	1998	1999
Human deaths -					
Male	2 (0)	3 (1)	1 (0)		
Female	0 (0)	0 (0)	1 (0)		
Total human deaths =	2 (0)	3 (1)	2 (0)		
Animal deaths -					
Single animal	19 (10)	18 (7)	16 (7)		
Group of animals	12 (7)	13 (7)	14 (4)		
Wildlife	5 (2)	10 (1)	4 (1)		
Total animal deaths =	36 (19)	41 (15)	34 (12)		
Other -					
Life threatening	11 (7)	7 (4)	0 (0)		
Interesting/strange	42 (17)	50 (6)	144 (60)		
Total other =	53 (24)	57 (10)	144 (60)		
Total additional outcomes =	91 (43)	101 (26)	180 (72)		

¹⁾ First number represents the total of purported incidents regardless of certainty index - numbers in parentheses indicate the total of incidents with certainty index of 1 (definite) or 2 (probable).

Table 3.18 Reported Ages of Human Victims Involved in Incidents

Age Category	Number of Victims				
	1995	1996	1997	1998	1999
Under 1 Year	27	24	42		
1 Year	19	25	36		
2 Years	23	30	19		
3 Years	11	8	21		
4 Years	9	15	13		
5 - 9 Years	20	41	51		
10 - 14 Years	21	17	30		
15 - 24 Years	32	34	33		
25 - 44 Years	201	257	276		
45 - 64 Years	115	198	226		
Over 64 Years	47	66	83		

4. Report on Subcontracts

4.1 Oregon Poison Center

NPTN pesticide specialists transferred 47 calls to the Oregon Poison Center. These calls were transferred to the center because the specialists deemed that the caller's situation represented an acute poisoning emergency. The NPTN Quarterly Reports present a table for the calls transferred in that quarter.

4.2 National Animal Poison Control Center

In the current year, 90 calls were transferred to the National Animal Poison Control Center (NAPCC). The situation presented in each call was considered to be an emergency; therefore the call was transferred to NAPCC. The nature of the calls transferred is detailed in the NPTN Quarterly Reports.

5. Sub-Projects

5.1 National Antimicrobial Information Network (NAIN)

The name of the Antimicrobial Complaint Service (ACS) was changed to National Antimicrobial Information Network (NAIN), to more accurately reflect the kind of service provided as well as the type of inquiries received. NAIN received 1,781 calls during this operational year; of these 1,624 calls were for general information about antimicrobial pesticides, 32 calls were complaints about antimicrobials, and 22 calls were incidents purported to involve antimicrobials. The NAIN World Wide Web site was updated with a new look and many new links to antimicrobial information. The NAIN web site received 16,931 hits; the current rate of access is about 4,000 hits/month. Antimicrobial Lists A, B, and C were updated, and a new list (List D) of antimicrobials effective against both HIV and Hepatitis B virus was created - these lists were posted to the NAIN web site. Two Faculty Research Assistants were hired as antimicrobial specialists (one position was for replacement of an antimicrobial specialist who left NAIN during the fourth quarter for employment elsewhere).

