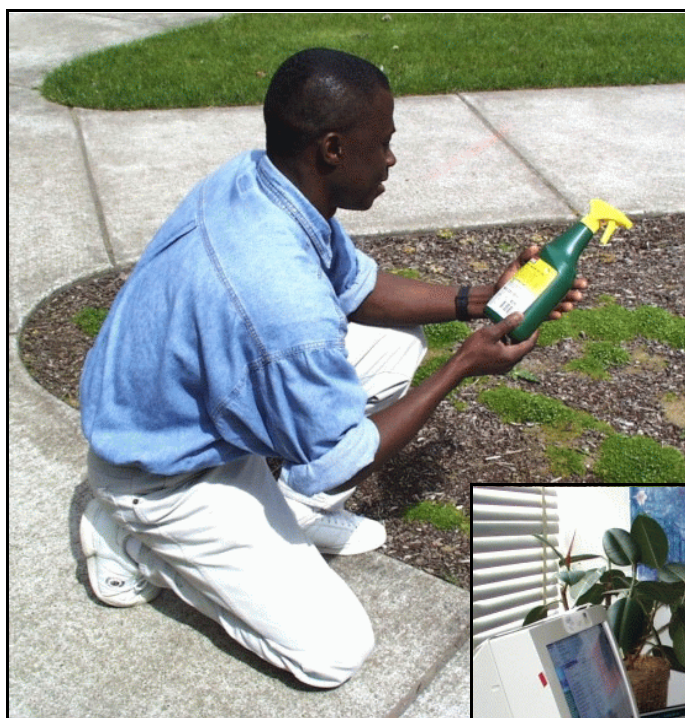


National Pesticide Telecommunications Network

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Environmental & Molecular Toxicology
Oregon State University

This is the fifth annual report for the National Pesticide Telecommunications Network (NPTN) since it began operation at Oregon State University in April, 1995. NPTN, a service providing a variety of pesticide and pesticide-related information to the general public and professionals across the United States and Puerto Rico and the Virgin Islands, is a cooperative project between Oregon State University and the U.S. Environmental Protection Agency. This report, the 1999 Annual Report, covers the period April 1, 1999 - March 31, 2000, corresponding to NPTN's fifth grant year.

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 a pesticide 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.

Submitted To:

Frank L. Davido
NPTN Project Officer
Pesticide Incident Response Officer
US EPA Office of Pesticide Programs

Submitted By:



Terry L. Miller, Ph.D.
Director

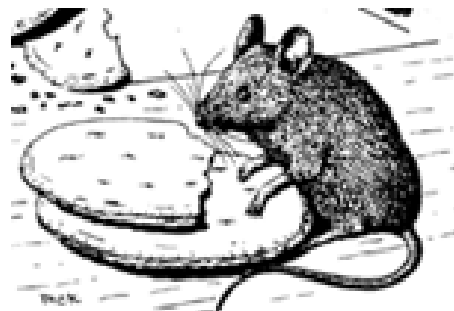
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NPTN 1999 ANNUAL REPORT TABLE OF CONTENTS

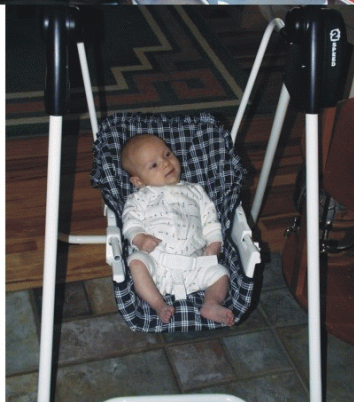
Executive Summary - NPTN 1999 Annual Report	1
Operations	3
Organization	3
NPTN Mission Statement	3
Objectives	3
History	4
Inquiries and Resources	4
Associated Projects	4
Funding	4
NPTN Update	5
Call Update	5
Achievements	5
Personnel Update	9
Facilities	9
Traffic Report	10
Traffic Report Summary	10
Traffic Report Tables and Figures	11
Table 1 - Monthly Telephone Calls	12
Table 2 - Types of Calls	13
Table 3 - Origin of Calls	14
Table 4 - Web Site Hits	15
Table 5 - Type of Caller	16
Table 6 - Type of Question	17
Table 7 - Reason for Inquiry	18
Table 8 - Action Taken	19
Table 9 - Inquiries by State	20
Table 10 - Top 25 Active Ingredients for All Calls	21
Table 11 - Top 25 Active Ingredients for Incident Calls	22
Table 12 - Location of Incidents	23
Table 13 - Environmental Impact	24
Table 14 - Incident Calls - Certainty Index	25
Table 15 - Description of Entities	26
Table 16 - Symptoms of Entities	27
Table 17 - Additional Outcomes for Entities	28
Table 18 - Ages of Human Entities	29
Report on Subcontracts	
Oregon Poison Center	30
National Animal Poison Control Center	30
Sub-Projects	30
National Antimicrobial Information Network (NAIN)	30



Read The Label! - The Label Is The Law



*“Pesticide Information . . .
. . . How May I Help You?”*



Executive Summary -

NPTN 1999 Annual Report

Note: The complete record of the accomplishments of NPTN for the current operational year includes the 12 monthly reports and 4 quarterly reports (submitted earlier), in addition to this "1999 Annual Report." This report covers the NPTN grant year: April 1, 1999 through March 31, 2000.

Operations

- ! The NPTN World Wide Web site continues to be a popular way of obtaining information from NPTN - during this operational year the site received 221,960 hits. NPTN received 380 inquiries via email.
- ! NPTN took 415 calls for information about pesticides and the outbreak of New York St. Louis Encephalitis/West Nile Virus; 14 of these were incident calls. NPTN expanded its hours of operation during September and October to help address the public's concerns.
- ! AllerCare, and its active ingredient benzyl benzoate, generated 244 incident calls and 246 calls for information.
- ! NPTN was available 24 hours per day over the New Year's weekend, in case of Y2K-related pesticide issues.
- ! NPTN answered 22,721 calls during its fifth operational year. Eighty percent of the inquiries were received between March and October, coinciding with that part of the year when most pest pressures are the highest (Table 1, Figure 1).
- ! The majority of calls (90.1%) were for information only (i.e., not related to an incident); 6.5% related to exposure concerns, and 3.4% concerned other non-health-related pesticide incidents (Table 7, Figures 8 and 9).
- ! The greatest number of calls (41.0%) were health-related, whereas 22.9% were for information about pesticide usage; 9.1% were of a regulatory nature (Table 6, Figure 7). Examples of "health-related" calls include:
 - " Caller applied a lice treatment containing permethrin to the scalp of her 5 and ½ year old daughter over a 2 week period a total of 5 times and is concerned that the daughter's nervous tick is related.
 - " DVM calling on behalf of a cat that had been exposed to diazinon. The cat was convulsing and twitching. Caller wanted information regarding diazinon poisoning and cats.
 - " Caller used 3 foggers in her business this past weekend and she wanted to know if it was hazardous to her. She's 5 and ½ months pregnant.
 - " Caller's husband had applied insect killer and a captan product to their vegetable garden yesterday and wanted to know if it would be safe to eat the spinach, lettuce and onions. Caller had checked the label and did not find those crops listed.
- ! Of the 22,721 calls, 8.6% (1,962) involved pesticide incidents, while 37.8% (8,595 calls) were for information about specific pesticide active ingredients or products, and 48.2% (10,951 calls) were for general information about pesticides and pesticide-related issues (Table 2, Figures 2 and 3). Examples of pesticide incident calls include:
 - " Caller used AllerCare, containing benzyl benzoate, as a powder. Within one hour of application, caller complained of burning eyes, nose, throat and mouth. Later in the evening, caller vomited. Carpet cleaners had been to house twice already, yet the odor persists. Now caller is barricading herself in the back bedroom because the living room is "contaminated."
 - " Caller is a physician at Sacred Heart Hospital. He has a patient, male, 40 years old, who is complaining of dizziness and numbness. Patient said that 16 hours earlier he had applied diazinon. Caller wanted to know symptoms of organophosphate poisoning.
 - " Caller's dog chewed on a can containing carbaryl. Dog is a German Shorthair Pointer, 12 years old, 50 lbs. One week after the potential exposure, the dog displayed symptoms of carbaryl poisoning including severe convulsions. Dog was taken to the vet. and given atropine for the carbaryl poisoning and additional medication for the convulsions.
 - " Caller indicated that she lives in a condo and the neighbors had a termite treatment with drilling yesterday. Today she suffers from nausea and diarrhea. She indicates she feels like vomiting but has not.
- ! Of the 1,962 incident calls, 8.4% 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 12).
- ! The active ingredient - chlorpyrifos - generated more inquiries (1,178) (corresponding to 5.2% of all calls, and 11.2% of pesticide-specific calls) than any other single active ingredient. Of these, 19.0% (224) were incident calls and 81.0% were inquiries for general information. Of the 224 chlorpyrifos incident calls, 6.3% were assigned a certainty index of 1 (definite) or 2 (probable) (Table 10, Figure 14).

- ! For the remaining active ingredients (in the top 25) involved in incidents, there were a total of 1,472 incidents, with 8.6% 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 (69.2%); 18.8% involved animals (Table 11, Figure 15).
- ! There were 2,084 entities involved in the incidents reported to NPTN - 65.1% were human, 21.3% animal, and 13.6% other (e.g., building, environment). Of the human entities, 33.6% were male, 52.4% female, 12.2% groups, and 1.8% where gender was not stated (Tables 14 and 15, Figures 16 and 17).
- ! Of the 1,356 humans involved in incident calls, information about symptoms was given for 1,261. Of these, 66.7% were symptomatic (symptoms matched those for pesticide in question), 19.0% were asymptomatic, and 14.1% reported atypical symptoms (Table 16, Figures 18 and 19).
- ! Amongst the 1,356 human entities, 5 deaths were reported - none of these incidents was judged to have a certainty index of 1 or 2, making it unlikely that the death(s) was a result of pesticide exposure. Of the 444 animal entities, there were 49 deaths, with 21 of the incidents assigned a certainty index of 1 or 2, indicating likely pesticide involvement (Table 17, Figure 20).
- ! Ages were available for 729 of the 1,356 human entities. A portion (18.8%) of the entities were less than 5 years old, 11.7% were between the ages of 5 - 14, 6.2% were between 15 - 24, 52.7% were between the ages of 25 - 64, and 10.7% over age 64 (Table 18, Figure 21).
- ! Of the known locations (1,785) where incidents occurred, 87.7% were the home or yard, while 5.1% were agriculturally related and 3.6% involved an office building or school (Table 12).
- ! Most of the calls (88.2%;20,041) to NPTN came from the general public, while 4.0% calls came from federal/state/local agencies, 2.4% from medical personnel, 2.0% from information providers, and 2.3% from consumer users (Table 5, Figures 5 and 6).
- ! Most of the calls to NPTN (75.1%; 17,070) were handled by providing verbal information to the caller. Other actions taken by Pesticide Specialists were to refer callers to EPA and SLA (5.4%), County Extension Service (6.3%), Oregon Poison Center (0.3%), National Animal Poison Control Center (0.4%), National Antimicrobial Information Network (0.9%), and other organizations (8.8%). Some callers (2.7%) received information via mail or FAX (Table 8, Figures 10 and 11).
- ! NPTN received 21,769 inquires via telephone (Table 3).
- ! The largest number of calls originated from Texas, California, and New York - states ranked 3, 1, 2 respectively, in terms of population (Table 9, Figure 12).
- ! By EPA region, 13.7% of the calls came from Region 6, 12.5% from Region 9, 12.5% from Region 2, 12.0% from Region 4, and 11.3% from Region 3 (Figure 13).
- ! New fact sheets posted on the NPTN web site are: Homeowners, Wildlife & Pesticides; DEET-General; Sulfuryl Fluoride-Technical; Sulfuryl Fluoride-General; Chlorpyrifos-General; Chlorpyrifos-Technical; DDT-General; DDT-Technical; Consumer Labeling Initiative; Pesticide Formulations; Signal Words; and Pesticides and Wildlife.

Work was initiated this year on the following fact sheets: Phenothrin-General; Phenothrin-Technical; Resmethrin-General; Resmethrin-Technical; Endocrine Disruptors; Environmental Fate of Pesticides; Carbaryl; Lambda-Cyhalothrin; Application Safety; Hexaflumuron-General; Hexaflumuron-Technical; DEET-General; Dicamba-General; Glyphosate-General; Pendimethalin-General; Drinking Water; Inert Ingredients; Pesticide Facts; Bacillus thuringiensis-General; Bacillus thuringiensis-Technical; Naled-General; Naled-Technical; and Glyphosate-Technical.
- ! As part of its efforts to continue to improve its service to the public, NPTN commissioned the Survey Research Center (SRC) at OSU to survey a representative sample of NPTN clientele as to their level of satisfaction with the services which NPTN provides.

This survey was mailed to 935 randomly-selected individuals. About 490 surveys were completed and returned. For those questions pertaining to the level of NPTN service (e.g., Was the information provided by NPTN clear? Was it useful? Was the NPTN specialist courteous? Was the specialist helpful? Was the specialist knowledgeable? Would you call NPTN again? Would you recommend NPTN to family and friends?) more than 90% of the responses were highly favorable to favorable.

Organization

- ! During its fifth year of operation, NPTN hired 4.0 FTE Pesticide Specialists at the rank of Faculty Research Assistant. Six specialists left NPTN; one specialist reduced her hours from full- to half-time. NPTN is presently recruiting for 3 full-time specialists, one of whom will become the NPTN Project Coordinator. Presently, NPTN has a staff of 15 full-time Pesticide Specialists.

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.

NPTN provides objective, science-based, accurate information about pesticides and pesticide-related topics to empower callers to make informed decisions about pesticide use...

In addition, NPTN provides referrals for:

- laboratory analyses, investigation of pesticide incidents, and emergency treatment
- safety practices
- health and environmental effects
- clean-up and disposal.

A major goal of NPTN is to promote informed decision making on the part of the caller. Service provided by NPTN is available from 6:30 am - 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 services provided by NPTN and its associated projects are strictly informational and have no regulatory or enforcement capabilities.

NPTN maintains a TDD to facilitate access to pesticide information by the hearing-impaired.

Objectives

The 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.

NPTN Pesticide Specialists deliver information in a user-friendly manner and are adept at communicating scientific information to the lay public...

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.

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 the over 600 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 capabilities (e.g., Medline, Toxline).

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.

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.



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Open minds. Open doors.™

NPTN is a cooperative effort of Oregon State University and the U.S. Environmental Protection Agency...

NPTN Update

Call Update

NPTN responded to 22,721 telephone inquiries, 1,962 of which were classified as pesticide incidents. 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. Incident calls are reviewed by Dr. Sheldon Wagner and/or a senior Pesticide Specialist. On the basis of information provided by the caller, and with reference to established criteria, all incident calls are assigned a certainty index (CI) - this is NPTN's assessment as to whether the effects were definitely (CI = 1), probably (2), possibly (3), or unlikely (4) to have been caused by exposure to a pesticide, or whether the effects were unrelated (5) to pesticide exposure. For incidents in which the caller reported an exposure, accident, or odor, but no health effects, a certainty index of zero (0) is assigned.

Achievements

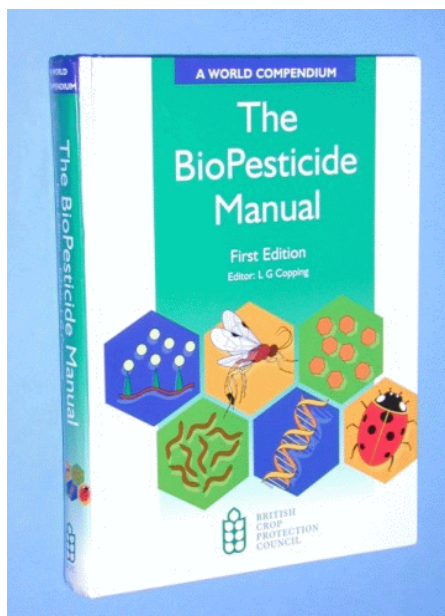
Resources

NPTN acquired many books, reports, and other documents to supplement the NPTN library that serves as a resource for specialists who respond to pesticide inquiries.

Books acquired during the 1999 grant year include: *Turf & Ornamental Reference for Plant Protection Products*; *Spill Reporting Procedures Guide*; *Our Children's Toxic Legacy: How Science and Law Fail to Protect us from Pesticides*; *1998-99 Pesticide Directory*; *BioPesticide Manual*; *Toxicology for Non-Toxicologists*; *Insecticides with Novel Modes of Action: Mechanism and*

Application; *Hormonally Active Agents in the Environment*; *Pest Control Products and Services Directory Red Book*; *Farm Chemicals Handbook 2000*; *Occupational Hazards of Pesticide Exposure: Sampling, Monitoring, Measuring*.

NPTN received the following EPA publications: *Toxics Release Inventory: Public Data Release, 1997*; *Toxics Release Inventory Public Data Release: Ten Years of Right to Know Industry Sector Analysis, 1996*; *EPA Strategic Plan*; *Public Drinking Water Information*; *Implementing the*



Food Quality Protection Act, Progress Report; *It's Your Drinking Water: Get to Know It and Protect It*; *Pesticide Industry Sales and Usage, 1996 and 1997 Market Estimates*; *Worker Protection Standard for Agricultural Pesticides: How to Comply, What Employers Need to Know*; *Radio Pesticidas: Program for Pesticide Safety Education with Hispanic Agricultural Workers* (Spanish/English manual and audio tapes); *Pesticide*

Handlers and the Worker Protection Standard: EPA-approved Pesticide Safety Training for Your Pesticide Handlers (video and publication); *Office of Pesticide Programs Biennial Report for Fiscal Year 1998 and 1999*.

World Health Organization publications received include: *Principles for the Assessment of Risks to Human Health from Exposure to Chemicals*; *Health Effects of Interactions between Tobacco Use and Exposure to other Agents*; *Bacillus thuringiensis*; *Vinyl Chloride*; *Carbon Monoxide*; *Flame Retardants: Tris(2-butoxyethyl)Phosphate, Tris(2-ethylhexyl)Phosphate and Tetrakis(hydroxymethyl)Phosphonium Salts*; *Butyl Benzyl Phthalate*; *Phenylhydrazine*; *Cumene*; *Health Criteria 200 Copper*; and *Health Criteria 208 Carbon Tetrachloride*.

Obtained the *FDA Directory of State Officials, 1999*; *Directory of County Extension Agents for 2000-2001*.

Videos to be used for training new Pesticide Specialists were purchased: *What is Fumigation & Properties of Fumigants, Phosphine, Methyl Bromide, Vikane*; *Fumigation of Commodities Under Tarps*; *Safety with Pesticides*; *Structural Tent Fumigation*; and *Rodenticides*.

The following Reregistration Eligibility Decisions were obtained: *Chlorine Gas*; *Virelure*; *Hydroxytetracycline Monohydrate*; *Oxytetracycline Calcium*; *Chlorothalonil*; *Flower and Vegetable Oils*; *3-Trifluoro-methyl-4-nitro-phenol*; *Captan*; *Folpet*; *Niclosamide*; *Pebulate*; *Triphenyltin Hydroxide*; *EPTC*.

NPTN obtained the Spanish publications: *Protejase de los Pesticidas (Protect Yourself from Pesticides)* from the U.S. EPA; Spanish version of *Recognition and Management of Pesticide Poisonings*.

The publications: *Clear and Simple: Developing Effective Print Materials for Low-Literate Readers* and *The ACS Style Guide: A Manual for Authors and Editors*, were purchased.

Project and Information Review

Fact Sheets - The following new pesticide topic fact sheets were posted on the NPTN web site: *Homeowners, Wildlife & Pesticides; DEET-General; Sulfuryl Fluoride-Technical; Sulfuryl Fluoride-General; Chlorpyrifos-General; Chlorpyrifos-Technical; DDT-General; DDT-Technical; Consumer Labeling Initiative; Pesticide Formulations; Signal Words; and Pesticides and Wildlife*. The fact sheet priority list was updated to include additional active ingredients and general topics.

Work was initiated this year on the following fact sheets: *Phenothrin-General; Phenothrin-Technical; Resmethrin-General; Resmethrin-Technical; Endocrine Disruptors; Environmental Fate of Pesticides; Carbaryl; Lambda-Cyhalothrin; Application Safety; Hexaflumuron-General; Hexaflumuron-Technical; DEET-General; Dicamba-General; Glyphosate-General; Glyphosate-Technical; Pendimethalin-General; Drinking Water; Inert Ingredients; Pesticide Facts; Bacillus thuringiensis-General; Bacillus*

thuringiensis-Technical; Methyl Bromide - General; Methyl Bromide - Technical; Naled-General; and Naled-Technical.

NPTN created a review process to aid in internal review of fact sheets. The *Malathion-General* and *Malathion-Technical* fact sheets have completed this review process. Fact sheet templates for general and technical documents were revised to ensure style and content consistency.



NPTN posted the: EPA publication *Recognition and Management of Pesticide Poisonings, 5th Edition*; and *NPTN Annual Report for Grant Year 1998* on the NPTN web site - both are searchable.

NPTN Web Site - NPTN web site developments this year include: posted the on-line version of *Recognition and Management of Pesticide Poisoning Handbook, 5th edition*; provided more intuitive/user-friendly NPTN and NAIN web addresses (nptn.orst.edu and nain.orst.edu); enhanced the pesticide manufacturer resource page; added contact information for a larger number of pesticide manufacturers, formulators, and registrants; re-designed the NPTN

fact sheet page for easier information retrieval and improved aesthetics.

Active Ingredient Files - Efforts to expand, update, and maintain hard copy active ingredient files were continued. NPTN opened 46 new active ingredient files. Presently, NPTN maintains approximately 613 active ingredient files, of which, 218 have been reviewed and updated with standardized content.

NPTN also continued its efforts at making certain key information about active ingredients available electronically (the Instant Info (II) Project). To date, a database structure and data entry and retrieval screens have been developed. For beta testing, information for three active ingredients have been collected and entered.

“Other” Ingredient Files - NPTN also began creation of reference files for selected “other” (or “inert”) ingredients. To date, files for 35 “other” ingredients are in various stages of completion.

Training and Continuing Education

Weekly NPTN group meetings, a principal training and QA/QC activity for Pesticide Specialists, continued throughout the year. Internal training seminars were scheduled during many of these weekly sessions.

The NPTN Specialist Training Manual was updated with new learning exercises, revisions and additions to the pesticide toxicology sections, new log coding guidance, and a section on writing narratives.

Five Specialists completed their attendance at all lectures of the 9-credit, 3-term series of graduate-

level introductory toxicology courses, including: Fundamentals of Toxicology, Target Organ Toxicology, and Environmental Toxicology and Risk Assessment.

Academic activities at Oregon State University provide additional opportunities for specialists' continuing education. Seminars, lectures, and other training opportunities attended by NPTN staff during grant year 1999 include: Dr. Lynn Royce, an Extension Entomologist with the OSU Department of Entomology conducted a presentation for NPTN specialists

entitled "Entomology Q & A." Dr. Roseanne Lorenzana, Toxicologist with the Environmental Protection Agency, Region 10, Office of Environmental Assessment spoke to NPTN staff about community outreach and one-in-a-million risk. David Spink conducted an internal training seminar on Chemigation. Wade Trevathan conducted an internal training seminar on antimicrobial products. Jerral Harchenko, who is affiliated with Industrial Aviation Service, conducted an internal training seminar on aerial pesticide applications. Pesticide Specialists attended the lecture "Incorporation of aerodynamic resistance in estimating pesticide evaporation rates" by Michael Conway, MS candidate, Bio-Resource Research/Environmental Chemistry.

Conferences attended by NPTN personnel this year include: Wade Trevathan and Theresa Scholz attended the Chemical Specialties Manufacturers Association Antimicrobial Registration

Workshop in Arlington, Virginia. Wade Trevathan attended APIC 99, the annual conference for the Association for Professionals in Infection Control, in Baltimore, Maryland. Roland Maynard attended the workshop Chemicals,

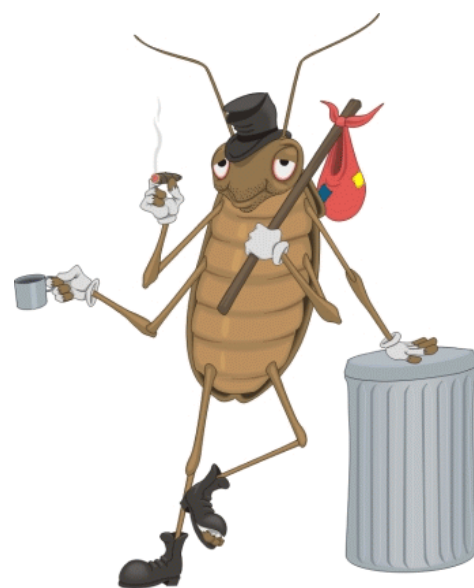


the Environment and Disease: A Research Perspective, in Seattle, WA. Crista Chadwick, Wade Trevathan, Terry Miller and Jeff Jenkins, attended the Association of American Pesticide Control Officials annual meeting in Washington D.C. March 5-8, 2000. Crista Chadwick attended the 1999 National Environmental Health Association Right-to-Know Conference and Exhibition in Denver in October. Amy Smoker, Aimee Code, Dixie Slatter, Tracie Caslin, Kate Brown, David Spink, David Stone, Terry Miller, Jeff Jenkins, and Sheldon Wagner, attended the Oregon State University Extension Service 2000 Chemical Applicators Short Course in Portland, Oregon in January. Terry Brock attended a Windows NT Network Administrators course March 27-29, 2000.

Publicity

Outreach efforts on behalf of NPTN were conducted by the Office of Communications within the U.S. EPA Office of Communications, Education, and Media Relations and the Communications Services Branch within the U.S. EPA Office of Pesticide Programs Field and External Affairs Division. This pilot project consisted in part of the drafting of Public Service Announcements and their distribution to radio stations in 18 cities in the U.S.

NPTN information packets were sent to 59 State Agricultural Agencies, 21 New York Department of Environmental Conservation Regional Offices, 55 California County Agricultural Commissioners, 57 Master Gardener Organizations, 56 State Pesticide Applicator Training Coordinators, and 53 Professional Veterinary Associations. NAIN marketing packets were sent to more than 3,000 city and county health agencies. NPTN brochures were included in these packets.



Dapperitus Roachii

NPTN brochures and other materials were distributed at the conferences listed above.

The NPTN exhibit was displayed at the National Town Meeting for a Sustainable America in Detroit, Michigan by Terry Miller, Dorothy Tibbetts, and Dawn Andrews.

NPTN brochures were distributed at Tree School 99, an annual event sponsored by OSU Extension, at Clackamas Community College. NPTN brochures were forwarded to Chicago for distribution at Environmental WATCH (Workshop on Actions to Take for Children's Health).

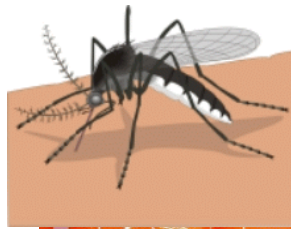
NPTN sent 5,000 brochures to EPA Region 3 for distribution at the Philadelphia Flower Show in March. EPA's Region 3 Pesticide Program presented a display and distributed NPTN brochures at the show.

Specialists also participated in local community outreach. Presentations about NPTN and/or pesticide-related topics were given to the Oregon Vegetation Management Association, students of the OSU Veterinary College, and students of the Department of Public Health at OSU.

Other

Customer Satisfaction Survey- As part of its efforts to continue to improve its service to the public, NPTN commissioned the Survey Research Center (SRC) at OSU to survey a representative sample of NPTN clientele as to their level of satisfaction with the services which NPTN provides. SRC developed a survey instrument (with input from NPTN as to the type of information desired by NPTN).

This survey was mailed to about 935 individuals (selected by SRC from list of about 2000, who voluntarily gave NPTN their name and addresses as potential survey recipients); SRC followed up with as many as two additional mailings to individuals who initially did not return their surveys. Surveys were completed by about 489 individuals, which was a large enough sample size to allow SRC to be 95 percent



confident that the results of survey would have a sampling error of no more than +/- 5%.



For those questions pertaining to the level of NPTN service (e.g., Was the information provided by NPTN clear? Was it useful? Was the NPTN specialist courteous? Was the specialist helpful? Was the specialist knowledgeable? Would you call NPTN again? Would you recommend NPTN to family and friends?) To all of these questions, more than 90% of the responses were highly favorable to favorable.

Special Events - Potential concerns regarding Y2K prompted NPTN to extend its hours of operation over New Year's weekend. NPTN specialists were

available 24 hours a day via cellular phones.

The New York St. Louis Encephalitis/West Nile Virus situation prompted a number of calls to NPTN. To accommodate the public's concerns, NPTN extended its hours so its services would be more readily available to individuals on the East Coast inquiring about pesticides being used to control mosquitoes. During the period of mid-September to mid-October, NPTN was open from 5:00am to 6:00pm (Pacific time).

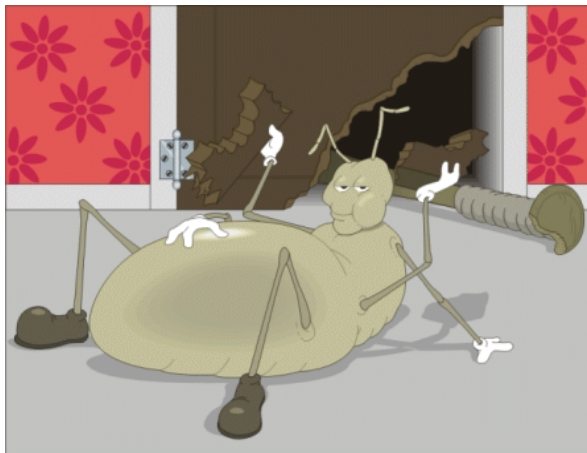
Various special reports, including one on AllerCare inquiries, were prepared for EPA OPP personnel.

Visit to OPP

Headquarters - Wade Trevathan, Crista Chadwick, Jeff Jenkins and Terry Miller attended the American Association of Pesticide Control Officials (AAPCO) meeting in March, 2000, in Arlington, Virginia. They, along with Sheldon Wagner, also met during the same week with EPA/OPP personnel at OPP headquarters in Arlington.

Meetings during this visit were held with: the NPTN Project Officer, Frank Davido; the NPTN Oversight and Monitoring Committee; and representatives of other EPA/OPP divisions, including: Information Resources and Services, Field and External Affairs, Antimicrobial, and Health Effects Divisions. The NPTN delegation also met at this time with OPP director Marcia Mulkey and her associates.

Site Visit - Sherri Street and Frank Davido from the EPA Office of Pesticide Programs Information Resources and Services Division conducted their annual site visit to NPTN.



Termitis Relaxus

National Efforts - Terry Miller attended the National Strategies for Health Care Providers Resources Workgroup meeting in Washington DC on August 3-6, to represent NPTN in the planning and implementation stages of this initiative.

Personnel Update

During the 1999 grant year, NPTN hired 4 full-time Pesticide Specialists. Six specialists left NPTN; one specialist reduced her hours from full- to half-time. NPTN is presently recruiting for 3 full-time specialists, one of whom will become the NPTN Project Coordinator. Other part-time staff, including graduate and undergraduate student help, were hired. Presently NPTN employs 12 (15 upon completion of recruitment) full-time Pesticide Specialists.



Facilities

NPTN acquired three additional rooms, totaling 1300 square feet, of office space to be available after extensive infrastructure changes. This will help relieve the overcrowding brought about by the growth in the NPTN program. Work was initiated on the early phases of remodeling. Upon completion, NPTN faculty and staff will have access to modern, comfortable work space, complete with new carpeting, lighting, paint, and heating, ventilation, and air

conditioning (HVAC), as well as wiring for the NPTN telephone system and NT network.

Telecommunications capabilities were upgraded so that specialists may staff in as regular or backup agents at any telephone station, thus increasing NPTN's ability to

immediately respond to incoming calls.

NPTN acquired a HP8100DN laser printer, a HP8500DN color laser printer, 5 new Micron Pentium III (600MHz) personal computers (for use as workstations as a part of the NPTN Windows NT network), and 6 office chairs.

NPTN has taken efforts to increase the security of its UNIX system, and plans to implement a "firewall" to further increase security.

Traffic Report

Traffic Report Summary

NPTN answered 22,721 inquiries during its fifth year of operation (April 1999 - March 2000) 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 summary of the number of calls received per month is provided in Table 1 and Figure 1. Also included in Table 1 is a listing of the total number of calls by calendar year. Most calls come to NPTN during the period March to October.

The types of calls received by NPTN are shown in Table 2 and Figures 2 and 3. Calls range from inquiries about general or specific information about pesticides to reporting of incidents.

The means by which people contact NPTN is shown in Table 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 221,960 hits. (Table 4

and Figure 4). In addition, there were 380 direct inquiries to NPTN via email.

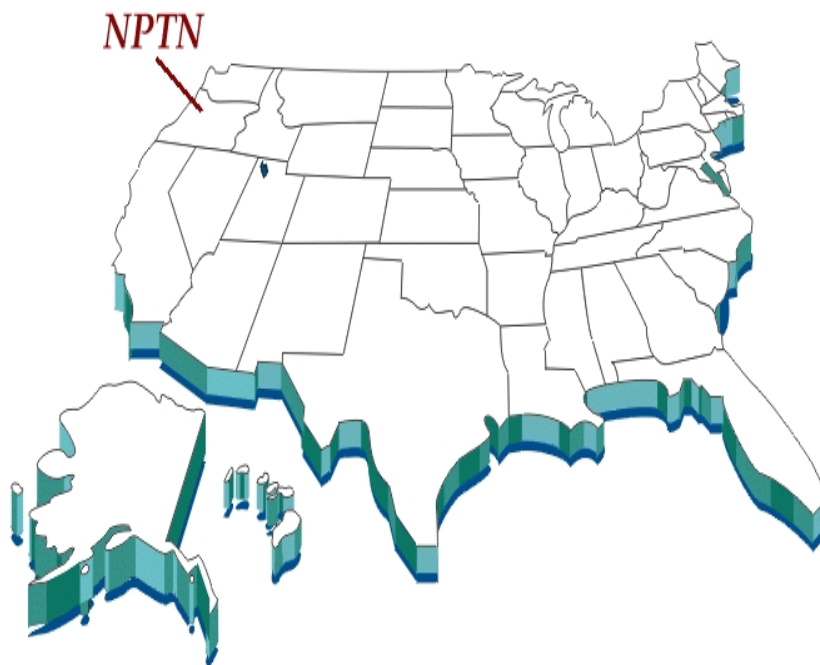
The variety of callers to NPTN is shown in Table 5 and Figure 5. The predominant number of calls received by NPTN are from the general public.

The types of questions posed to the NPTN Pesticide Specialists are presented in Table 6 and Figure 7. Most of the callers requested information about health-related issues.

Most of these information calls and others listed in Table 6 were prompted by concern/knowledge of the caller (Table 7 and Figures 8 and 9). Only about 8.6% of the calls are to report a pesticide incident.

Medical Monitoring Program (NPMMP, a cooperative project between Oregon State University and the U.S. EPA to provide medical consultation and follow-up to potential pesticide exposures), 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 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 Figures 12. Residents from Texas, California, and New York initiated the greatest number of calls. Also shown in Table 9 and presented in Figure 13 are the number of calls from each of the EPA regions.



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 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 presented in Figure 14. The 25

active ingredients most frequently mentioned in incident calls are listed in Table 11. Incident calls are further classified by entity type. The 10 active ingredients most often mentioned in incident calls are presented in Figure 15.

Most callers received information verbally from a Pesticide Specialist (Table 8 and Figures 10 and 11). Some callers also request and receive written information. In addition, many calls are referred to either EPA, National Pesticide

The locations where pesticide exposures were purported to have taken place are shown in Table 12. Of those calls where the location was reported, most incidents occurred in or around the home.

The environmental impact of the pesticides involved in incidents is shown in Table 13.

The incident calls are further categorized by whether the incident involved a human, animal, or building/other (Table 14 and Figure 16). The incident calls for each entity type are qualified 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 entities presented in Table 14, the certainty index is further categorized by gender and group.

Table 15 and Figure 16 list the descriptions for the entities involved in incidents, as female, male, groups, animals, and other.

Reported symptoms are shown in Table 16 and Figures 18 and 19. Symptoms provided by callers ranged from symptomatic, to asymptomatic, to atypical.

The number of deaths, life threatening, or interesting/strange cases due to a potential pesticide exposure is shown in Table 17 and Figure 20.

Ages were available for some of the entities and are presented in Table 18 and Figure 21.

Traffic Report Tables and Figures

Pesticide Specialists record pertinent information for every call received at NPTN. This information is entered into the NPTN Pesticide Incident Database (PID), an electronic database used to record information for all inquiries to NPTN. Broadly speaking, there are two types of calls received by NPTN - those for general or specific information about pesticides and pesticide-

mail), state from which the inquiry originated, type of person (e.g., general public, government agency, or medical personnel), type of inquiry (e.g., request for pesticide information or report of pesticide incident), reason for inquiry (e.g., concern/knowledge in the case of information calls), and action required (e.g., verbal information, referral, or mailed information). If a specific pesticide product or active ingredient is discussed, the product and/or active ingredient is entered into the database.

When incidents are reported, more detailed and specific information is recorded, including: type of incident (e.g., exposure, spill, drift), location of the incident and information about the entity, including age, gender, nature of the exposure, and reported symptoms. For incidents involving reported human or animal health effects, and for environmental incidents, a certainty index is assigned. The certainty index is an estimate by



related issues and calls about pesticide incidents. For example, a caller might ask a question about 'pesticides in foods' (a general information call) or about the toxicity of a particular pesticide (a pesticide-specific information call). A call to report an exposure to a pesticide is an example of an incident call. The type and amount of information entered into the PID depends on whether the call was for general information or to report a pesticide incident.

Information collected and entered into the PID for general information calls includes: origin of inquiry (e.g., telephone or e-

NPTN (based on information provided by the caller) as to the likelihood that the reported effects were caused by exposure to a pesticide. Additionally, if an incident involves an environmental impact, the nature of the impact is recorded in the database (e.g., impact to air, water, or soil).

Following is a summary of selected data from the NPTN Pesticide Incident Database for the 1999 NPTN operational year.

Monthly Calls

NPTN received 22,721 inquiries during the 1999 grant year. Figure 1 shows number of calls received for each month. Eighty percent of the inquiries were received between March and October, coinciding with that part of the year when most pest pressures are highest. Total calls received during previous grant and calendar years is provided for comparison in Table 1.



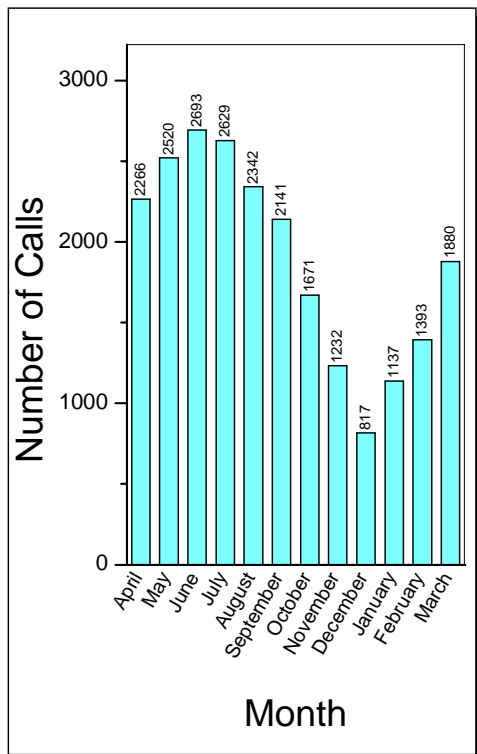
**Table 1 -
NPTN Monthly Telephone Calls**

Month	Number of Calls				
	1995	1996	1997	1998	1999
April	1560	2015	2129	2181	2266
May	1494	2215	2199	2486	2520
June	1612	2111	2441	2891	2693
July	1763	2114	2536	2608	2629
August	2004	1950	2282	2188	2342
September	1633	1638	1904	1790	2141
October	1699	1642	1712	1544	1671
November	1289	1094	1131	1132	1232
December	895	858	1060	938	817
January	1098	1114	1153	1047	1137
February	1217	1263	1353	1214	1393
March	1511	1557	1937	1698	1880
Calendar ¹⁾ Year	13949	19463	21328	22206	22275
Grant ²⁾ Year Total	17775	19571	21837	21717	22721

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

²⁾ April 1 through March 31.

**Figure 1 -
NPTN Monthly Calls - 1999**



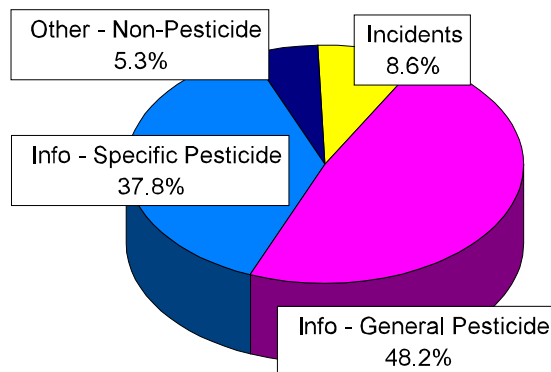
“I’ve been told that my home needs to be treated with pesticides to kill termites. I am pregnant, and I am wondering if the chemicals will hurt my unborn baby? What about my other children?”

Types of Calls

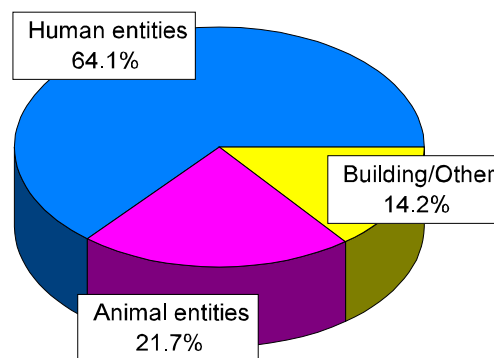
NPTN classifies calls as information calls, incident calls, or other (non-pesticide) calls. These types of calls are summarized in Figures 2 and 3 and Table 2. The majority of calls (19,546 or 86.0%) to NPTN were information calls in which the caller is requesting information about pesticides or pesticide-related matters (Figure 2). Information calls may involve a discussion of a specific pesticide, or of pesticides in general. NPTN responded to 8,595 (37.8%) information calls about specific pesticides, for example: *"I am going to have my house treated for carpenter ants with bendiocarb and pyrethrins. What precautions do I need to take for pregnant wife (3-4 months) and kids (5 and 7 years)?"* and *A veterinarian called about a Hartz product containing methoprene that was applied to a cat - what is the toxicity of methoprene?* NPTN responded to 10,951 (48.2%) information calls about pesticides in general, for example: *PCO treats monthly and caller wanted to know what precautions she should be taking.* and *Caller is having an invasion of earwigs- how can she get rid of them?*

NPTN responded to 1,962 (8.6%) calls about pesticide incidents. A pesticide incident is a spill, a misapplication, a contamination of a non-target entity, or any purported exposure to a pesticide, regardless of injury. The majority of incident calls involved human and animal entities (Figure 3). Of the 1,962 incident calls, 1,258 (64.1%) involved a human entity, 426 (21.7%) involved an animal entity, and 278 (13.8%) involved damage to a building such as a home or office. NPTN also took 1,213 (5.3%) calls that were not related to pesticides, for example: *Caller looking for the name of an onion she wants to plant.* and *Caller said he was bitten by a black widow spider and wanted to know what to do.*

**Figure 2 -
Types of Calls**



**Figure 3 -
Incidents**



**Table 2 -
Types of Calls Received by NPTN**

Type of Call	Number of Calls				
	1995	1996	1997	1998	1999
Information - Specific Pesticide	7215	7757	8953	8235	8595
Information - General Pesticide	7973	9243	10482	10621	10951
Incidents	1944	1749	1559	1562	1962
Human Entities	1327	1067	1026	939	1258
Animal Entities	276	327	311	352	426
Building/Other	331	355	221	271	278
Other - Non-Pesticide	643	822	843	1299	1213
Grant Year Total =	17775	19571	21837	21717	22721

Origin of Calls

Table 3 summarizes the origin of inquiries received by NPTN. Most inquiries are received by telephone. Of the 22,721 inquiries, 21,769 (95.8%) were received by telephone, 483 (2.1%) were recorded by a voice mail system, 73 (0.3%) were received by postal mail, 7 (0.03%) were walk-in inquiries, 380 (1.7%) were by email, and 9 (<0.1%) inquiries were received by NPTN via other means. NPTN received an additional 161 email responses in follow-up to previous email inquiries.

**Table 3 -
Origin of Calls to NPTN**

Origin of Call	Number of Calls				
	1995	1996	1997	1998	1999
Telephone	17104	18901	21005	20950	21769
Voice Mail	373	455	542	470	483
Mail	117	129	126	40	73
Walk In	7	10	6	4	7
E-Mail	-	-	-	215	380
Other	174	76	158	38	9
Grant Year Total =	17775	19571	21837	21717	22721



Web Site Access

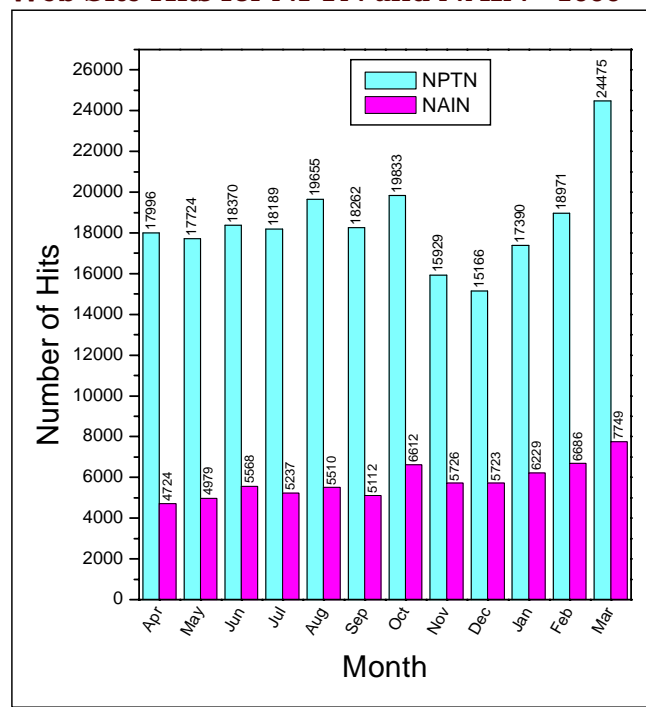
The NPTN World Wide Web site continues to be a popular source of information to NPTN clientele.

The NPTN web site received 221,960 hits and the NAIN web site received 69,855 hits. Table 4 and Figure 4 summarize by month the number of web site hits received by NPTN and NAIN during 1999.

**Table 4 -
Web Site Hits for NPTN
and NAIN - 1999**

Month	# of Hits NPTN	# of Hits NAIN
April	17996	4724
May	17724	4979
June	18370	5568
July	18189	5237
August	19655	5510
September	18262	5112
October	19833	6612
November	15929	5726
December	15166	5723
January	17390	6229
February	18971	6686
March	24475	7749
Total =	221960	69885

**Figure 4 -
Web Site Hits for NPTN and NAIN - 1999**



National Pesticide Telecommunications Network - a toll-free service that provides objective, science - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Bookmarks Location: <http://ace.orst.edu/info/nptn/> What's Related

NPTN
National Pesticide Telecommunications Network
1-800-858-7378
nptn@ace.orst.edu

Home
General Info
Technical Info
Antimicrobial Info
Regulatory
Manufacturers
Pest Control
Emergency
Related Links

NPTN Publications and Discussion Groups

NEW Fact sheets on DEET, Sulfuryl Fluoride, Chlorpyrifos, Consumer Labeling Initiative, DDT, Pesticide Formulations, Product Signal Words, and Wildlife.

Search
Advanced Search

OREGON STATE UNIVERSITY EPA United States Environmental Protection Agency

NPTN is a cooperative effort of Oregon State University and the U.S. EPA

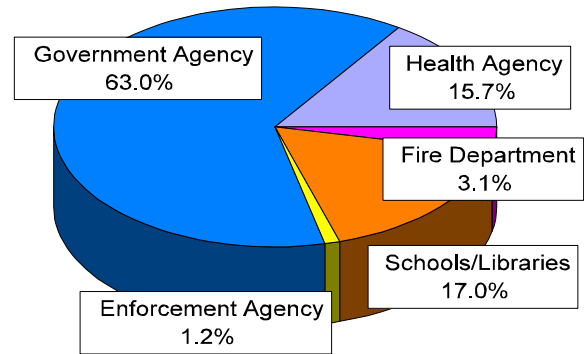
Document: Done

Type of Caller

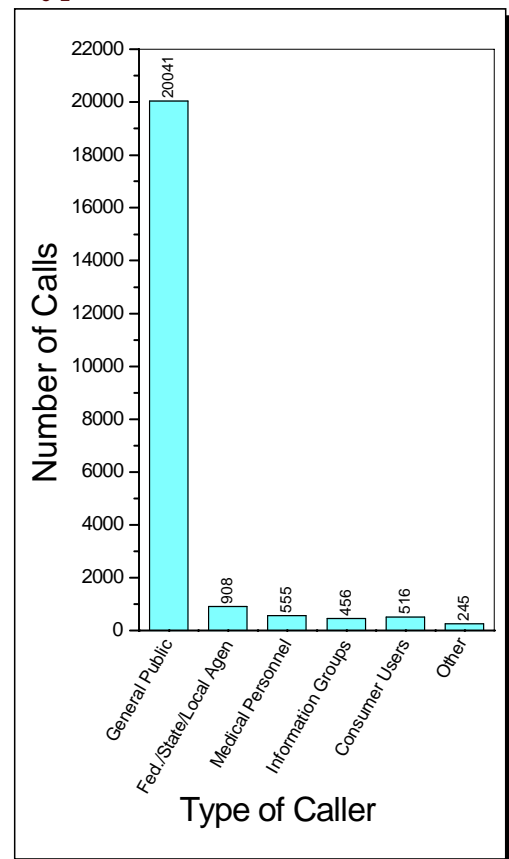
Figures 5 and 6 and Table 5 summarize the profession/occupation of individuals contacting NPTN. The majority of calls made to NPTN are from the general public. Of the 22,721 inquiries received, there were 20,041 (88.2%) from the general public; 908 (4.0%) from federal, state, or local government agencies; 555 (2.4%) from human and animal medical personnel; 456 (2.0%) from information groups including the media, unions, environmental organizations and pesticide manufacturing or marketing companies; 516 (2.3%) from consumer users including legal or insurance representatives,

laboratory or consulting personnel, pest control operators, retail store personnel, or farm personnel; and 245 (1.1%) calls from other professions/ occupations.

**Figure 6 -
Inquiries from
Federal/State/Local Agencies**



**Figure 5 -
Type of Caller**



**Table 5 -
Type of Caller to NPTN**

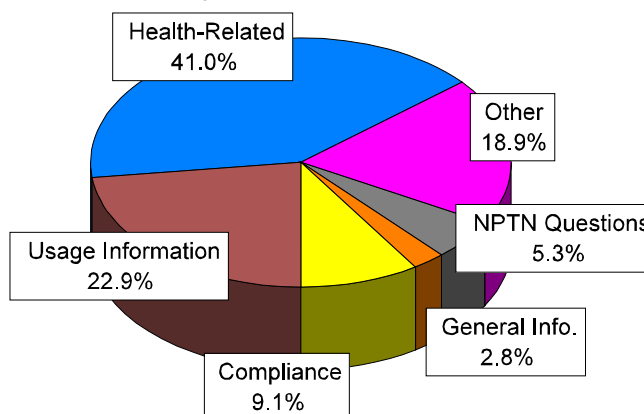
Type of Caller	Number of Calls				
	1995	1996	1997	1998	1999
General Public	15357	16743	18304	18802	20041
Federal/State/Local Agency					
Health Agency	122	101	120	171	143
Government Agency	360	446	637	564	572
Enforcement Agency	39	50	67	43	11
Schools/Libraries	239	222	280	261	154
Fire Department	27	26	26	31	28
Medical Personnel					
Human Medical	336	423	532	395	351
Animal Vet./Clinic	92	147	159	168	195
Migrant Clinic	9	10	16	3	9
Information Groups					
Media	127	165	228	162	133
Unions/Info. Service	51	96	104	68	61
Environmental Org.	119	139	191	150	156
Pesticide Mfg./Mktg. Co.	128	136	158	133	106
Consumer Users					
Lawyer/Insurance	98	143	129	69	76
Lab./Consulting	222	176	149	96	105
Pest Control	186	167	227	202	131
Retail Store	55	49	57	51	154
Farm	51	65	67	57	50
Other	157	267	386	291	245
Grant Year Total =	17775	19571	21837	21717	22721

Type of Question

The types of questions received at NPTN are most often related to health effects of pesticides (Figure 7 and Table 6). NPTN responded to 9,211 (41.0%) inquiries related to health effects of pesticides, including inquiries about general health, treatment and testing, and laboratory questions. NPTN responded to 5,147 (22.9%) inquiries involving requests for pesticide usage information, including questions about use on specific pests or crops, chemical information, pros and cons of application, safety and application questions, cleanup questions, questions about harvest intervals, and lawn care usage questions.

NPTN responded to 2,049 (9.1%) inquiries involving compliance questions, including questions about regulations, questions about disposal, and complaints. Additionally, NPTN responded to 31 (0.14%) inquiries specifically about the FQPA brochure, 227 (1.0%) inquiries about other food safety issues, 5 (0.02%) inquiries about a Consumer Reports article, 619 (2.7%) inquiries involving general pesticide questions, 1,185 (5.2%) inquiries involving questions about NPTN, and 4,246 (18.9%) inquiries not classified according to type of question.

**Figure 7 -
Type of Question**



**Table 6 -
Type of Question Asked by Callers to
NPTN**

Type of Question	Number of Calls				
	1995	1996	1997	1998	1999
Health Related					
Health	8225	8363	7997	8396	8976
Treatment	172	158	238	284	151
Testing Lab.	73	97	114	115	84
Usage Information					
Pest/Crop	1211	1267	1437	1575	1846
Chemical	912	1202	1865	2111	2196
Pros and Cons	162	181	185	104	55
Safety/Application	278	655	1040	531	686
Cleanup	273	283	312	252	270
Harvest Intervals	143	69	105	89	64
Lawn Care	58	51	54	43	30
Compliance					
Regulations	1107	1201	1567	1714	1587
Complaints	223	233	279	328	288
Disposal	210	166	197	236	174
FQPA Brochure	-	-	-	33	31
Food Safety	-	-	-	42	227
Consumer Report Article	-	-	-	18	5
General	1519	1845	1026	653	619
NPTN Questions	973	1033	1407	1266	1185
Non-Pesticide Related	460	127	5	5	1
Other	1776	2640	4009	3922	4246
Grant Year Total =	17775	19571	21837	21717	22721

Reason for Inquiry

Pesticide Specialists identify the reason for inquiry for all calls received by NPTN (Table 7 and Figures 8 and 9). The reason for inquiry for all information calls is Concern/Knowledge. The reason for inquiry for incident calls varies according to the nature of the incident. Of the 1,962 incident calls, reasons for inquiry involved pesticide exposure for 1,485 (75.7%) calls, accidents for 416 (21.2%) calls, odor only for 55 (2.8%) calls, laboratory testing for 1 call, and other reasons for inquiry for 21 (1.1%) calls. The reason for all other (non-pesticide) calls is N/A–Unknown.

Table 7 - Reason for Inquiry to NPTN

Reason for Inquiry	Number of Calls				
	1995	1996	1997	1998	1999
Information Calls					
Concern/Knowledge	15019	17313	20020	19817	20474
Incident Calls					
Exposures					
Dermal - Acute	249	239	201	200	293
Dermal - Chronic	34	32	13	13	15
Ingestion - Acute	160	175	178	228	298
Ingestion - Chronic	7	8	3	7	4
Inhalation - Acute	244	241	176	147	308
Inhalation - Chronic	45	61	43	22	25
Exposure Possible	445	357	311	335	314
Unknown/Many	72	54	83	133	211
Occupational	79	39	42	22	17
Accidents					
Misapplic. - Homeowner	152	116	101	120	137
Misapplic. - PCO	132	84	111	80	70
Misapplic. - Other	31	22	39	32	37
Spill - Indoor	65	47	55	75	75
Spill - Outdoor	24	18	15	29	20
Contamination - Home	37	25	21	15	6
Contamination - Other	36	26	16	8	9
Drift	81	81	59	51	60
Fire - Home	3	2	1	0	1
Fire - Other	3	0	0	2	1
Industrial Accident	0	0	0	0	0
Odor Only	53	80	58	28	55
Testing Laboratory	6	2	1	0	1
Other	103	76	36	26	21
N/A-Unknown	695	473	254	327	269
Grant Year Total =	17775	19571	21837	21717	22721

Figure 8 - Pesticide Exposures

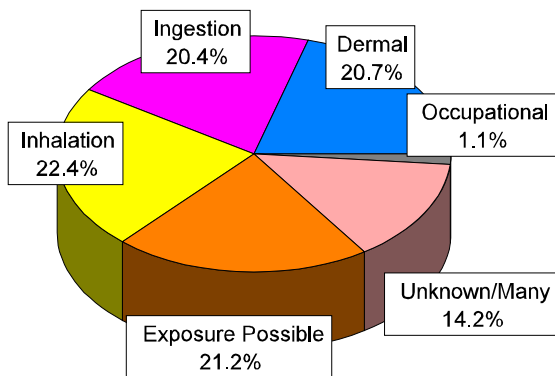
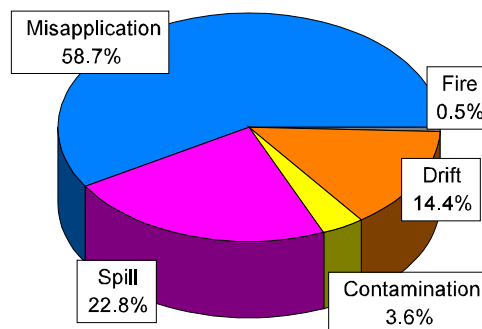


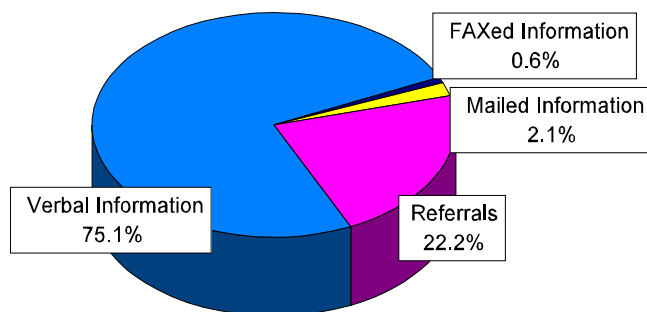
Figure 9 - Pesticide Accidents



Action Taken by NPTN

NPTN Specialists respond to inquiries in many ways, including the provision of verbal information, referrals to other agencies or organizations, and hard-copy information sent by mail, fax, or email. Actions taken by Pesticide Specialists in response to inquiries are summarized in Figures 10 and 11 and Table 8. Most inquiries (17,070; 75.1%) were answered by providing verbal information to the caller. If Specialists determine that

**Figure 10 -
Action Taken by NPTN**

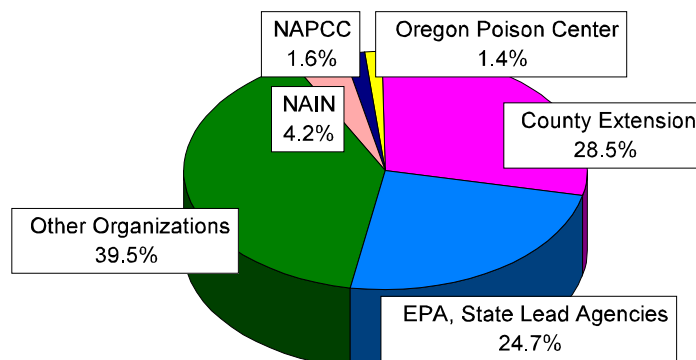


**Table 8 -
Action Taken by NPTN**

Action Taken	Number of Calls				
	1995	1996	1997	1998	1999
Verbal Information	11590	15078	17948	18180	17070
Referrals to:					
EPA, State Lead Agencies, National Pesticide Medical Monitoring Program	1763	1363	1404	1095	1245
County Extension	711	500	490	583	1435
Oregon Poison Center	69	45	42	112	72
National Animal Poison Control Center	100	152	77	155	81
National Antimicrobial Information Network	103	208	214	178	213
Other Organizations	2001	1086	915	973	1992
Mailed Information, Brochure, Publication	1098	802	576	340	472
Other/FAXED Information	340	337	171	101	141
Grant Year Total =	17775	19571	21837	21717	22721

other agencies or organizations are better able to respond to an inquiry than NPTN, a referral is made. Referrals were made for 5,038 (22.2%) calls. Common NPTN referrals include referrals to the EPA, state lead agencies or the National Pesticide Medical Monitoring Program; referrals to county extension services; referrals to Oregon Poison Center and National Animal Poison Center; and referrals to the National Antimicrobial Information Network (NAIN). Some callers (613; 2.7%) received hard-copy information via mail or FAX.

**Figure 11 -
Referrals Made**



Calls Listed by State

Table 9 lists the number of calls received by NPTN from each state. The largest number of calls were received from Texas, California, and New York—states ranked 3, 1, and 2 respectively in terms of population (Figure 12). Figure 13 summarizes calls by EPA region. NPTN received 13.7% of calls made from Region 6, 12.5% from Region 9, 12.5% from Region 2, 12.0% from Region 4, and 11.3% from Region 3.

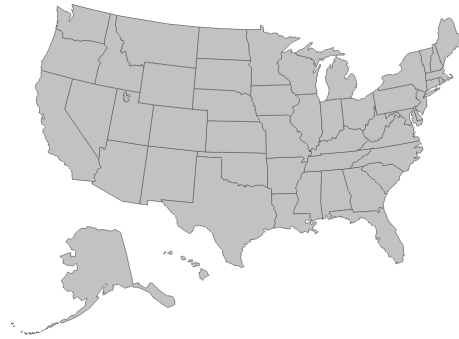


Figure 12 - Top 10 States Using NPTN

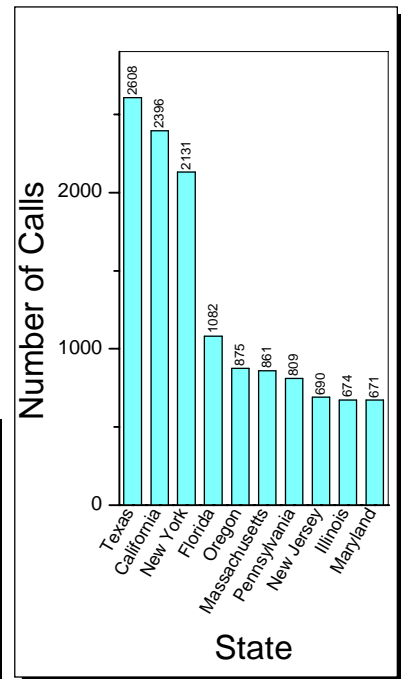
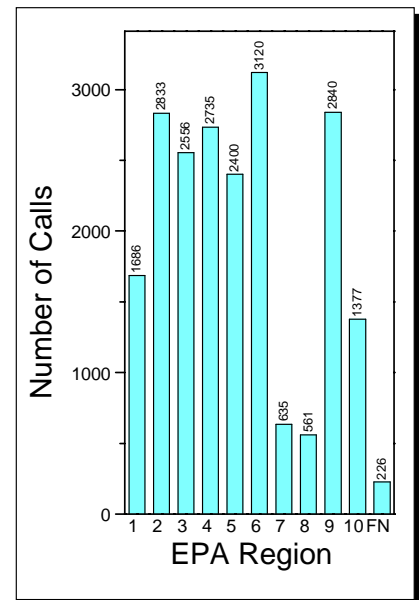


Table 9 - Listing of States and Foreign Nations Using NPTN During 1999 Operational Year

EPA Region	State Code	State	Number of Calls
		Not recorded	1752
10	AK	Alaska	26
4	AL	Alabama	193
6	AR	Arkansas	110
9	AZ	Arizona	268
9	CA	California	2396
FN	CN	Canada	134
8	CO	Colorado	346
1	CT	Connecticut	450
3	DC	District of	370
3	DE	Delaware	47
4	FL	Florida	1082
FN	FN	Foreign	92
4	GA	Georgia	403
9	HI	Hawaii	80
7	IA	Iowa	105
10	ID	Idaho	69
5	IL	Illinois	674
5	IN	Indiana	216
7	KS	Kansas	130
4	KY	Kentucky	168
6	LA	Louisiana	153
1	MA	Massachusetts	861
3	MD	Maryland	671
1	ME	Maine	65
5	MI	Michigan	452
5	MN	Minnesota	255
7	MO	Missouri	296
4	MS	Mississippi	68
8	MT	Montana	72
4	NC	North Carolina	474
8	ND	North Dakota	28
7	NE	Nebraska	101
1	NH	New Hampshire	94
2	NJ	New Jersey	690
6	NM	New Mexico	118
9	NV	Nevada	103
2	NY	New York	2131
5	OH	Ohio	538
6	OK	Oklahoma	131
10	OR	Oregon	875
3	PA	Pennsylvania	809
2	PR	Puerto Rico	9
1	RI	Rhode Island	100
4	SC	South Carolina	126
8	SD	South Dakota	34
4	TN	Tennessee	220
6	TX	Texas	2608
8	UT	Utah	63
3	VA	Virginia	591
2	VI	Virgin Islands	3
1	VT	Vermont	115
10	WA	Washington	406
5	WI	Wisconsin	263
3	WV	West Virginia	67
8	WY	Wyoming	20
		Total =	22721

Figure 13 - Calls to NPTN by EPA Region



Top 10 Active Ingredients In All Calls

When calls to NPTN involve discussion of a specific product or active ingredient, the Pesticide Specialist records the product and the active ingredient in the NPTN Pesticide Incident Database. The active ingredient chlorpyrifos was discussed in more calls than any other single active ingredient (Table 10). Of the 1,178 calls involving chlorpyrifos, 224 (19.0%) were incident calls and 954 (81.0%) were calls for general

information. See Table 10 and Figure 14 for this and similar information for the 25 active ingredients most commonly discussed in calls made to NPTN. Note that a call may involve discussion of more than one active ingredient; thus totals reflect the number of

Figure 14 - Top 10 Active Ingredients in All Calls

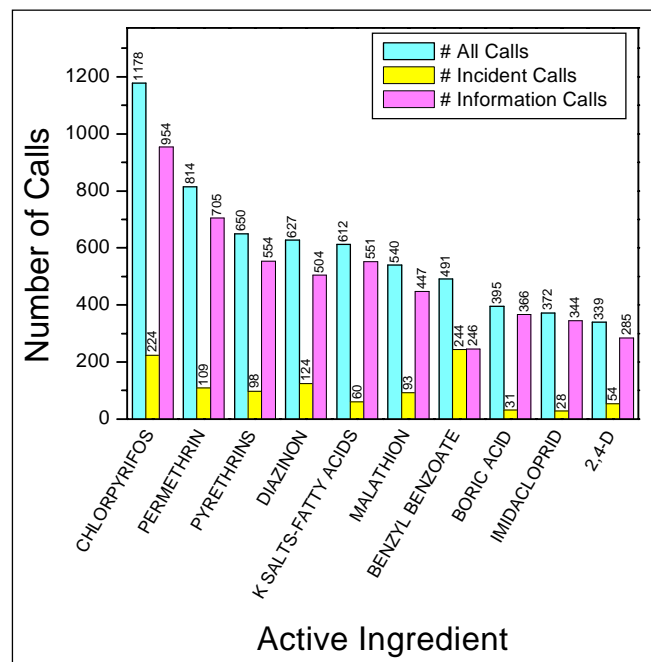


Table 10 - Top 25 Active Ingredients for All Calls to NPTN in the 1999 Operational Year

Active Ingredient	Total Calls	Incident ¹⁾ Calls	Information Calls
CHLORPYRIFOS	1178	224 (14)	954
PERMETHRIN	814	109 (18)	705
PYRETHRINS	650	98 (11)	554
DIAZINON	627	124 (7)	504
POTASSIUM SALTS OF FATTY ACIDS	612	60 (3)	551
MALATHION	540	93 (6)	447
BENZYL BENZOATE	491	244 (11)	246
BORIC ACID	395	31 (1)	366
IMIDACLOPRID	372	28 (1)	344
2,4-D	339	54 (2)	285
PIPERONYL BUTOXIDE	338	56 (8)	284
BENDIACARB	297	23 (3)	276
GLYPHOSATE	281	42 (1)	240
CARBARYL	268	35 (2)	234
CYFLUTHRIN	240	30 (2)	210
CHLORDANE	235	27 (3)	208
CYPERMETHRIN	230	37 (6)	193
DICAMBA	227	63 (2)	164
SULFURYL FLUORIDE	221	12 (1)	209
MECOPROP	208	55 (2)	153
LAMBDA-CYHALOTHRIN	205	35 (6)	171
D-PHENOTHRIN	199	26 (3)	173
SULFUR	189	24 (2)	166
BIFENTHRIN	155	14 (1)	141
DEET	148	12 (4)	136
Total - Above Pesticides =	9459	1556 (120)	7914

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).

times active ingredients are discussed during the course of all calls. Table 10 also provides the certainty index assigned to all incident calls. The certainty index is an estimate by NPTN as to whether the incident was 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 zero (0) is assigned to those calls where the caller reported an exposure, accident, or odor, but no health effects were reported. Of the 224 times that chlorpyrifos was mentioned during incident calls in which effects were reported, 6.3% of the cases were assigned a certainty index of 1 (definite) or 2 (probable).

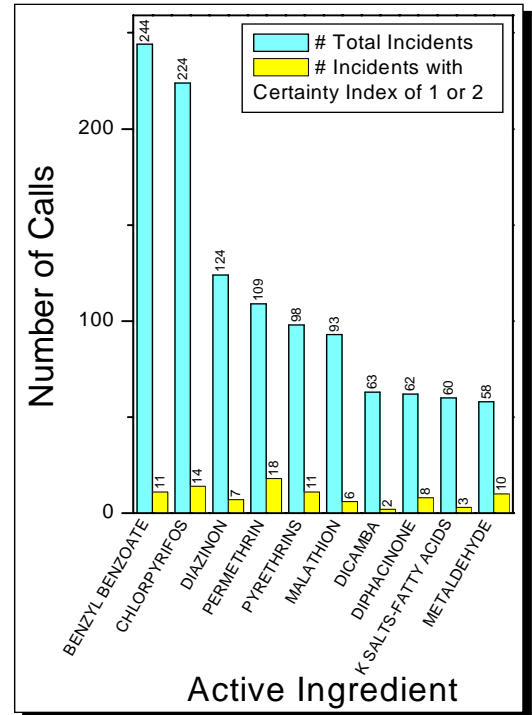
Top 10 Active Ingredients in Incident Calls

The most common active ingredients reported during incident calls are listed in Table 11 and Figure 15. Table 11 also summarizes the numbers of human and animal entities involved in reported incidents of exposure to specific active ingredients. Benzyl benzoate was reported to be involved in more incidents than any other active ingredient. Products containing this active ingredient

which were involved in the incident calls include some called AllerCare.

Of the 1,492 times that one of the top 25 active ingredients was mentioned during incident calls in which human or animal entities were involved, 9.4% of the cases were assigned a certainty index of 1 (definite) or 2 (probable).

Figure 15 - Top 10 Active Ingredients in Incident Calls



More incident calls involved benzyl benzoate than any other active ingredient. Benzyl benzoate is the active ingredient in some AllerCare products, which were developed to control dust mites and dust mite allergens. These products were recently recalled by the manufacturer.

Table 11 - Top 25 Active Ingredients for Incident Calls in the 1999 Operational Year

Active Ingredient	Total Incidents ¹⁾	Human Incidents	Animal Incidents	Other Incidents	Information Calls
BENZYL BENZOATE	244 (11)	239 (11)	5 (0)	0 (0)	246
CHLORPYRIFOS	224 (14)	157 (9)	23 (5)	44 (0)	954
DIAZINON	124 (7)	79 (4)	20 (3)	25 (0)	504
PERMETHRIN	109 (18)	71 (7)	23 (11)	15 (0)	705
PYRETHRINS	98 (11)	73 (10)	14 (1)	11 (0)	554
MALATHION	93 (6)	64 (6)	6 (0)	23 (0)	447
DICAMBA	63 (2)	47 (1)	10 (1)	6 (0)	164
DIPHACINONE	62 (8)	2 (1)	60 (7)	0 (0)	40
POTASSIUM SALTS OF FATTY ACIDS	60 (3)	33 (3)	15 (0)	12 (0)	551
METALDEHYDE	58 (10)	11 (1)	44 (9)	3 (0)	79
PIPERONYL BUTOXIDE	56 (8)	42 (8)	7 (0)	7 (0)	284
MECOPROP	55 (2)	38 (1)	12 (1)	5 (0)	153
2,4-D	54 (2)	28 (2)	12 (0)	14 (0)	285
GLYPHOSATE	42 (1)	32 (1)	6 (0)	4 (0)	240
CYPERMETHRIN	37 (6)	32 (5)	3 (1)	2 (0)	193
CARBARYL	35 (2)	20 (1)	8 (1)	7 (0)	234
LAMBDA-CYHALOTHRIN	35 (6)	27 (4)	7 (2)	1 (0)	171
ACEPHATE	34 (4)	22 (3)	3 (1)	9 (0)	95
MCPA	34 (1)	30 (0)	3 (1)	1 (0)	45
N-OCTYL BICYCLOHEPTENE DICARBOXIMIDE	34 (6)	30 (5)	3 (1)	1 (0)	69
BORIC ACID	31 (1)	22 (1)	5 (0)	4 (0)	366
CYFLUTHRIN	30 (2)	26 (2)	1 (0)	3 (0)	210
BRODIFACOU	29 (5)	3 (0)	25 (5)	1 (0)	32
IMIDACLOPRID	28 (1)	24 (1)	4 (0)	0 (0)	344
CHLORDANE	27 (3)	21 (3)	0 (0)	6 (0)	208
Total - Above Pesticides =	1696 (140)	1173 (90)	319 (50)	204 (0)	7173

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).

Location of Incident

For incident calls, the NPTN specialist records the reported location of the reported exposure, accident, or odor. Of the 1,785 known locations where incidents occurred, 87.4% occurred in the home or yard, 5.1% occurred in an agricultural setting, and 3.6% occurred in an office building or school (Table 12).



**Table 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)	32 (6)	105 (13)
Home or Yard	730 (152)	902 (152)	1148 (129)	1246 (97)	1565 (121)
Agriculturally Related	92 (19)	115 (21)	131 (22)	91 (8)	114 (14)
Industrially Related	10 (2)	16 (3)	11 (0)	12 (1)	13 (1)
Office Building, School	51 (9)	52 (9)	75 (10)	65 (2)	39 (2)
Pond, Lake, Stream Related	8 (3)	4 (1)	6 (3)	5 (0)	9 (2)
Nursery, Greenhouse	7 (1)	9 (1)	10 (1)	10 (0)	9 (1)
Food Service/Restaurants	6 (3)	6 (0)	4 (1)	4 (0)	5 (1)
Retail Store/Business	4 (2)	15 (6)	14 (3)	17 (2)	15 (3)
Roadside/Right-of-Way	10 (1)	15 (0)	17 (1)	9 (1)	8 (0)
Park/Golf Course	8 (0)	7 (1)	7 (0)	9 (1)	8 (0)
Other	43 (16)	126 (20)	122 (28)	62 (12)	72 (6)
Total =	1944 (347)	1749 (254)	1559 (201)	1562 (130)	1962 (164)

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).



Environmental Impact

NPTN specialists also record reported environmental impacts discussed in incident calls. See Table 13. The most common reported environmental impacts are damage to property and damage to plant material, including food crops and other plants or trees. Multiple environmental impacts may be reported for each incident calls; thus totals reflect the number of times these sites were discussed during the course of all incident calls. Of the 272 times that a specific environmental impact was reported, 5.2% of the cases were assigned a certainty index of 1 (definite) or 2 (probable).

**Table 13 -
Reported Environmental Impact
from Pesticide Incidents**

Environmental Impact	Number of Incident ¹⁾ Calls				
	1995	1996	1997	1998	1999
Air	29 (6)	32 (4)	35 (8)	13 (0)	11 (0)
Water	24 (5)	19 (1)	15 (1)	17 (1)	9 (1)
Soil	17 (2)	22 (3)	41 (6)	21 (3)	15 (3)
Food Crops/Process	68 (4)	60 (3)	44 (4)	38 (0)	40 (1)
Property	105 (24)	131 (19)	120 (14)	93 (7)	136 (6)
Poultry/Livestock	11 (2)	9 (4)	7 (0)	3 (1)	13 (2)
Plants/Trees	31 (1)	26 (2)	44 (4)	25 (2)	48 (1)
Not Applicable	1647 (297)	1431 (215)	1211 (154)	1333 (112)	1675 (147)
Other	11 (6)	19 (3)	42 (10)	19 (4)	15 (3)
Total =	1943 (347)	1749 (254)	1559 (201)	1562 (130)	1962 (164)

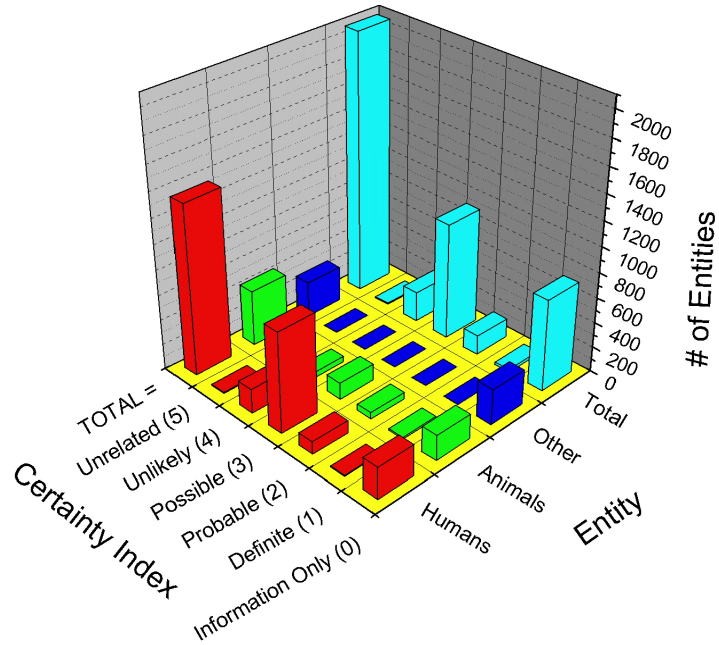
¹⁾ First number represents the total of purported incidents regardless of certainty index - numbers in parentheses indicate the total of incidents with certainty index of 1 (definite) or 2 (probable).



Certainty Index

Table 14 and Figure 16 summarizes the assignment of certainty index for all incident calls received by NPTN. Calls are sorted according to type of entity; human entities are further sorted according to gender and groups of entities. Multiple entities may be discussed in one incident call; thus totals reflect the number of entities (as opposed to number of incidents) discussed during the course of incident calls to NPTN. Of the total number of entities (2,084) discussed in incident calls to NPTN, 1.0% of the cases were assigned a certainty index of definite (1), 7.4% of the cases were assigned a certainty index of probable (2), 44.6% of the cases were assigned a certainty index of possible (3), 11.4% of the cases were assigned a certainty index of unlikely (4), 0.5% of the cases were assigned a certainty index of unrelated (5), 35.1% of the cases did not involve effects and so were assigned the certainty index of zero (0), information only.

**Figure 16 -
Certainty Index for Entities**



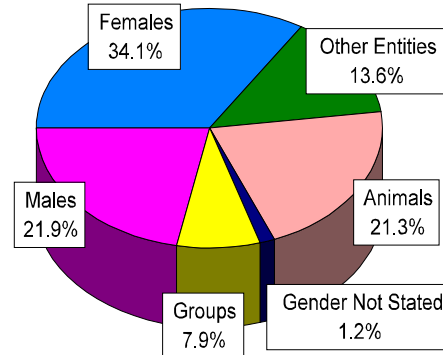
**Table 14 -
Incident Calls Sorted by Certainty Index for the 1999 Operational Year**

CI for All Categories of Entities					Breakdown of Human Entity Incident Calls			
Certainty Index	Humans	Animals	Other	Total	Male	Female	Groups	Gender Not Stated
Total Calls in Operational Year = 22,721								
Non-Incident Calls = 21,477								
Information Only (0)	250	199	282	731	94	123	28	5
Definite (1)	6	15	0	21	2	2	1	1
Probable (2)	101	53	1	155	46	43	12	0
Possible (3)	796	132	1	929	238	432	109	17
Unlikely (4)	193	45	0	238	74	104	13	2
Unrelated (5)	10	0	0	10	2	6	2	0

Description of Entities

Table 15 and Figure 17 provide a more detailed summary of categories of entities discussed in incident calls. Of the 2,084 entities involved in incidents reported to NPTN, 65.1% were human, 21.3% animal, and 13.6% were other types of non-target entities (building or environment, for example).

**Figure 17 -
Description of Entities**



**Table 15 -
Description of Entities Involved in Reported Incidents**

Description of Entities	Number of Entities ¹⁾				
	1995	1996	1997	1998	1999
All females -					
Female	625 (112)	562 (91)	555 (76)	502 (37)	686 (44)
Female-pregnant	68 (5)	36 (2)	22 (1)	12 (0)	24 (1)
Female suicide attempt	2 (1)	1 (0)	2 (1)	3 (1)	0 (0)
Total all females =	695 (118)	599 (93)	579 (78)	517 (38)	710 (45)
All males -					
Male	460 (103)	397 (75)	407 (79)	367 (35)	452 (48)
Male suicide attempt	2 (1)	0 (0)	1 (1)	2 (0)	4 (0)
Total all males =	462 (104)	397 (75)	408 (80)	369 (35)	456 (48)
All groups -					
Family	144 (40)	90 (15)	88 (10)	94 (7)	138 (12)
Non-family group	54 (13)	33 (5)	32 (7)	31 (2)	27 (1)
Total all groups =	198 (53)	123 (20)	120 (17)	125 (9)	165 (13)
Gender not stated -					
Child - sex unknown	33 (4)	16 (4)	15 (1)	7 (1)	9 (0)
Adult - sex unknown	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)
Other - sex unknown	15 (1)	4 (0)	22 (4)	12 (0)	15 (1)
Total gender not stated =	48 (5)	20 (4)	37 (5)	19 (1)	25 (1)
Total all humans =	1403 (280)	1139 (192)	1144 (180)	1030 (83)	1356 (107)
All animals -					
Single animal	242 (66)	273 (57)	259 (42)	312 (39)	371 (53)
Group of animals	50 (15)	47 (13)	57 (15)	45 (16)	70 (16)
Wildlife	18 (4)	19 (4)	6 (1)	2 (1)	3 (0)
Total all animals =	310 (85)	339 (74)	322 (58)	359 (56)	444 (69)
Other entities:					
Building-home/office	134 (16)	147 (7)	88 (2)	135 (0)	123 (1)
Other places	208 (9)	214 (6)	138 (2)	144 (1)	161 (0)
Total other entities =	342 (25)	361 (13)	226 (4)	279 (1)	284 (1)
Total all entities =	2055 (390)	1839 (279)	1692 (242)	1668 (140)	2084 (177)

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).

Entity Symptoms

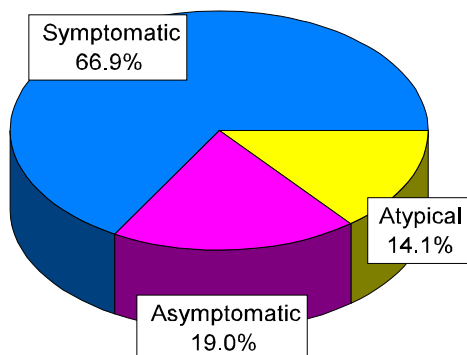
Of the 1,356 human entities discussed in incident reports to NPTN, symptoms or absence of symptoms were reported for 1,261 entities (Table 16). Of these entities, 66.7% reported symptomatic health effects (effects that are consistent with a significant exposure to the pesticide in question), 19.0% reported asymptomatic health effects, and 14.1% reported atypical health effects (Figure 18). Table 16 and Figure 19 provide this and similar information for animal entities.

**Table 16 -
Reported Symptoms of
Entities Involved in Incident Calls**

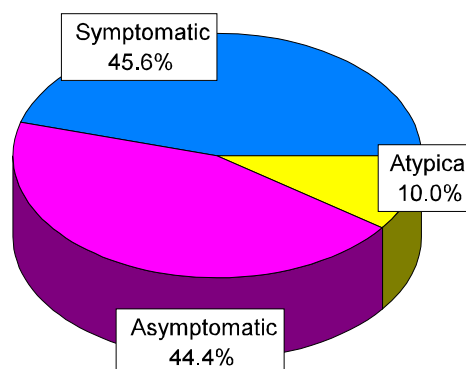
Reported Symptoms	Number of Entities ¹⁾				
	1995	1996	1997	1998	1999
Human symptoms -					
Symptomatic	721 (263)	605 (187)	651 (202)	614 (138)	843 (188)
Asymptomatic	258 (48)	145 (29)	164 (16)	180 (24)	240 (15)
Atypical	264 (22)	221 (21)	227 (17)	174 (19)	178 (15)
Total humans =	1243 (333)	971 (237)	1042 (235)	968 (181)	1261 (218)
Animal symptoms -					
Symptomatic	152 (81)	169 (70)	162 (64)	165 (59)	201 (81)
Asymptomatic	77 (10)	78 (8)	108 (6)	147 (5)	196 (1)
Atypical	53 (6)	54 (5)	54 (3)	48 (5)	44 (4)
Total animals =	282 (97)	301 (83)	324 (73)	360 (69)	441 (86)
Total symptoms =	1525 (430)	1272 (320)	1366 (308)	1328 (250)	1702 (304)

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 18 -
Symptoms - Humans**



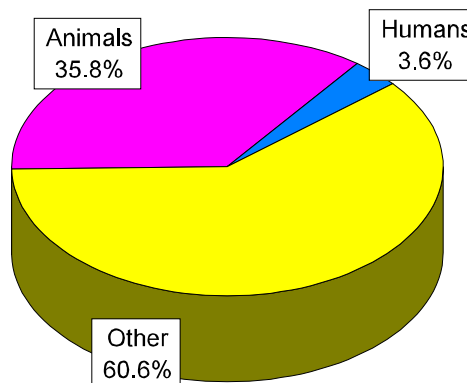
**Figure 19 -
Symptoms - Animal**



Deaths and Other Outcomes

Amongst the 1,356 human entities, 5 deaths were reported (Table 17). Based on information provided by the caller, none of these incidents was assigned a certainty index of 1 or 2, making it unlikely that the death(s) was a result of pesticide exposure. One of the persons involved was a pesticide applicator who died from internal bleeding, another had previously worked with captan and mancozeb and died of brain cancer, one was a gardener who had died of lead poisoning, and one had died of cancer after living in a house where the walls had been treated with creosote. No information was provided about date, frequency, duration, or level of exposure to pesticides. Of the 444 animal victims, there were 49 deaths, with 21 of the cases assigned a certainty index of 1 or 2, indicating likely pesticide involvement. Table 17 and Figure 20 summarize this information and also list the number of entities associated with life threatening conditions or interesting or strange circumstances.

**Figure 20 -
Deaths and Other Outcomes**



**Table 17 -
Additional Outcomes for Entities Involved in Incidents**

Additional Outcome	Number of Entities ¹⁾				
	1995	1996	1997	1998	1999
Human deaths -					
Male	2 (0)	3 (1)	1 (0)	2 (0)	4 (0)
Female	0 (0)	0 (0)	1 (0)	1 (1)	1 (0)
Total human deaths =	2 (0)	3 (1)	2 (0)	3 (1)	5 (0)
Animal deaths -					
Single animal	19 (10)	18 (7)	16 (7)	27 (4)	22 (11)
Group of animals	12 (7)	13 (7)	14 (4)	20 (10)	25 (10)
Wildlife	5 (2)	10 (1)	4 (1)	2 (1)	2 (0)
Total animal deaths =	36 (19)	41 (15)	34 (12)	48 (15)	49 (21)
Other -					
Life threatening	11 (7)	7 (4)	0 (0)	5 (1)	4 (4)
Interesting/strange	42 (17)	50 (6)	144 (60)	60 (12)	79 (21)
Total other =	53 (24)	57 (10)	144 (60)	65 (13)	83 (25)
Total additional outcomes =	91 (43)	101 (26)	180 (72)	117 (29)	137 (46)

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).

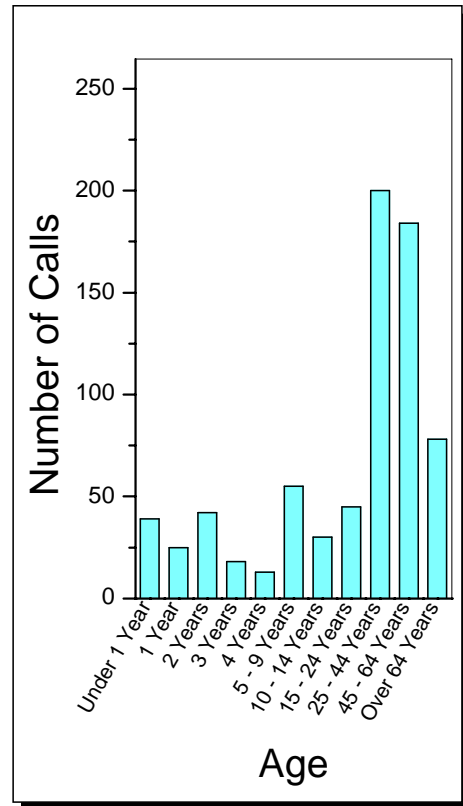
Entity Age

Entity ages were available for 729 of the 1,356 human entities. Table 18 and Figure 21 summarize information about the ages of human entities discussed in incident calls to NPTN. Of these 729 entities, 18.8% were less than 5 years of age, 11.7% were between the ages of 5 and 14, 6.2% were between the ages of 15 and 24, 52.7% were between the ages of 25 and 64, and 10.7% were over age 64.

**Table 18 -
Reported Ages of
Human Entities Involved in Incidents**

Age Category	Number of Entities				
	1995	1996	1997	1998	1999
Under 1 Year	27	24	42	49	39
1 Year	19	25	36	39	25
2 Years	23	30	19	41	42
3 Years	11	8	21	23	18
4 Years	9	15	13	29	13
5 - 9 Years	20	41	51	68	55
10 - 14 Years	21	17	30	19	30
15 - 24 Years	32	34	33	28	45
25 - 44 Years	201	257	276	245	200
45 - 64 Years	115	198	226	196	184
Over 64 Years	47	66	83	73	78

**Figure 21 -
Age of Entities**



Report on Subcontracts

Oregon Poison Center

NPTN Pesticide Specialists transferred 72 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 information for the calls transferred in that quarter.

National Animal Poison Control Center

In the current year, 81 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.

Sub-Projects

National Antimicrobial Information Network (NAIN)

The National Antimicrobial Information Network (NAIN), operated in association with the National Pesticide Telecommunications Network, is a toll-free telephone service that provides antimicrobial pesticide information via telephone and the Internet. Information is provided to health care and antimicrobial industry professionals, and to the general public. NAIN helps callers

understand product labels and permitted uses for specific products; provides lists of products registered as sterilants, tuberculocides, and products effective against HIV and HBV/HIV; provides toxicology, health effect and safety information on specific antimicrobial active ingredients; supplies information on regulation and registration of antimicrobials in the United States; fields complaints on product efficacy and forwards that information to the EPA; and refers requests that are outside of the scope of NAIN services to the correct agencies and resources.

NAIN provides callers with a variety of antimicrobial pesticide information, including lists of products registered as sterilants, tuberculocides, and products effective against HIV and HBV/HIV, and toxicology, health effect and safety information on specific antimicrobial active ingredients.

NAIN received 1,614 calls during grant year 1999. Of these calls, 1,404 were for general information about antimicrobial pesticides, 11 were complaints about antimicrobials, and 13 were incidents purported to involve antimicrobials. The NAIN web site received 69,885 hits; the current rate of Internet access is about 7,750 hits/month.

Wade Trevathan and Theresa Scholz attended the Chemical Specialties Manufacturers

Association Antimicrobial Regulation Workshop in Arlington, Virginia. Wade Trevathan presented an oral paper to 300+ attendees at APIC '99, the annual conference for the Association of Professionals in Infection Control and Epidemiology, in Baltimore, Maryland. NAIN, along with NPTN, met with OPP personnel and with OPP Office Director, Marcia Mulkey, in March.

NAIN hired one new antimicrobial Pesticide Specialist, and 1.5 specialists left NAIN for other employment.

Fact sheets added to the NAIN web site were: *Benzalkonium Chloride (general and technical)* and *Chlorine Dioxide - Technical*. The PR-notice *PR 2000-1 Applicability of the Treated Article Exemption to Antimicrobial Pesticides* was posted the web site.

NAIN outreach packets, containing a publicity letter, NAIN flyer, NAIN information sheet, and NAIN brochures, were sent to more than 3,000 city and county health organizations.

Efforts continue to update the NAIN antimicrobial pesticide active ingredient files.

NAIN submits independent quarterly and annual reports to the EPA. For current, detailed information about NAIN, see the National Antimicrobial Information Network Quarterly and Annual Reports posted on the NAIN web site at <http://nain.orst.edu>.

