



"Read the label first!"

npic

Real answers to real questions
from real people in real time!

National Pesticide Information Center - 2006 -



Environmental & Molecular Toxicology

Oregon State
UNIVERSITY

OSU

This is the twelfth annual report for the National Pesticide Information Center (NPIC) since it began operation at Oregon State University in April, 1995. NPIC, a service providing a variety of pesticide and pesticide-related information to the general public and professionals across the United States, Puerto Rico and the Virgin Islands, is a cooperative project between Oregon State University and the U.S. Environmental Protection Agency. This report, the 2006 Annual Report, covers the period April 1, 2006 - March 31, 2007, corresponding to NPIC's twelfth grant year.

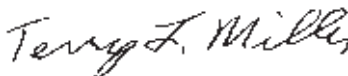
DISCLAIMER

Material presented in this report is based on information as provided to NPIC by individuals who have contacted NPIC for information or to report a pesticide incident. None of the information reported to NPIC has been verified or substantiated by independent investigation by NPIC 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 NPIC. Based on the information provided, NPIC 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." NPIC makes no claims or guarantees as to the accuracy of the CI or other information presented in its reports, other than that NPIC has done its best to accurately document and report the information provided to NPIC.

Submitted To:

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

Submitted By:



Terry L. Miller, Ph.D.
Director

National Pesticide Information Center (NPIC)
Oregon State University
333 Weniger Hall
Corvallis, OR 97331-6502
800-858-7378
<http://npic.orst.edu>

NPIC 2006 Annual Report

Table of Contents

Executive Summary.....	1
NPIC Mission Statement	3
Objectives	3
History	4
Inquiries and Resources	4
Funding	4
NPIC Update	5
Inquiry Update.....	5
Achievements.....	5
Resources.....	14
Personnel Update	17
Facilities	17
Traffic Report.....	19
Traffic Report Summary	19
Traffic Report Tables and Figures	20
1. Monthly Inquiries.....	21
2. Type of Inquiry	22
3. Origin of Inquiry	23
4. Web Site Access.....	24
5. Type of Inquirer.....	28
6. Type of Question.....	29
7. Reason for Inquiry	30
8. Action Taken	31
9. Inquiries by State.....	32
10. Top 10 Active Ingredients for All Inquiries.....	33
11. Top 10 Active Ingredients for Incident Inquiries	34
12. Location of Incident.....	35
13. Environmental Impact.....	36
14. Certainty Index.....	37
15. Description of Entities.....	38
16. Entity Symptoms.....	39
17. Deaths and Other Outcomes.....	40
18. Entity Age.....	41
Report on Subcontracts.....	43
Oregon Poison Center	43
National Animal Poison Control Center	43
Acknowledgements	44

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



The NPIC Team

Executive Summary - NPIC 2006 Annual Report

Note: The complete record of NPIC accomplishments for the current operational year includes the 12 monthly reports and 4 quarterly reports (submitted earlier), in addition to this “2006 Annual Report.” This report covers the NPIC grant year April 1, 2006 through March 31, 2007.

Operations

- NPIC received 24,472 inquiries between April 1, 2006 and March 31, 2007 (Graph 1.1). Eighty-three percent of these inquiries were received between March and October, occurring when pest pressures are at their highest. Approximately 94% of the total inquiries were addressed over the telephone. The NPIC web site continues to be an important source of information. During the twelfth operational year the site received 1,146,050 hits (Graph 4.1), an increase of more than 94,000 hits compared to the previous year.
- (33%) were the most commonly asked questions. Regulatory compliance consisted of 9% of questions (Chart 6.1).
- The majority of inquiries (87%) were for information only (not related to an incident, Chart 2.1), while 13% were related to exposure concerns. Dermal exposure accounted for 30%, ingestion accounted for 37% and inhalation accounted for 15% of exposure inquiries (Chart 7.1). The remaining inquiries were reported as an unknown or possible exposure.
- Pyrethrins and pyrethroids continued to generate many inquiries, including 3 of the top 5 active ingredients addressed by NPIC. The top five active ingredients for all inquiries were permethrin (1,042), naphthalene (855), malathion (576), pyrethrins (499) and deltamethrin (424) (Table 10.1).

Notable Items

- NPIC received 1,327 inquiries regarding the use of mothballs, including 769 mothball-related incidents and 465 reports of misapplication.
- NPIC received 217 inquiries related to bed bugs.
- NPIC received 88 inquiries about Hartz Pet Products for cats and kittens, a 51% decrease from the previous year.
- NPIC received 322 inquiries on West Nile Virus, compared with 596 inquiries in the previous year.
- Most of the inquiries to NPIC (93%) were handled by providing verbal information/discussion or referral to the inquirer. Other actions taken by specialists include transfer to Oregon Poison Control Center or Animal Poison Control Center (1%), and to provide appropriate contact information such as EPA, state lead agencies, cooperative extension and the manufacturer. Some inquirers (6%) received information via fax, mail or e-mail (Table 8.1, Chart 8.1).
- The highest number of inquiries to NPIC came from California, Texas and New York, the three most populated states (Graph 9.1). Of the EPA regions, NPIC received the most inquiries from EPA Region 4, followed by EPA Region 5 and Region 9 (Graph 9.2).
- The active ingredients found in mothballs continue to be a major source of concern for inquirers. NPIC responded to 433 human incident inquiries for naphthalene, followed by 137 for paradichlorobenzene (Table 11.1), comprising the most frequent active ingredients for human incident inquiries. A certainty index of 1 or 2 was given in less than 1% of the inquiries for both active ingredients.
- For animals, the highest number of incident inquiries were 186 for metaldehyde and 156 for zinc phosphide (Table 11.1). Twenty-six percent (26%) of the inquiries for metaldehyde were given a certainty index of 1 or 2, compared to only 2% of the inquiries for zinc phosphide.

Inquiries

- Most of the inquiries to NPIC came from the general public (89%), followed by government organizations (3%), human and animal medical personnel (2%) and information providers (2%) (Table 5.1, Graph 5.1).
- Health-related inquiries (33%) and pesticide use inquiries

● Pesticide Questions?

● NPIC

- 7 days a week
- 6:30 am to 4:30 pm (PT)
- Phone: 1.800.858.7378
- Web: npic.orst.edu
- E-mail: npic@ace.orst.edu

● We've Got Answers!

- Of the 3,388 incident inquiries, 3.5% were assigned a certainty index of 1 or 2, thus determined to have a definite or probable link to the pesticide in question.
- Of the known locations where incidents occurred, 96% occurred in the home or yard, 1% occurred in an agricultural setting, and 1% occurred in an office building or school (Table 12.1).

- There were 3,762 entities involved in incidents reported to NPIC: 46% were human (26% female and 20% male), 34% were animals and 16% were classified as other (structures or environment) (Chart 15.1).
- Of the 1,872 human entities involved with incident inquiries, information about symptoms was provided for 1,584 entities. Of these, 51% were asymptomatic, 27% were symptomatic and 22% reported atypical symptoms (Chart 16.1).
- Among the 1,872 human entities for pesticide incident inquiries, one death was reported. Of the animal inquiries, 38 deaths were reported, with 10 of the incidents assigned a certainty index of 1 or 2 (Table 17.1, Chart 17.1).
- Of the human entities in which age was available, 27% were less than 5 years of age, 5% were between the ages of 5 and 14, 4% were between the ages of 15 and 24, 48% were between the ages of 25 and 64, and 16% were 65 years or older.
- Examples of “health-related” inquiries include:
 - Caller said he received a notice about a pending Talstar application on his neighbor’s property. Caller reported he has a well about 45 feet from the property line and asked if this application could contaminate his well.
 - Caller said she took her children to the local park and after playing for an hour, she noticed some yellow flags saying the area had been treated with a pesticide for weed control. Caller asked if her children are in danger from these chemicals.
 - Caller reported he applied a flea and tick spot-on treatment to his dog this morning and is expecting his grandchildren to visit this evening. Caller stated the children “love to hug and climb all over” his dog. Caller asked if it was safe to let the children handle the dog today considering the recent treatment.
- Examples of pesticide incident inquiries include:
 - Caller bought a permethrin product designed for treating clothing and he applied it to his clothes while wearing them. Caller reported the product “soaked through” the pants and onto his legs. Caller asked if the product would harm him.
 - Caller said she applied garden dust to her yard an hour ago and a breeze came up and blew some dust into her face. Caller inhaled some dust and immediately began coughing. She now feels nauseous and her throat and lungs are irritated. Caller asked what to do to alleviate her symptoms.

Organization

- Eight specialists completed the training program during this grant year. Kaci Agle assumed the duties of the Project Coordinator with the departure of Carley Hansen Prince. A new faculty member in the Environmental and Molecular Toxicology Department, Dave Stone, was hired on March 1, 2007. Since his arrival, Dr. Stone has worked closely with the NPIC executive committee and staff. NPIC’s current staff includes 12 full-time specialists, a full-time information resource supervisor, an administrative assistant, a part-time fiscal/personnel manager, and two part-time undergraduate student assistants.
- NPIC purchased a new Xerox Phaser 5500DX for black-and-white printing, and a new Xerox Phaser 7760DX for printing in color. Two new Sun Microsystems T2000 servers were installed, improving NPIC’s information delivery capacity and performance. To improve disaster recovery systems, an ADIC Scalar 24 tape library system was purchased as a replacement for an older ADIC unit. In addition, NPIC upgraded its aging network firewall hardware and purchased three Seagate Cheeta hard disk drives to replace failing units in a server RAID system.

Web Corner

- NPIC’s web site received 1,146,050 hits in this grant year, which has been steadily increasing over the past few years (Graph 4.1).
- NPIC continues to develop the InfoBase search tool including the addition of the active ingredient and general files. InfoBase has an improved interface and usability for both internal staff and the public.
- The West Nile Virus Resource Guide received 112,143 hits in this grant year, down from 142,967 hits in the previous year (Graph 4.4).
- NPIC case profiles received 15,292 hits last year. “Bombs Away” was the most accessed profile (Graph 4.5). NPIC medical profiles received 11,310 hits, with “Organophosphate Biomarkers” as the most accessed profile (Graph 4.6).
- NPIC received 176,981 hits to their active ingredient fact sheets (Graph 4.7). Permethrin was the most accessed fact sheet (18,392), followed by boric acid (17,634), fipronil (16,003) and pyrethrins (12,487).
- NPIC received 23,567 hits to their topic fact sheets (Graph 4.8). “Drinking Water” was the most accessed topic followed by “Pets” and “Formulations.”



NPIC Mission Statement

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

- recognition and management of pesticide poisonings
- health and environmental effects
- toxicology
- environmental chemistry
- pesticide products.

In addition, NPIC provides referrals for:

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

A major goal of NPIC is to promote informed decision-making on the part of the inquirer.

Service provided by NPIC is available 10 hours/day from 6:30 am - 4:30 pm Pacific Time, 7 days per week (excluding holidays), via a toll-free telephone number, and 24 hours/day via e-mail and the internet, to anyone in the United States and its territories. NPIC is sponsored cooperatively by Oregon State University and the U.S. Environmental Protection Agency.

NPIC is open to questions from the public and professionals. It is staffed by highly qualified and trained specialists who have the toxicology and environmental chemistry training needed to provide knowledgeable answers to questions about pesticides. NPIC specialists deliver information in a user-friendly manner, and are adept at communicating scientific information to the lay public. Specialists can help inquirers interpret and

understand toxicology and environmental chemistry information about pesticides. The services provided by NPIC are strictly informational and have no regulatory or enforcement capability or authority.

NPIC maintains a Telephone Relay Service (TRS) to facilitate access to pesticide information by the hearing-impaired.

Objectives

The objectives of NPIC are:

- 1) To operate a toll-free telephone service to inquirers in the United States, Puerto Rico, and the Virgin Islands, including a recording device to capture off-hour inquiries.
- 2) To provide access to NPIC and pesticide-related information via the internet and e-mail.
- 3) To serve as a source of factual, unbiased information on pesticide chemistry, toxicology, and environmental fate to all who inquire, including industry, government, medical, and agricultural personnel, in addition to general public.
- 4) To provide the medical community with diagnostic and crisis management assistance involving pesticide incidents in situations pertaining to both human and animal patients.
- 5) To acquire accurate and complete information on all inquiries considered to be pesticide incidents.
- 6) To computerize all inquiry information as well as pesticide incident data for easy retrieval.

NPIC provides objective, science-based information about pesticides and pesticide-related topics to empower inquirers to make informed decisions about pesticides and their use.



Kaci - Project Coordinator

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, offered via telephone, 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. In addition to the telephone, NPTN

began to place major emphasis on the internet and e-mail as means of disseminating pesticide information, and as alternate routes of contact with NPTN. To more accurately reflect the nature of its service, NPTN was named National Pesticide Information Center (NPIC) in 2001. On March 1, 2006, NPIC assumed responsibility for responding to inquiries about antimicrobial products.

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

Inquiries and Resources

NPIC 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 NPIC 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; and current pesticide-related issues in the news.

NPIC maintains an extensive collection of hard-copy and electronic resources for pesticide information, used as necessary by the specialists in answering inquiries. Included in this collection are: NPIC's Active Ingredient (AI) file collection containing information on 950 pesticide AI; 60 General Files that contain 306 topic sub-files of specific pesticide topic information; numerous compendia of pesticide information (e.g., *Code of Federal Regulations - 40 CFR Parts 150 - 189*; *Common Sense Pest Control*; *Crop Protection Handbook*; *Disinfection, Sterilization, and Preservation*; *Herbicide Handbook*; *Metabolic Pathways of Agrochemicals*; *Pest Control Operations*; *The Pesticide Manual*; *Toxicology - The Science of Poisons*; and the *WHO Environmental Health Criteria* series); electronic access to EXTOWNET (*EXtension TOXicology NETwork*), *CHEMBANK (HSDB, RTECS, IRIS)*, and *PESTBANK*; and on-line literature searching capabilities (e.g., Medline, TOXNET, PubMed).

Funding

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



Open minds. Open Doors.™

NPIC Update

Inquiry Update

NPIC responded to 24,472 inquiries, 3,393 of which were classified as pesticide incidents (13.9%). 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 inquiries are reviewed by Dr. Daniel Sudakin and/or a senior NPIC Pesticide Specialist. On the basis of information provided by the inquirer, and with reference to established criteria, all incident inquiries are assigned a certainty index (CI). This is NPIC's assessment as to whether the effects were definitely (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 inquirer reported an exposure, misapplication, accident, or odor, but no health effects, a certainty index of zero (0) is assigned.

Achievements

Administrative and Operational Infrastructure -

Mission, Goals, & Values -

NPIC continued to operate under its *Mission, Goals and Values* statement. The statement, which articulates NPIC's mission and goals, includes a set of values and attributes deemed to contribute to a positive workplace culture and promote a sustainable public service-oriented organization.

NPIC Policies - NPIC operated with the following policies throughout this granting period: *Policy Guidance Overview; Faculty Position Descriptions, Annual Evaluations, and Salary Increases; Schedule Policy; Vacation-Leave Policy; and Sick-Leave Policy.*



Standard Operating Procedures (SOP) - The Executive Committee and staff worked together to enhance the NPIC SOP collection. Upon completion, NPIC posts each SOP to the NPIC Intranet (Inet) and adds each to its hard-copy collection. Master SOP collections include: *Operational/Administrative; Specialist Projects; and Student Assistants.*

NPIC developed and/or revised the following Operational/Administrative SOP: *NPIC Emergency Officer Duties; Computer Procedure During Power Outage; Reporting Human Deaths, Group Illnesses, Group Deaths; Inquirer's Options for Reporting Incident Information to the EPA; Referrals to Dr. Sudakin, M.D., M.P.H. (NPMMP); Referrals for Human Poisonings (PCC); Referrals for Animal Poi-*

sonings (APCC); Referrals to Other Organizations; Referrals for Suspicious Activity/Security Concerns; Transferring Spanish Speaking Callers to SRC; Transferring Callers to Language Line; Requests for Quotes (Expert Witness), or to Publish NPIC Information, Telephone Number, or Written Materials; Requests for NPIC Pesticide Inquiry Database (NPIC/PID) Data; Requests for Pesticide-Related Material Available from NPIC; Submitting Mail-out and Fax Requests to Student Assistants; Processing Fax Requests; Responding to Telephone Inquiries (Skills Review); Difficult Callers; Scams; Collecting and Documenting Incident Information; NPIC Telephone System; Telephone Quick Reference; Responding to Audix Messages; Spanish Audix Message; Personal Audix/Voice Mail; E-mail Attachments in Pine; NPIC Meetings: Specialist, Full Staff, and Continuing Education; Posting Quarterly Achievements; Maintaining Staff Directories and Station Locators; Answering NPIC E-mail; NPIC Routing Slip; Opening/Closing Procedures; Printing NPIC Logs, and Sending Follow-up E-mail to Callers.

NPIC posted the following Student Assistant SOP to the Inet as either new documents or with significant updates: *Archiving NPIC Records; Binding REDs; Creating and Generating NPIC Routing Slips; Filing NPIC Logs; Generating Call Histograms; Mail Run; Maintaining Staff Directories and Station Locator; Making Recruitment Folders; Ordering Supplies; Posting Quarterly Achievements; Preparing Show and Tell Bibliography; Printing and*

Distributing NPIC Reports; Printing Numbers on NPIC Brochures or Promotional Items; Updating Resource Information Listings; Using the Electronic Scale, Processing Library Inventory, AI Document Verification; Filing AI Documents; Preparing Monthly Student Worker Calendars; Preparing Monthly Student Worker Time Cards; Preparing for the Upcoming Year; Training Incoming Student Worker; Contact Information and Equipment Identification; and PC Filing.

Additional update and development of SOPs are described in the “Pesticide Inquiry Database” section below.

reviews, new FoxPro programming occurred, numerous new codes were added to the field choices, and guidance documents were substantially revised.

Consistency in coding and narrative quality were the focus of discussions throughout the grant year. Reprogramming the FoxPro PID interface reduced the potential for coding errors, and reduced the need for manual monitoring by the PID Facilitator. The training materials for new specialists were substantially revised to include more detailed decision-making criteria and exercises to facilitate familiarity with the Log Coding Guidelines and

of these enhancements to the PID system and QA/QC process.

NPIC continued to benefit from advancements in technology that allow comments to be imbedded in QA/QC reports and shared with a group electronically. Human Incident QA/QC reports were generated regularly, reviewed by the PID Facilitator and Dr. Daniel Sudakin, and posted to the NPIC Inet for review by the staff. This provides specialists with the opportunity to improve coding decisions by having access to PID QA/QC actions and rationales for the changes. In addition, log reports for trainees and new specialists were generated in a similar manner, with additional feedback from the trainer and/or Project Coordinator. This mechanism for sharing feedback and tracking improved application of the log coding guidelines has proven to be a valuable mechanism for improving consistency over the long term.

New codes were added to the Action field that will allow NPIC to track the frequency with which Specialists provide contact information to other organizations. Because Specialists may respond to inquiries with multiple actions, two additional entry fields were added to the PID. For example, a specialist might respond to an inquiry by providing verbal information and contact information for the product manufacturer. The new fields will allow specialists to record both actions.

Melody Roth was cross-trained as a member of the PID team. The following SOP describing QA/QC processes were developed or improved during this grant year: *Appending Files to the Working Database; Obtaining and Combining NPIC Log Files from FoxPro; Applying Log Coding Guidelines, Pesticide Inquiry Database Macros, and Generating Human Incident Reports.*



Kelly - Pesticide Specialist

Project and Information Review -

Pesticide Inquiry Database (PID) - The Executive Committee and staff focused on a variety of Quality Assurance/Quality Control (QA/QC) techniques, identified and discussed in detail at weekly meetings, by conducting routine incident/information inquiry report reviews (compiled by the PID Facilitator, Kelly Bahns) and through NPIC training program events. As a result of these discussions and

FoxPro interface. Guidance documents were updated and reviewed by the group, including the list of Log Coding Guidelines, Commonly Mis-entered Active Ingredients, Wrong Number - Coding Guidance and Macros, which are short-cuts used in data entry. Macros improve consistency by ensuring that common phrases are entered into the PID in a standard way. Proposed changes to the PID data entry fields were presented to the group, and additional feedback collected will further improve the implementation

NPIC Web Site - The NPIC web site is useful to NPIC clientele and is an effective tool for providing pesticide-related information. The NPIC web site presently provides the user access to many types of pesticide information, including NPIC fact sheets, other materials developed by NPIC, and links to pesticide information at other web sites demonstrated to be of use to NPIC clientele.

In many respects, the NPIC web site is a “gateway” or “one-stop shopping center” for pesticide information. NPIC anticipates access to its web site will continue to increase and conducts frequent updates and enhancements to the content and functionality of the main pages. In addition, NPIC continues to update specific resources, including the WNV Resource Guide (with specific emphasis on WNV background, state contacts, and new science), and hot topics.

NPIC received 1,146,050 total web hits to its web site this grant year. The WNV Resource Guide received 112,143 hits.

Routine link checks were performed and maintenance on broken and/or redirected links continued throughout the year. NPIC improved the *General Info*, *Technical Info*, *Pest Control*, *Regulatory* and *EPA Regulations* web pages, including spelling, link title and source labeling, and overall organization in order to be more intuitive for users. Links imbedded in documents developed by NPIC were systematically updated, including NPIC Case Profiles, NPIC Medical Case Profiles, and Hot Topics documents dedicated to *Chromated Copper Arsenate* and *Permethrin-Treated Clothes*.

New links were added to NPIC’s *Pest Control* page, including eight new links regarding IPM in schools, a new section on Agricultural Pests (featuring USDA’s Crop Profiles), expanded resources about termites

and all-new resources about bed bugs and avian flu. To facilitate access to university resources that publish pest control advice, NPIC added links to the University of Florida, Washington State University and the University of California at Davis. Two new sections were added to NPIC’s *Regulatory* page,



Masa - Pesticide Specialist

dedicated to Biotechnology and Inert or Other Ingredients. Additional links were added to various NPIC web pages, including EPA’s *Pesticide Fate Database*, IPM Center’s *OPP Pesticide Ecotoxicity Database*, EPA’s *Toxicity and Exposure Assessment for Children’s Health (TEACH)*, ASPCA’s *Toxicology Briefs*, and EPA’s *Pesticide Labeling Questions & Answers*.

A Mothball web page was designed and posted to the NPIC web site to address common questions. Inquiries to NPIC about mothball products have increased over time.

NPIC updated its West Nile Virus Resource Guide to reflect the 2006 WNV season. Reregistration Eligibility Decisions (REDs) for pyrethrins and resmethrin were added to the Guide’s section about *Pesticides and Toxicology*. Several new research articles were also added, including Centers for Disease Control

& Prevention (CDC) *Cost-effectiveness of West Nile Virus Vaccination*.

InfoBase - NPIC further developed the InfoBase, an electronic repository of pesticide-related information. NPIC catalogued the pesticide-related dockets found at www.regulations.gov and created

a user-friendly way to browse and search those dockets. (See the new features by checking the box titled “E-Gov Docket Documents” at <http://pi.ace.orst.edu/search/>. Then choose one of the links at the bottom of the page.)

NPIC added two new libraries to the InfoBase for internal use, including Active Ingredient (AI) files and General files. These hard-copy resources were converted to electronic files (PDF) using PrimeOCR (Prime Recognition Systems) to do optical character recognition (OCR). Resulting files were indexed by RetrievalWare. Using a system designed by NPIC, these resources were associated with relevant metadata and indexed for efficient access by NPIC staff.

Before each file was scanned for inclusion in the InfoBase, NPIC evaluated each document to ensure that it was reputable, appropriately

referenced and to ensure that its metadata were correctly reflected in a corresponding database. Scanning was initiated in June 2006. By March 2007, the majority of Active Ingredient files (876/950) and over half of the General files (181/306) had been evaluated, scanned, indexed and made available to staff electronically. NPIC scanned 11,857 documents for inclusion in the InfoBase.

Active Ingredient Files - NPIC added 40 new Active Ingredient (AI) files to its collection, totaling 950 files at the conclusion of the grant year. The AI committee updated 55 AI files (including

major priority this grant year, robust maintenance activities were also performed. The AI committee performed a comprehensive inventory of the collection to ensure that all files were present and appropriately filed. Active ingredients with more than one common name were identified and the AI committee provided leaders within the file cabinets to direct specialists to the correct location of the AI file. More than 200 leaders were created and mirrored electronically in the collection's Table of Contents, accessible on the Inet. Leaders were filed in locations where a specialist might look for a file by the wrong name, and provides the correct name, quickly

bibliographic data were accurately and consistently reflected in NPIC's General File database. Many files were also updated as part of the pre-scanning process, which includes a literature- and web-search for new information.

Hard-copy files are similar in organization to the AI projects; specific source materials are placed on colored backers for easy accessibility by specialists. At the conclusion of the grant year, NPIC had restructured and entered 143 general topic sub-files, and added 1,304 documents into the database.

“Other” Ingredient Files -

NPIC continues to update its inert or other ingredient files by addition of NTP, ATSDR, WHO, and other relevant scientific hard-copy documents.

Library - NPIC restructured its library inventory by reviewing the inventory database and the physical collection. Each resource was labeled with a sticker identifying the author, title, date and its appropriate location in the NPIC collection.

Intranet (Inet) - NPIC's internal web pages, referred to as the Inet, continued to receive updates on a weekly basis. Updates included schedules, calendars, meeting notes, staff directories, human incident reports, and project-related materials. Notable additions include the Hot Topics documents dedicated to Mothballs and Non-CCA Wood Preservatives, researched and developed by Brent Fleck. The Mothball document was provided internally, using the Inet, before being released to the general public on NPIC's external web-site.

Desktop Resources - NPIC enhanced and updated the Resource Book throughout the year. Sections within this hard-copy resource provide specialists quick access to frequently requested information, including contact information for



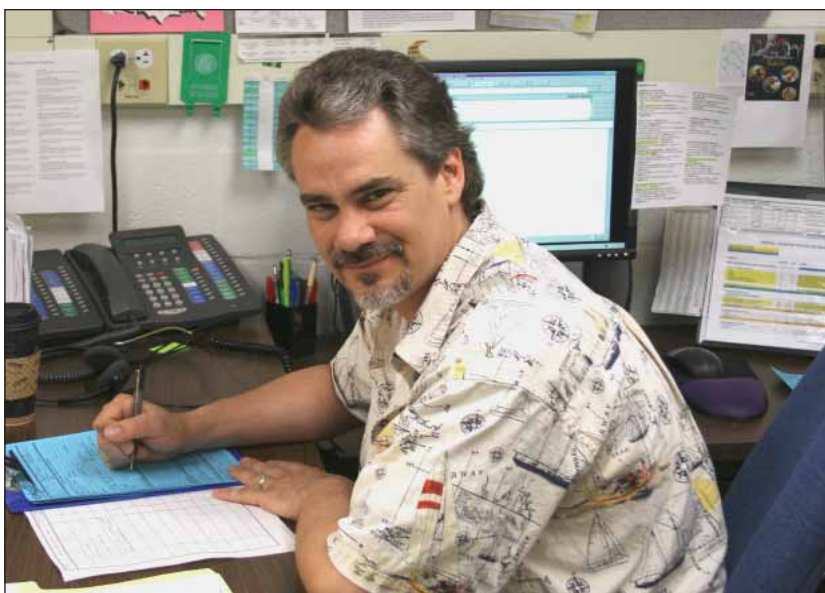
Katie - Pesticide Specialist

azinphos-methyl, cyphenothrin, picaridin, propargite, DDAC, red pepper and denatonium benzoate) by adding new and relevant data obtained from a literature search. NPIC acquired 1,219 new documents for inclusion in the AI file collection this year, including all relevant FQPA Risk Assessments, EPA Fact Sheets, Reregistration Eligibility Decisions and Tolerance Reassessment Eligibility Decisions (RED/TRED).

Katie Panneman joined the AI committee and cross-trained on AI maintenance activities. While the scanning project was a ma-

leading the specialist to the desired information.

General Files - NPIC maintains 60 General Files that contain 306 topic sub-files of specific information about pesticide-related topics. The scanning project was a major focus this grant year, requiring additional labor. Suzanne Phillips, Brent Fleck, Masa Safic-Youngblood and Tom Jones joined the General File committee; Ms. Phillips cross-trained as its facilitator. Prior to scanning a general file, NPIC staff perform steps for each file to ensure that the documents were not duplicated or missing, and the



Bryan - Pesticide Specialist

health departments, educational resources, and local, state, and federal agencies. Polly Wegner continues to lead this project, completing a thorough update of the Resource Book this year by verifying contact information, web sites and mailing addresses for thousands of resources including local OSHA offices, state Wildlife Agencies, Poison Centers and more. Databases generated for this project were also used by NPIC's Outreach team for a bulk mail-out.

NPIC maintained and added to its manufacturer database containing contact information for 383 manufacturers with current addresses, telephone numbers and web sites. This database is also posted to the NPIC web site.

Case Profiles - NPIC presents general and medical case profiles on its web site to provide an educational opportunity to the NPIC audience. Six new staff were cross-trained on the project and began writing and reviewing new content. They utilized guidance documents and tracking mechanisms developed by NPIC to maintain consistency with work generated by other staff.

Training and Continuing Education -

Training - The NPIC Training Manual Review and Revision team continued to focus on QA/QC measures during this grant period, while taking on major revisions to sections 7 and 8 of the NPIC training manual, dedicated to "Log Coding Guidelines" and "Pesticide Regulations." New materials were utilized, including the *National Pesticide Applicator Certification Core Manual*, and materials explaining EPA's Registration Review process.



Clayton - Pesticide Specialist

Trainer - Kaci Agle became NPIC's trainer of new pesticide specialists, and began cross-training Clayton Cornell to move into the role. His training will continue in the 2007 grant year.

Specialists - Eight specialists completed the training program during this period. Each new specialist who has not been formally trained in toxicology attends university lecture courses as part of a three-term series in graduate-level toxicology. Four specialists attended Fundamentals of Toxicology (TOX 511), eight specialists attended Target Organ Toxicology (TOX 512), and five specialists attended Environmental Toxicology and Risk Assessment (TOX 513) during the 2006 grant year.

Graduate Students - Bob Burris was hired to assist in the development of NPIC fact-sheets. He is working toward a Master's degree in the Environmental and Molecular Toxicology Department.

Student Assistants - Two students successfully completed the student assistant training program and continue to support administrative tasks that assist in NPIC's operation.

Continuing Education - Each week the NPIC staff meets to further their knowledge of pesticide-related topics to discuss administrative matters, including coding consistency and QA/QC activities, and to further improve the service our organization provides to the public. Internal seminars were scheduled during many of those weekly sessions. The university also provides additional opportunities for continued learning, including seminars, lectures, and conferences.

Melody Roth was cross-trained as the facilitator of Continuing Education. She led discussions with staff that generated the development of a list of diverse topics, speakers and materials that were the focus of Continuing Education Events throughout the year.



Melody - Pesticide Specialist

NPIC staff benefitted from the following guest presentations this year: Dr. Nancy Kerkvliet, a faculty member in the Department of Environmental and Molecular Toxicology at Oregon State University, gave a presentation on Endocrine Disrupters, and highlighted EPA's Endocrine Disrupter Screening Program (EDSP).

Dr. Richard Brown from Syngenta's Product Stewardship & Sustainable

Agriculture Division spoke in the fall about their program, including their adherence to the International Code of Conduct on Distribution and Use of Pesticides (FAO 2002), and the training provided to international users on issues such as: safe transport and storage, mixing, loading, application, maintenance of equipment, and the "five golden rules."

Brian Arnzen, R.N. from the Oregon Poison Center, and Dr. Daniel Sudakin MD discussed Poison Center resources, including a commonly used data entry system, Toxicall, used to share information about inquiries between poison centers, and PoisIndex, which contains information about products, ingredients and corresponding case management recommendations.

NPIC staff and directors gave presentations on various topics throughout the year. The following staff discussions occurred during this grant period: Sean Ross presented new features of the InfoBase to staff, including the navigation of new libraries and enhancements to the search interface for OPP dockets.

Pesticide Specialist Suzanne Phillips gave a presentation on Resi-

dential Misting Systems, including information about their history, regulation, installation and use. She reviewed EPA risk assessments for pyrethrins, piperonyl butoxide and permethrin, and discussed the required label statements related to misting systems.

Pesticide Specialist Masa Safic-Youngblood gave a presentation on the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. Using EPA's White Paper (2004), she explained the goals, benefits and scope of the overhaul. Side-by-side comparisons between current and future labeling criteria and pictograms were reviewed and discussed by the staff.

In order to stay current with new Reregistration Eligibility Decisions (REDs) published in the summer of 2006, NPIC staff were assigned to read, summarize and present one or more REDs to the group. This grant year, specialists summarized and presented Cypermethrin, Malathion, Metaldehyde, Permethrin, Pyrethrins, and Resmethrin REDs. In doing so, they developed a slide presentation and a "cheat sheet" with major highlights of each RED.

Dr. Daniel Sudakin presented *Incident Narrative Documentation*, a review of methods to create a robust narrative about an incident. He reviewed some ways in which NPIC narratives are used and relied upon by EPA, and demonstrated techniques for gathering essential information, documenting any gaps and communicating the pertinent information concisely.

NPIC personnel also attended several off-site conferences, meetings, and/or seminars during the 2006 grant period. Pesticide Specialists attended several presentations at the 2007 Non-Crop Vegetation Management Course held in Corvallis, Oregon. Topics of interest included: *Aquatic Weed Control*, *Aquatic Herbicide Regulation in Oregon*,



Suzanne - Pesticide Specialist

Hazcom/Right to Know, Past Year's Pesticide Violations, Control of Weeds and Vertebrates and EPA Decisions That Affect Oregon Pesticide Programs.

Melody Roth attended part of a two-day workshop at OSU titled *Integrated Pest and Nutrient Management Options: Practices to Protect Water Quality and Enhance Crop Yields*, sponsored by OSU, Washington State University, University of Idaho, EPA, and the National Resource Conservation Service (NRCS). Topics included minor crops, drift and buffers, chemical fate in the environment, water quality education and best management practices that protect water quality. Dr. Jeff Jenkins, a Co-Principal Investigator of NPIC, was also a presenter at the workshop. He spoke about *Pesticide Properties Influencing Environmental Fate and Water Resource Contamination*.

Of Special Interest -

Site Visit - On September 26-27, 2006, NPIC was visited by staff from the Office of Pesticide Programs (OPP) including Office Director Jim Jones, Associate Director of the Information Technology and Resources Management Division

(ITRMD) Robert Forrest, Chief of the Public Information and Records Integrity Branch Sherry Street, and NPIC's Project Officer, Frank Davido. NPIC gave presentations about NPIC's organization, Computer Resources, the Pesticide Inquiry Database, Active Ingredient Files, General Files, E-mail Management, and the Training Program. OPP staff listened to specialists responding to calls from the public, and participated in meetings with NPIC staff addressing a variety of current topics.

Issues - Topics of high interest during the grant period included questions or concerns related to mothball products (1,327), West Nile virus (322), metaldehyde products (402), Hartz Pet Care products (88), chromated copper arsenate (CCA) treated wood (173), and bed bugs (217).

Mothball Products - During the year, NPIC received 1,327 inquiries regarding the use of mothballs. Of these inquiries, 769 were mothball-related incidents, including 465 reports of misapplication. Inquiries primarily involved off-label use of mothballs to repel cats, rats, squirrels and snakes in and around the home. Two hundred eight (208)

inquiries were coded as "incident prevention," whereby the inquirer describes the intent to use mothballs for an off-label use and NPIC provided information in an attempt to avert the inappropriate application.

Naphthalene and paradichlorobenzene, the active ingredients currently found in mothballs, made the *Top 25 Active Ingredients* (Table 10.1 and 11.1) for both *All Inquiries* and *All Incident Inquiries*.

WNV - Interest in topics related to West Nile virus waned during the year. NPIC received 322 inquiries related to West Nile virus during the grant year, compared to 596 in 2005-06. States with the highest number of calls included: California (47), New York (32), and Massachusetts (25). The most frequent topics discussed were mosquito control (111) and health effects of pesticides (105).

Metaldehyde - NPIC received 402 inquiries related to slug and snail baits containing metaldehyde. Two hundred forty-two (242) of these inquiries were incidents, with 34 requiring a transfer to the Animal Poison Control Center (APCC). Forty-eight incidents (20%) were assigned a certainty index of 2 (probable).

Hartz Pet Care Products - During the grant period, NPIC continued to receive incident reports about the use of Hartz flea and tick control products. Eighty-eight (88) incident reports were taken during this year related to Hartz products, down from 180 during the 2005-06 grant year.

CCA - NPIC received 173 inquiries related to chromated copper arsenate (CCA) treated wood. Questions included safety of existing wood structures, current permissible uses of CCA treated wood, and potential sources of information on alternative wood preservatives.

In response to questions about CCA alternatives, NPIC developed a “Hot Topic” document with quick links to regulatory and science-based information about borates, acid copper chromate, copper azole, cyproconazole, propiconazole and Cu-HDO. See it at <http://npic.orst.edu/hottopic/AltCCA.pdf>.

Bed Bugs - NPIC began to track the number of inquiries related to bed bugs during the grant year, as it became evident that this pest was increasing in national significance. NPIC received 217 inquiries about bed bugs, many of which were related to control measures and the health effects of pesticides.

Avian flu - NPIC received 17 inquiries related to avian flu. These inquiries were from individuals seeking recommendations for antimicrobial pesticide products that could be used to kill the H5N1 virus, individuals seeking to register such products with the EPA, and individuals hoping to report dead birds to local authorities.

Publicity -

NPIC Outreach Efforts - The NPIC Outreach program defines its activities as either proactive or responsive. Proactive outreach is initiated by NPIC, while responsive outreach is NPIC responding to inquiries received. As a result of both proactive and responsive outreach this grant period, NPIC provided 72,921 brochures to its clientele, compared with 43,045 brochures disseminated in the previous year. NPIC further defined outreach audiences of interest and continued to focus outreach to important groups targeting public health interests, children, elderly, tribal and underserved populations.

Outreach administrative project structures and standard operating procedures (SOP) continued to be

improved to address consistency in data collection, and to streamline processing of outreach processing forms (OPF), tracking, sorting and reporting capabilities.

NPIC continued to benefit from the recently developed “business reply card” that allows individuals or organizations to request free NPIC brochures via mail. Each card is printed with a tracking number to

Audience Definitions and Codes

Animal Caretakers (ANI)

a) Animal hospitals, zoos, retail outlets, publications, organizations, and rescue facilities which assist, educate, or have the ability to reach those who care for animals.

b) Examples: Veterinarians, American Animal Hospital Association, PetCo Stores, Humane Society, National Zoo, Veterinary Medical Association.

Emergency Services (EMS)

a) Public safety organizations, publications, coordinated groups, agencies, or local governments with the mission of assisting the public during an emergency situation.

b) Examples: Fire departments, hazardous waste management personnel, and public safety officers.

Environmental Agencies and Municipal Offices (ENV)

a) State, county, and municipal offices with jurisdiction over environmental regulations.

b) Examples: USDA and state EPA/DEQ's (not pesticide regulatory agencies).

EPA (EPA)

a) All officials employed by the U.S. Environmental Protection Agency on a regional level or at EPA headquarters.

Farmers, Workers, and Applicators (FAR)

a) Organizations, publications, businesses, and farming programs who provide employment, education, support, or assistance to agriculture professionals, farm workers, and structural and landscape pest control operators.

b) Examples: Pesticide Safety Education Programs, Pest Control Operators, and Future Farmers of America programs.

Gardeners (GAR)

a) Organizations, nurseries, retail outlets, coordinated groups, publications, and University Extension Service programs who provide information, assistance, or education to the non-professional gardening community.

b) Examples: Master Gardeners; American Rose Society; Garden editors; Clubs.

General Public/Non-targeted Audience (GEN)

a) Organizations, agencies, general retail, and media who provide a means of reaching a large diverse group of public without classification.

b) Examples: Readers of newspapers, customers of retail stores that cater to homeowners.

Industry (IND)

a) Manufacturers and distributors of pesticide products who reach the public through distribution of products and/or company

literature. Organizations representing industry.

b) Examples: Manufacturers, Distributors, CropLife America, American Wood Preservative Institute.

Parents and Children (PAR)

a) Organizations, associations, publications, and school, church, or extension programs whose mission is to reach out to children and/or their parents.

b) Examples: Children's Foundation, National Childcare Foundation, parenting magazines.

Physicians (PHY)

a) Organizations, associations, educational programs, medical facilities, and media targeting human health care practitioners who may be interested in NPIC as an additional pesticide resource for themselves, their staff, or their patients.

b) Examples: American Academy of Pediatrics, hospitals.

Public Health Information Services (PHI)

a) Organizations, associations, and state, county, or local health agencies providing public health information to diverse communities.

b) Examples: Organization of Teratology Information Services, health departments.

State Pesticide Agencies (SPA)

a) State regulatory agencies involved in the registration, regulation, and/or enforcement of pesticide use within the state.

b) Examples: Department of Agriculture (DOA), CA county agricultural commissioners.

Tribes (TRI)

a) Organizations, programs, and national, regional, state, or tribal governments serving nationally recognized and/or unrecognized native communities.

b) Examples: USDA Indian Health Services, EPA regional tribal program.

Underserved Communities (UND)

a) Organizations, associations, and programs serving urban and rural communities of no specific ethnicity or race, and that experience minimal, or lack of quality financial, educational, and medical opportunities.

b) Examples: National Rural Health Association, WIC, HUD, State or Local Social Services, Community Action Networks, USDA Food and Nutrition Services.

Other (OTH)

a) Any other target audience, which is not represented in the other descriptions.

Proactive Outreach		
Audience Name	Number of activities	Number of brochures
Animal Caretakers	4	146
Emergency Services	4	256
Environmental Agencies and Municipal Offices	2	184
Environmental Protection Agency	1	30
Farmers, Workers, and Applicators	9	714
Gardeners	6	451
General Public	1	50
Other	6	1250
Public Health Information Services	8	5739
State Pesticide Agencies	4	230
Tribes	8	1571
Underserved	20	1221

allow NPIC to track the effectiveness of each proactive outreach event.

Outreach Audience Definitions - Audience definitions assist NPIC in identifying and defining NPIC outreach categories, which enhances NPIC's ability to evaluate the quality and quantity of NPIC outreach efforts. Each audience is assigned a code which can be referenced in outreach status reports for ease in tracking, sorting, and reviewing progress for a given audience. See the audience definition table below.

Proactive Outreach - Outreach initiated by NPIC is considered proactive, and can be conducted through four methods: 1) conferences and events, 2) mail-outs, 3) publications and editorials, or 4) other means. NPIC proactively provided 11,842 brochures during this grant year.

A summary of the number of proactive outreach activities performed with a particular audience, number of activities, and number of NPIC brochures provided by NPIC, is shown above.

Responsive Outreach - Responsive outreach relates to inquiries to NPIC by telephone, web comment, or e-mail, which resulted in requests for NPIC outreach materials. NPIC provided 61,079 NPIC brochures in response to requests this year.

A summary of the number of inquiries received from a particular audience, number of activities and number of NPIC brochures provided by NPIC is shown on page 14.

In addition, NPIC mailed nine (9) brochures to individual households not identified or affiliated with an organization.

Special Projects - NPIC opened its doors to the OSU community during an open house event hosted on April 20, 2006. Faculty members, researchers, students, and prospective applicants were provided the opportunity to tour the facilities and browse NPIC's extensive resource collection.

Dr. Jeff Jenkins, a member of NPIC's Executive Committee, gave a presentation at the *Risk Communication for Pesticide Regulators Course* held at the University of California, Davis June 25-29, 2006. Dr. Jenkins' talk, "Risk Communication at the National Pesticide Information Center" highlighted NPIC services, the training program for Specialists, and provided an overview of how NPIC communicates risk to the public.

Polly Wegner coordinated NPIC's annual bulk mail-outs, completed in June 2006 and March 2007. As part of each event, specific audience groups were targeted, and nearly 5,000 recipients received a custom cover letter, brochure and business reply card. Target audience groups included state pesticide and environmental agencies, food distribution programs, tribal programs, emergency management services, public health and veterinary associations, and university extension services. Over 200 business reply cards were returned soon after the 2006 mail-out, resulting in requests for over 30,000 brochures.

NPIC performed a targeted mail-out in December, specifically targeting urban audiences. NPIC sent a



Polly - Pesticide Specialist

custom cover letter, brochure and business reply card to Coordinators of HUD Neighborhood Networks in each state, and to state tenant associations.

North Carolina's Department of Health & Human Services' Occupational Health Surveillance Unit

OPP's various web pages, NPIC is featured as a source of additional information.

NPIC staff performed a targeted mail-out in February to EPA Regional personnel describing NPIC's interest in future cooperative outreach opportunities. Several individuals from

each regional office were hand-selected to receive a custom cover letter discussing NPIC as a resource for regional audiences, as well as a brochure, business reply card, and NPIC's 2005 annual report. Follow-up correspondence is ongoing.

NPIC obtained the following EPA publications: *Exposure Factors Handbook (EFH)*, February 1999; *The Inside Story: A Guide to Indoor Air Quality*, September 1993; *Reconocimiento y Manejo de los Envenenamientos por Pesticidas*, J. Routt Reigart and James R. Roberts, September 1999.

NPIC acquired the following US EPA, Office of Pesticide Programs, Reregistration Eligibility Decision (RED) documents: *Acetochlor (TRED)*, March 2006; *Dicofol (RED addendum)*, August 2005; *Ethoprop (IREDA addendum)*, February 2006; *Sabadilla Alkaloids (RED)*, February 2004; *DCNA (Dicloran) (RED)*, June 2006; *Imazapyr (RED)*, June 2006; *Dimethoate (IREDA)*, June 2006; *Dicamba and Associated Salts (RED)*, June 2006; *Formetanate Hydrochloride (IREDA)*, March 2006; *Naptalam Sodium (RED)*, July 2006; *Ethephon (TRED)*, June 2006; *MCPB and Salts (RED)*, March 2006; *Propazine (TRED)*, April 2006; *Simazine (RED)*, April 2006; *Dichlorvos (DDVP) (IREDA)*, June 2006; *Permethrin (RED)*, April 2006; *Sodium Cyanide (TRED)*, July 2006; *Boric Acid and Sodium Borate Salts (TRED)*, August 2006; *Pentachloronitrobenzene (RED)*, June 2006; *Lindane (RED Addendum)*, July 2006; *Propiconazole (RED)*, July 2006; *Metaldehyde (RED)*, July 2006; *Propylene Oxide (RED)*, August 2006; *Methyl Bromide (TRED)*, August 2006; *Methyl Bromide (RED)*, August 2006; *Ethylene Oxide (TRED)*, July 2006; *Inorganic Chlorates (RED)*, July 2006; *Cypermethrin (RED)*, June 2006; *Streptomycin (TRED)*, June 2006; *N-Octyl Bicycloheptene Dicarboximide (MGK-264) (RED)*, June 2006; *Oxytetracycline (TRED)*, June 2006; *Propanil (RED Amendment)*, March 2006; *Propanil (RED)*, September 2003; *Piperonyl Butoxide (PBO) (RED)*, June 2006; *Resmethrin (RED)*, June 2006; *Pyrethrins (RED)*, June 2006; *Coppers (RED)*, July 2006;

Responsive Outreach		
Audience Name	Number of activities	Number of brochures
Animal Caretakers	12	1077
Emergency Services	5	2750
Environmental Agencies and Municipal Offices	10	1825
Environmental Protection Agency	7	10100
Farmers, Workers, and Applicators	19	3276
Gardeners	57	6297
General Public	10	75
Industry	1	500
Other	3	217
Parents and Children	10	789
Physicians	8	3387
Public Health Information Services	175	19711
State Pesticide Agencies	26	5775
Tribes	19	2500
Underserved	22	2800

included 1,200 NPIC brochures in a mail-out to health care providers regarding the state's proposed Pesticide Illness & Injury Surveillance Program.

NPIC brochures were disseminated to attendees of the *Status of Aging Farmworkers Conference* in Indianapolis, Indiana in March 2007.

Locally, NPIC staff disseminated brochures to attendees at the 2007 Non-Crop Vegetation Management Course, the Integrated Pest & Nutrient Management Options Workshop, four career fairs on the campus of Oregon State University, and one career fair at the University of Oregon. Career fairs present a dual opportunity: recruitment and community outreach.

Efforts with EPA - EPA's OPP continues to include NPIC contact information on daily press advisories and, as updates are made to

Resources

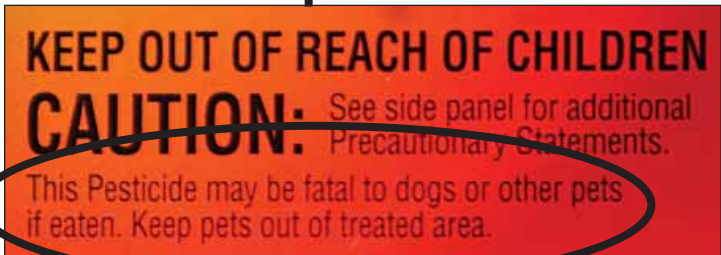
NPIC acquired many books, reports, and other documents to supplement the organization's library, which serves as a resource for specialists in responding to pesticide inquiries.

Books acquired or purchased during the 2006 grant year included: *Code of Federal Regulations 40*, National Archives and Records Administration, July 2006; *Code of Federal Regulations 21*, National Archives and Records Administration, April 2006; *Wildlife Pest Control around Gardens and Homes*, Terrell P. Salmon, 2nd Edition, 2006; *National Pesticide Applicator Certification Core Manual*, National Association of State Departments of Agriculture Research Foundation; *Crop Protection Handbook 2007*, R. Meister, 2007, *The Pesticide Manual*, British Crop Protection Council, 2006 and *Made To Stick*, C. Heath, 2007.



**READ
THE ENTIRE
LABEL FIRST!**

**-BEFORE YOU BUY, USE,
OR STORE
PESTICIDES.**



MSMA, DSMA, CAMA, and Cacydic Acid (Revised RED), August, 2006; Amitraz (TRED), July 2006; Aliphatic Solvents (RED), August 2006; Carbofuran (IREG), August 2006; Triadimefon (RED), August 2006; Triadimenol (TRED), August 2006; Malathion (RED), July 2006; Methyl Salicylate (RED), September 2005; Peroxy Compounds (RED), December 1993; O-phenylphenol (RED), July 2006; Chlorine Dioxide and Sodium Chlorite (RED), August 2006; 2-(thiocyanomethylthio)benzothiazole (TCMTB) (RED), August 2006; Mineral Acids (RED), December 1993; Alkyl Dimethyl Benzyl Ammonium Chloride (ADBAC) (RED), August 2006; Sulfuric Acid (RED), December 1993; Sodium Bisulfate (RED), December 1993; Hydrogen Chloride (RED), December 1993; Aliphatic Alkyl Quaternaries (RED), August 2006; Urea Sulfate (TRED), June 2005; Fluometuron (RED), September 2005; Pine Oil (RED), September 2006; Propylene Glycol (RED), September 2006; Dipropylene Glycol (RED), September 2006.

NPIC added the following publications from DHHS/ATSDR to its library this year: *Toxicological Profile for Hydrogen Sulfide (Update)*, July 2006; *Toxicological Profile for Vinyl Chloride (Update)*, July 2006; *Toxicological Profile for Dichlorobenzenes (Update)*, August 2006; *Toxicological Profile for Cyanide (Update)*, July 2006; *Toxicological Profile for 1,4-Dioxane*, July 2006; *Toxicological Profile for 1,1,1-Trichloroethane (Update)*, July 2006.

World Health Organization International Programme on Chemical Safety publications received by NPIC include: *Tetrachloroethene*, 2006; *IPCS No. 69: Cobalt and Inorganic Cobalt Compounds*, 2006; *Concise International Chemical Assessment Document No. 71, Resorcinol*, 2006; *Environmental Health Criteria No. 84, 2,4-Dichlorophenoxyacetic Acid*, 1989.

Other World Health Organization publications received by NPIC include: *Guidelines for Safe Recreational Water Environments: Volume 2, Swimming Pools and Similar Environments*, 2006; *Fuel For Life: Household Energy and Health*, 2006; *Health Aspects of*

Practitioner, Bio-Integral Resource Center (BIRC), September/October 2006; *Journal of Occupational and Environmental Medicine*, American College of Occupational and Environmental Medicine; *Pesticide Data Program Annual Summary Calendar Year 2005*, USDA, November



Brent - Pesticide Specialist

Plumbing, 2006; *Children's Health and the Environment, A Global Perspective: A Resource Manual for the Health Sector*, 2005; *Journal of Water and Health, Volume 4, Number 3*, Charles P. Gerba, Paul R. Hunter, and Paul Jagals, September 2006; *Preventing Disease Through Healthy Environments: Towards an Estimate of the Environmental Burden of Disease*, A. Pruss-Ustun and C. Corvalan, 2006; *Protecting Groundwater for Health: Managing the Quality of Drinking-water Sources*, 2006; *WHO Drinking-water Quality Series: Fluoride in Drinking-water*, 2006; *Journal of Water and Health, Volume 4, Number 4*, December 2006.

Other publications received by NPIC include: *Public Health Reports*, R. Rinsky, November/December 2006; *2006 Oregon Agricultural Resources Directory*, September 2006; *Common Sense Pest Control Quarterly* and the *IPM*

2006; *Fruit and Ornamental Disease Management Program - 2006*, OSU Extension Service, 2006; *2,4-D Data Disk*, The Industry Task Force II on 2,4-D Research Data, 1998. Foreign language resources acquired by NPIC this grant year include the *Harper Collins Spanish Unabridged Dictionary*, 2005, and the *Oxford Spanish Dictionary*, 2003.

Foreign language EPA publications include: *Clear Your Home of Asthma Triggers, Your Children Will Breathe Easier* (Chinese, Korean, Vietnamese), September 1999; *Environmental Justice for All* (Spanish), 2004; *Fact Sheet: Effective Control of Household Pests* (Chinese, 2004; Russian, 2005; Spanish, 2005); *Help! It's a Roach!* (Spanish, 2003 Revision); *Protecting Endangered Species: Interim Measures* (Spanish), September 1993; *Should I Eat the Fish I Catch?* (Chinese, Korean, Vietnamese), April 2001.

Personnel Update

NPIC hired seven full-time pesticide specialists during the 2006 grant year. Carley Hansen-Prince assumed duties of Interim Project Coordinator with the departure of Crista Chadwick in May. Kaci Agle was hired as the Project Coordinator in August after Carley Hansen-Prince expressed interest in resuming her role as a Pesticide Specialist and Trainer. Seven pesticide specialists resigned during this period. Two student workers were hired to assist with office support. NPIC continued recruitment efforts for other full-time specialists.

NPIC's current staff includes a full-time project coordinator, twelve full-time, and one part-time Pesticide Specialists, a full time information resource supervisor, an administrative assistant, a part-time fiscal/personnel manager, a part-time graduate student and three part-time undergraduate student assistants.

All specialists have a bachelor's degree in a scientific field; many have advanced degrees. Specialists come from a variety of scientific disciplines including, but not limited to, toxicology, chemistry, biology, biochemistry, environmental science, microbiology and soil science.

Facilities

NPIC replaced two aging Hewlett Packard laser printers with a new Xerox Phaser 5500DX for black-and-white printing, and a new

Xerox Phaser 7760DX for printing in color. Two new Sun Microsystems T2000 servers were installed, improving NPIC's information delivery capacity and offering increased performance compared to the previous Sun server. NPIC replaced an older Dell workstation with a new Dell Precision 670 workstation to assist with the con-

version of paper documents into digital files and to speed the optical character recognition (OCR) process while scanning. To improve the disaster recovery systems, an ADIC

Scalar 24 tape library system was purchased as a replacement for an older ADIC unit. NPIC upgraded its aging network firewall hardware. A Canon L170 FaxPhone was purchased to replace a failing FAX machine, and three Seagate Cheetah hard disk drives were purchased to replace failing units in a server RAID system.



POSITION ANNOUNCEMENT
Faculty Research Assistant
 National Pesticide Information Center
 Department of Environmental & Molecular Toxicology

Position – The National Pesticide Information Center (NPIC) invites applications for one or more full-time Faculty Research Assistant positions for the 2006-2007 academic year. These are 12 month, fixed-term appointments, with reappointment at the discretion of the NPIC Director.

Salary and Benefits – Full-time annual salary rate of \$28,000 - \$45,000, depending on qualifications, education, and experience. Benefit package includes options for health/dental/life insurance and retirement program.

National Pesticide Information Center – The only service of its kind in the US, NPIC's mission is to deliver objective, science-based information about a variety of pesticide-related issues to the public and professionals, with a goal of promoting informed decision-making. NPIC, a cooperative effort between OSU and the US Environmental Protection Agency, serves the US and its territories via an 800-telephone number (seven days per week), email, and the World Wide Web (<http://npic.orst.edu>).

NPIC provides its staff with many opportunities for professional- and self-development, including: Public service experience; coordination of projects; working in a dynamic learning atmosphere; and continuing education (e.g., taking occasional classes at OSU at reduced tuition rates - some restrictions apply).

Responsibilities and Duties – Provide objective, science-based information on a variety of pesticide-related topics, including: Pesticide chemistry, toxicology, and environmental fate, to the public and professionals; participate in the development of fact sheets that promote a broader understanding of issues related to pesticide use and their potential impact on human health and the environment; respond to telephone inquiries and help maintain a pesticide incident database; develop and maintain knowledge of pesticides and pesticide-related issues; contribute to other areas as needed for NPIC to fulfill its mission.

Qualifications – Position requires a minimum of a B.S. degree – an M.S. is strongly preferred – in toxicology, environmental chemistry, biotechnology, agricultural sciences, public health, or closely related area (degree must include coursework in biochemistry, physiology, or equivalent). Also required are knowledge and experience in one or more of the following - Pesticide toxicology, environmental chemistry, regulations, and use practices; ability to provide unbiased information on pesticide issues to both the public and professionals.

Candidates also will be judged on their knowledge, ability, and experience in these areas: Strongly preferred - Dealing with the public on controversial issues, including risk communication and crisis management; Demonstrated writing ability; effective use of computers in word processing; database management. Highly desirable - Fluent in Spanish. Position requires a demonstrable commitment to promoting and enhancing diversity.

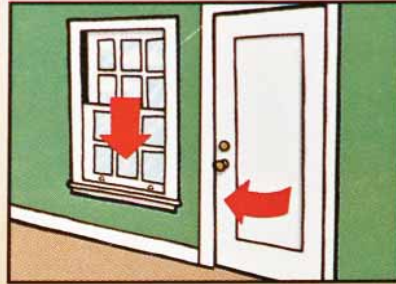
University & Community – OSU is one of only two American universities to hold the Land Grant, Sea Grant, Sun Grant, and Space Grant designation and is a Carnegie Doctoral/Research-Extensive university. OSU is located in Corvallis, a community of 53,000 people situated in the Willamette Valley between Portland and Eugene. Ocean beaches, lakes, rivers, forests, high desert, the rugged Cascade and Coastal Ranges, and the urban amenities of the Portland metropolitan area are all within a 100-mile drive of Corvallis.

Application – For complete application procedure, see: <http://www.oregonstate.edu/jobs> - then search for posting number 0000069.

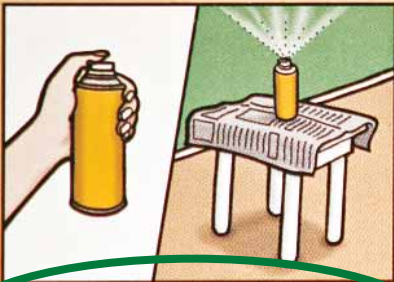
Review of applications begins as positions become available.
 OSU is an Affirmative Action/Equal Opportunity Employer.

HOW TO USE

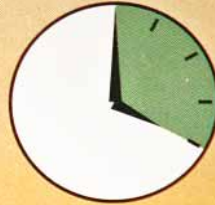
1 PREPARE AREA by following instructions listed above.



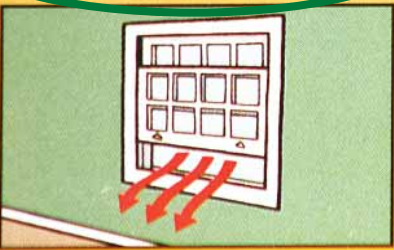
2 Press valve button all the way down, hooking the catch. Set can down on prepared surface and leave treatment area at once.



3 Keep area closed for 4 hours.



4 Open doors and windows and allow to air 30 minutes.



“READ THE LABEL FIRST!”

INDOOR INSECT FOGGER

KILLS ON CONTACT. GUARANTEED!

Kills Bugs Where They Hide



FOR RESIDENTIAL USE ONLY

Active Ingredients	
Pyrethrins	0.050%
*N-Octyl bicycloheptene dicarboximide	0.400%
Permethrin	0.400%
Related compounds	0.035%
Other Ingredients	99.115%
* MGK®264, Insecticide Synergist	
**Chlorobenzene, Insecticide Synergist	

KEEP OUT OF REACH OF CHILDREN
CAUTION See side panel for additional precautionary statements.

Traffic Report

Traffic Report Summary

There are three main means of inquiry to NPIC: telephone, e-mail, and the internet. For purposes of this report, use of the terms “inquiry” and “inquirer” generally refer to use of the telephone or e-mail to contact NPIC. Unless otherwise specified, inquiries to NPIC via the web are referred to as “hits”.

NPIC received 24,472 inquiries during its twelfth year of operation (April 2006 - March 2007) at Oregon State University. Most of the inquiries received by NPIC are quite sophisticated, requiring extensive expertise on the part of the specialists to be able to provide answers which are objective, science-based and, at the same time, presented in an understandable way to the inquirer.

A summary of the number of inquiries received per month is provided in Table 1.1 and Graph 1.1. Also included in Table 1.1 is a listing of the total number of inquiries by calendar year. Most inquiries occurred during the period March to October.

The types of inquiries received by NPIC are shown in Table 2.1 and Charts 2.1 and 2.2. Inquiries ranged from questions regarding general or specific information about pesticides, to reporting of incidents.

The means by which people contact NPIC is shown in Table 3.1. The telephone was by far the most important contact route. However, many people accessed NPIC through its website (Table 4.1 and Graphs 4.1 - 4.8).

The variety of inquirers to NPIC is shown in Table 5.1 and Chart 5.1. The predominant number of inquiries received by NPIC were from the general public.

The types of questions posed to NPIC specialists are presented in Table 6.1 and Chart 6.1. Most of the inquirers requested information about health-related issues and pesticide products.

Most of these information inquiries, and others listed in Table 6.1, were prompted by concern/knowledge of the inquirer (Table 7.1 and Charts 7.1 and 7.2). Only a small percentage of the inquiries were to report a pesticide incident.

Most inquirers received information verbally from a specialist (Table 8.1 and Charts 8.1 and 8.2).



Some inquirers also requested and received written information. In addition, many inquiries were referred to either EPA, the National Pesticide 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 a State Department of Agriculture).

The inquirers to NPIC represented all 50 states, as well as Canada and other foreign nations. Table 9.1

shows the number of inquiries from each of the states, Puerto Rico, the Virgin Islands, and other locations. The 10 states where most of the inquiries were from is presented in Graph 9.1. Also shown in Table 9.1 and presented in Graph 9.2 are the number of inquiries from each of the EPA regions.

The total number of inquiries, as well as the number of information and incident inquiries, for the 25 most asked about pesticide active ingredients are presented in Table 10.1. For incident inquiries, 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 all inquiries are presented in Graph 10.1. The 25 active ingredients most frequently mentioned in incident inquiries are listed in Table 11.1. Incident inquiries are further classified by entity type. The 10 active ingredients most often mentioned in incident inquiries are presented in Graph 11.1.

The locations where pesticide incidents were purported to have occurred are shown in Table 12.1.

Of those inquiries 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 13.1.

The incident inquiries are further categorized by whether the incident involved a human, animal, or building/other (Table 14.1 and Graph 14.1). The incident inquiries for each entity type are qualified by the certainty index. The certainty index is an estimate by NPIC 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 zero (0) reflects those inquiries where the inquirer reported an exposure to a pesticide, but no symptoms were present. For human entities presented in Table 14.1, the certainty index is further categorized by gender and group.

Table 15.1 and Chart 15.1 list the descriptions for the entities involved in incidents, as female, male, groups, animals, and other.



Reported symptoms are shown in Table 16.1 and Charts 16.1 and 16.2. Symptoms provided by inquirers were either symptomatic, asymptomatic, or atypical.

The number of deaths or interesting/strange cases, due to a potential pesticide exposure, is shown in Table 17.1 and Chart 17.1.

Ages were available for most of the human entities and are presented in Table 18.1 and Graph 18.1.

Traffic Report Tables and Figures

Specialists record pertinent information for every inquiry received at NPIC via telephone or e-mail. This information is entered into the NPIC Pesticide Inquiry Database (PID), an electronic database used to record information for all inquiries to NPIC. Broadly speaking, there are two types of inquiries received by NPIC: 1) those for general or specific information about pesticides and pesticide-related issues and 2) inquiries about pesticide incidents. For example, an inquirer might ask a question about “pesticides in foods” (a general information inquiry) or about the toxicity of a particular pesticide (a pesticide-specific information inquiry). An inquiry to report an exposure to a pesticide is an example of an incident inquiry. The type and amount of information entered into the PID depends on whether the inquiry was for information or to report a pesticide incident.

Information collected and entered into the PID for information inquiries includes: origin of inquiry (e.g., telephone or e-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 inquiries), 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. Details of an inquiry, including what the inquirer told or asked the specialist and how the specialist responded to the inquirer, are recorded as a narrative statement in the PID.

When incidents are reported, more detailed and specific information is recorded, including: type of incident (e.g., exposure, spill, drift), location of the incident, information about the entity, including age, gender, nature of the exposure, and reported symptoms and product information. 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 NPIC (based on information provided by the inquirer) 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).

The following is a summary of selected data from the NPIC Pesticide Inquiry Database for the 2006 NPIC operational year:

1. Monthly Inquiries

NPIC received 24,472 inquiries during the 2006 grant year. Graph 1.1 shows the number of inquiries received for each month. Eighty-three percent of the inquiries were received between March and October, coinciding with that part of the year when most pest pressures are highest. Total inquiries received during previous grant and calendar years is provided for comparison in Table 1.1. June received the highest number of inquiries, while December received the lowest number of inquiries, consistent with the previous three years.

**Table 1.1 -
Monthly Telephone Inquiries**

Month	Number of Inquiries				
	2002	2003	2004	2005	2006
April	2650	2328	2519	2556	2494
May	2942	2891	2826	2620	3140
June	3060	3267	3386	3602	3400
July	3154	3143	3136	3071	3241
August	3326	2747	2792	2951	2716
September	2187	2026	2142	1952	1807
October	1664	1597	1821	1638	1640
November	1030	1032	1193	1211	1149
December	839	796	886	818	838
January	1050	969	1065	1145	1074
February	1067	1077	1172	1106	1045
March	1580	1736	1827	1752	1928
Calendar ¹⁾ Yr Tot	24810	23524	24483	24484	24428
Grant ²⁾ Yr Tot	24549	23609	24765	24422	24472

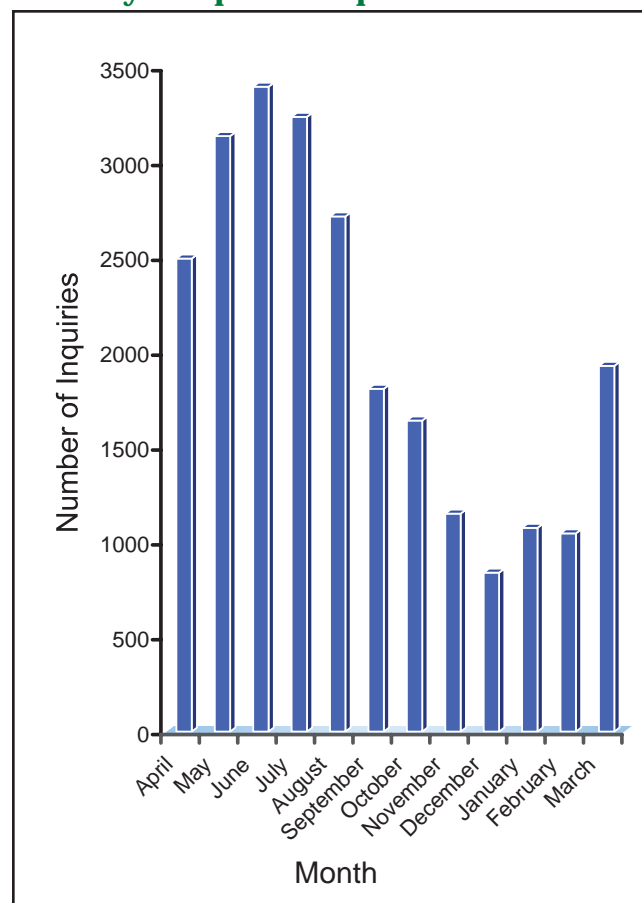
¹⁾ January 1 through December 31.

²⁾ April 1 through March 31.



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

**Graph 1.1 -
Monthly Telephone Inquiries**



2. Type of Inquiry

NPIC classifies inquiries as information, incident, or other (non-pesticide) inquiries. The types of inquiries are summarized in Table 2.1 and Charts 2.1 and 2.2.

The majority of inquiries (22,403 or 91.5%) to NPIC were information inquiries in which the inquirer requested information about pesticides or pesticide-related matters (Chart 2.1). Information inquiries may involve a discussion of a specific pesticide, or of pesticides in general. NPIC responded to 8,303 (33.9%) information inquiries about specific pesticides. For example: a) Caller seeking health risk information on termite treatment with Vikane. She is concerned about possible risk to her 2 year old daughter; and b) Caller seeking health infor-

mation on “metaldehyde and slugs.” Caller reports her dog ate something in the garden, and she is concerned with secondary poisoning.

NPIC responded to 10,707 (43.8%) inquiries relating to pesticides in general. For example, a) Caller asked if there are any regulations regarding pesticide application near wells; and b) Caller said veterinarian recommended applying topical pesticides on his cat for flea control. Caller wanted to know if this is O.K.

NPIC responded to 3,393 (13.9%) inquiries 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 inquiries involved human

and animal entities (Chart 2.2). Of the 3,393 incident inquiries, 1,714 (50.5%) involved a human entity, 1,235 (36.4%) involved an animal entity, and 443 (13.1%) involved damage to a structure or other location such as a garden or automobile.

NPIC also took 2,069 (8.5%) inquiries that were not related to pesticides. For example, a) Caller reported her neighbor is dumping something in her yard and wants to know what it is; and b) Caller wants information on FDA Regulations for pharmaceuticals.

Table 2.1 - Type of Inquiry

Type of Inquiry	Number of Inquiries				
	2002	2003	2004	2005	2006
Information - Specific Pesticide	10831	9907	9900	8690	8303
Information - General Pesticide	11152	11056	10547	9733	10707
Incidents	1884	1777	2455	3190	3393
Human Incidents	826	718	1089	1477	1714
Animal Incidents	740	763	984	1250	1235
Building/Other	318	296	382	462	443
Other - Non-Pesticide	682	869	1863	2809	2069
Grant Year Total =	24549	23609	24765	24422	24472

Chart 2.1 - Type of Inquiry

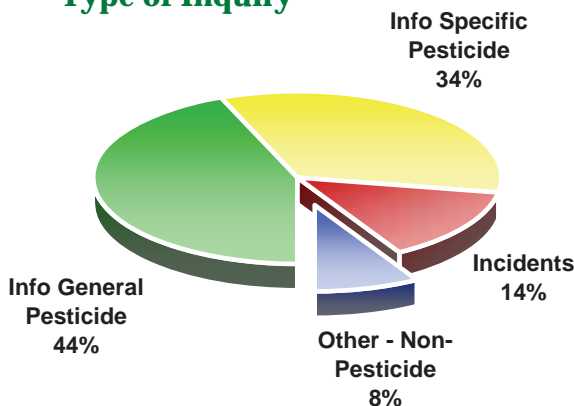
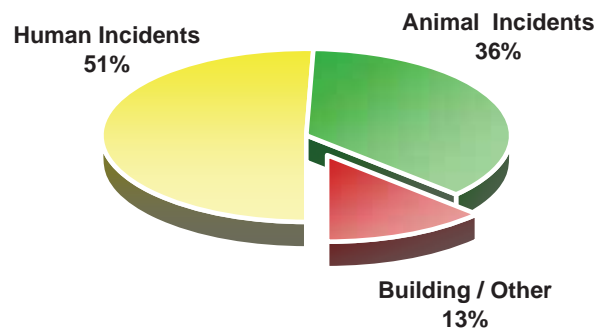


Chart 2.2 - Incidents



3. Origin of Inquiry

Table 3.1 summarizes the origin of inquiries received by NPIC. Most inquiries are received by telephone. Of the 24,472 inquiries, 22,907 (93.6%) were received by telephone, 483 (2.0%) were recorded by a voice mail system, 266 (1.1%) were received by postal mail, 3 were walk-in inquiries, and 813 (3.3%) were by e-mail.

**Table 3.1 -
Origin of Inquiry**

Origin of Inquiry	Number of Inquiries				
	2002	2003	2004	2005	2006
Telephone	23094	21999	23242	22871	22907
Voice Mail	607	671	598	521	483
Mail	45	24	19	121	266
Walk In	2	12	8	2	3
E-mail	795	901	897	906	813
Other	6	2	1	1	0
Grant Year Total =	24549	23609	24765	24422	24472

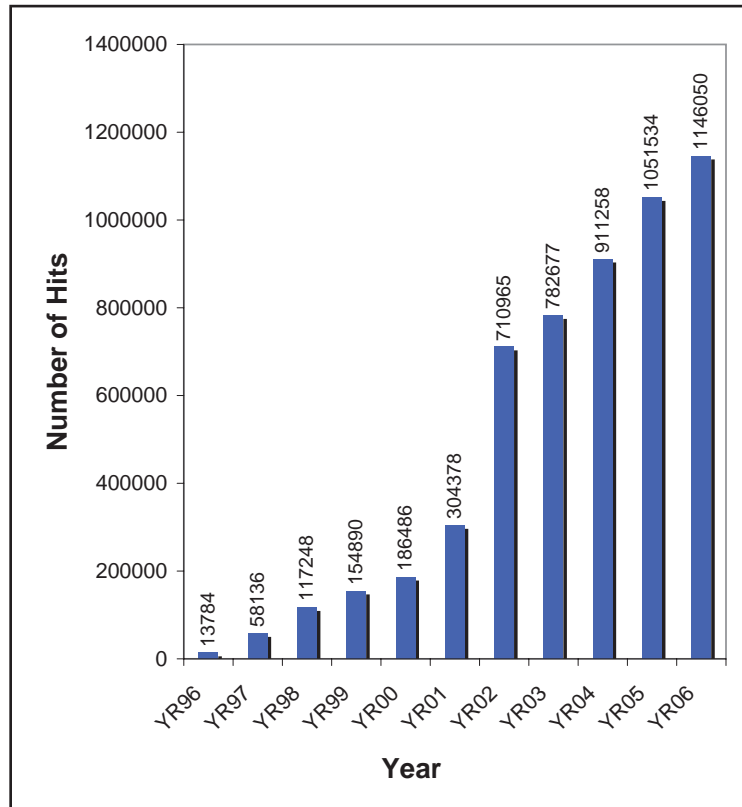


4. Web Site Access

The NPIC web site is an increasingly popular source of information for NPIC clientele. The NPIC web site received 1,146,050 hits in 2006.

Graph 4.1 shows the number of total hits per grant year. Table 4.1 and Graph 4.2 summarizes the number of web site hits to NPIC main web pages. Graph 4.3 shows the number of hits for emergency-related information. The number of hits (112,143) to the NPIC West Nile virus web pages is shown in Graph 4.4. Hits to case profiles are shown in Graphs 4.5 and 4.6. Graphs 4.7 and 4.8 detail the number of hits for NPIC fact sheets (>200,000 hits). Web hits are a major form of inquiry to NPIC, in addition to telephone and e-mail. The NPIC InfoBase received 72,708 hits this year, a 30% increase from last year.

Graph 4.1 - NPIC Total Hits per Year



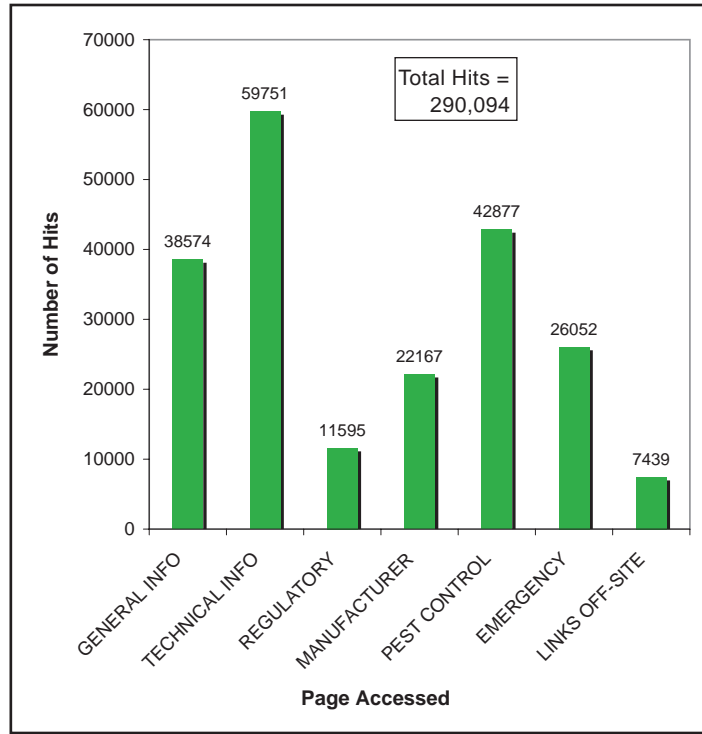
Feedback from Web Site Comment Form -

“I want to thank you guys for getting such an informative site. Excellent design and it is easy to navigate.”

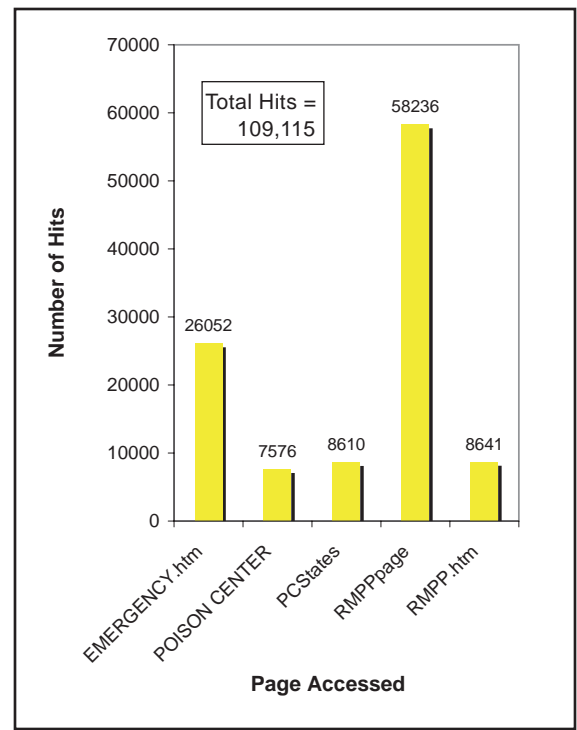
Table 4.1 - Selected Web Hits

Page Accessed	# of Hits NPIC
General Information	38574
Technical Information	59751
Fact Sheets	200548
State Regulatory Agencies	39471
Recognition & Management of Pesticide Poisoning	66877
Manufacturer Info	50119

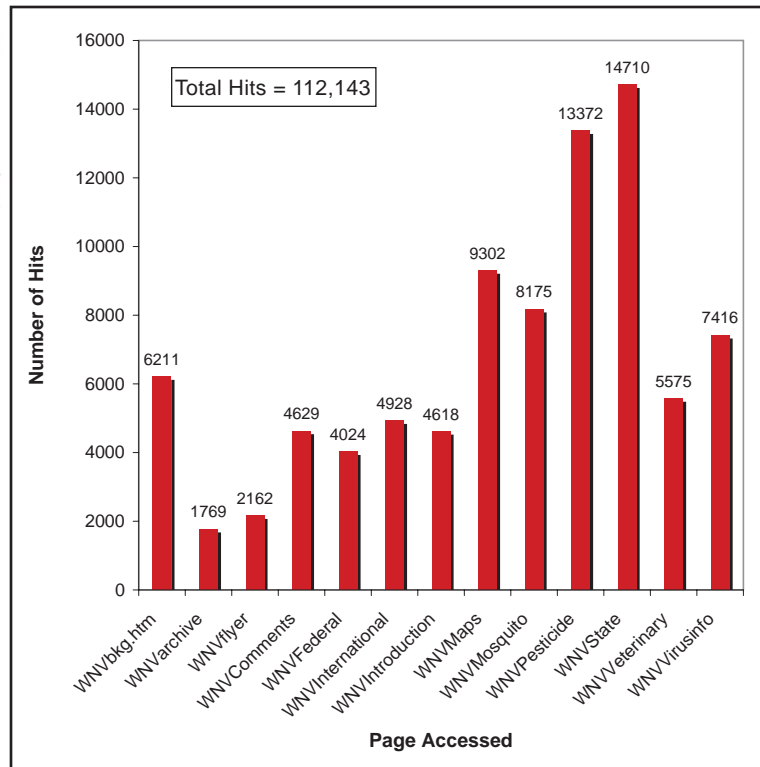
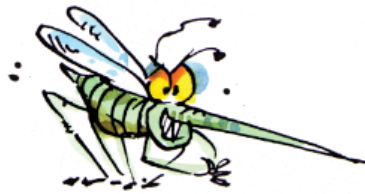
Graph 4.2 - Hits to NPIC Main Web Pages



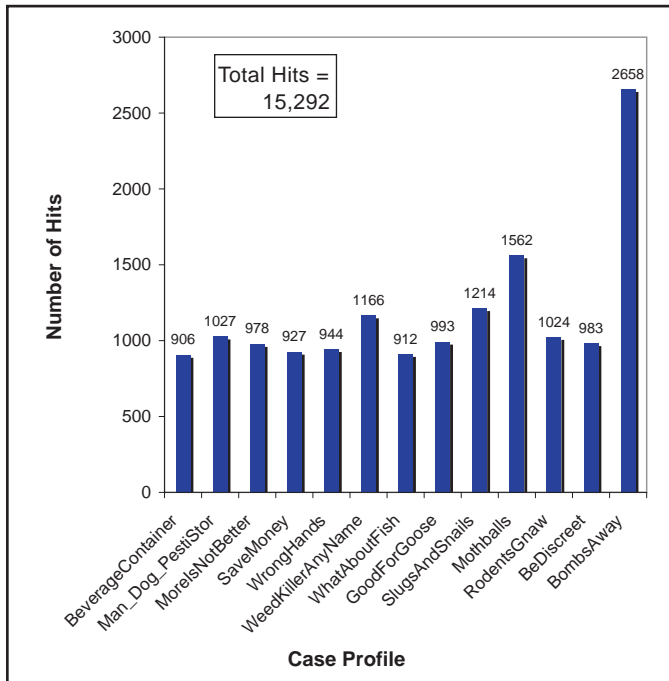
Graph 4.3 - Hits to Emergency Information Pages



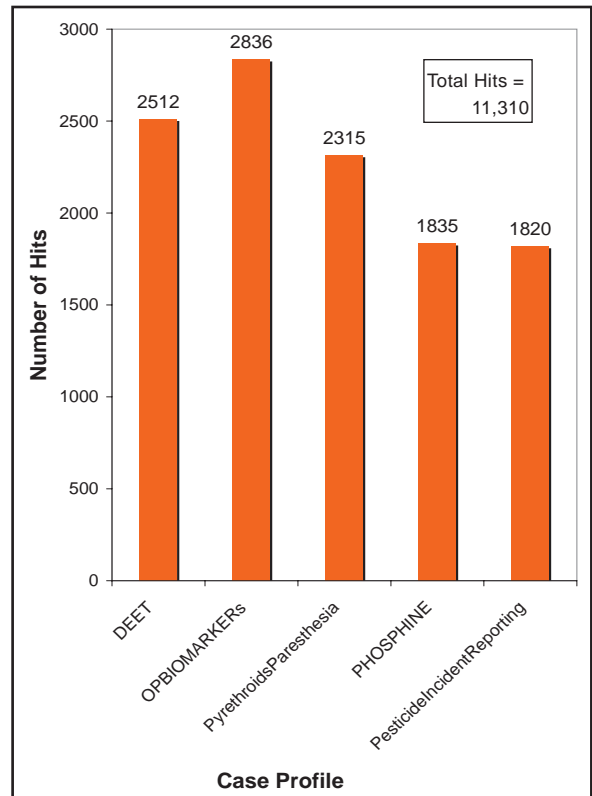
Graph 4.4 - Hits to WNV Pages



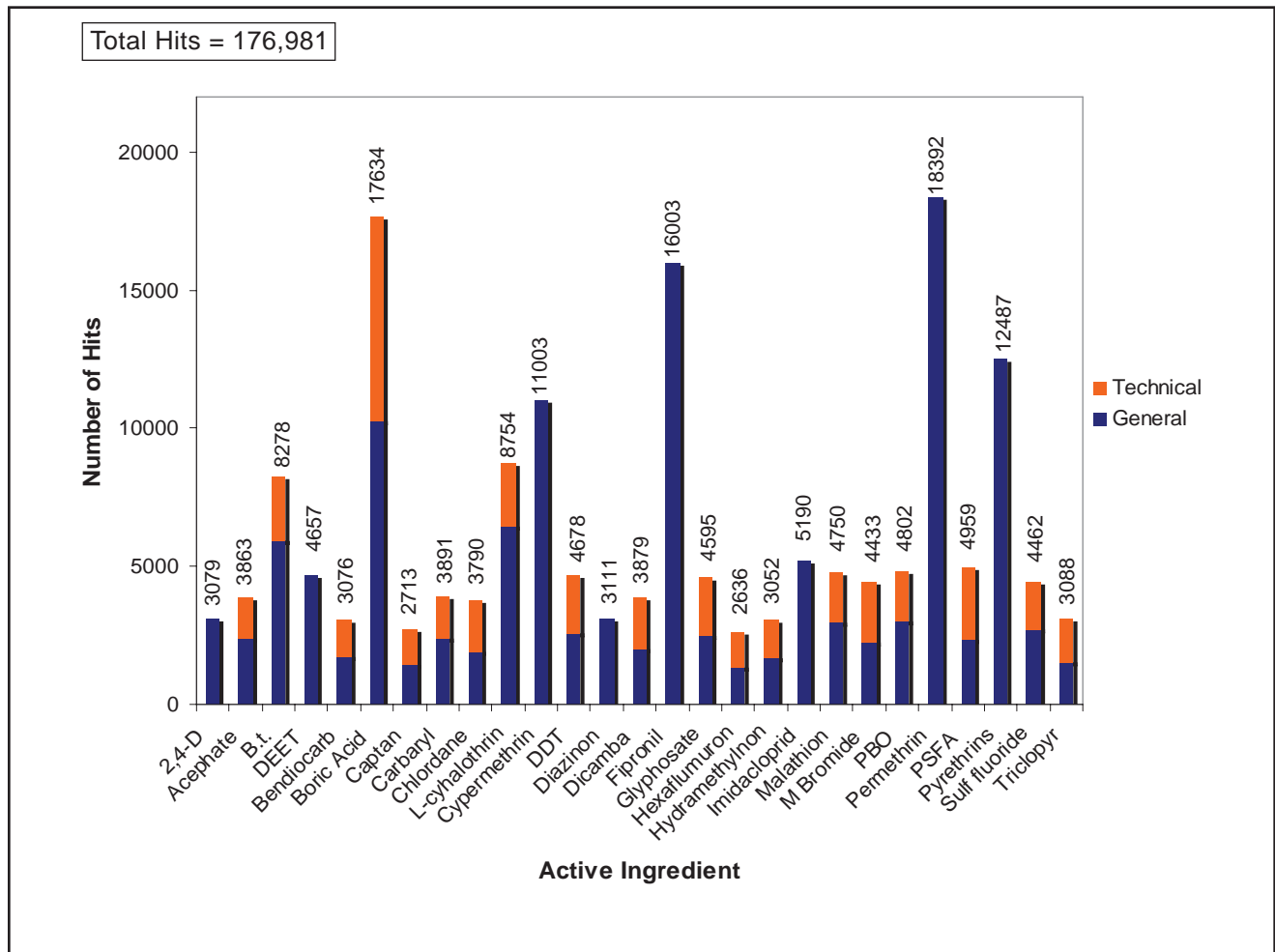
Graph 4.5 - Hits to Case Profiles



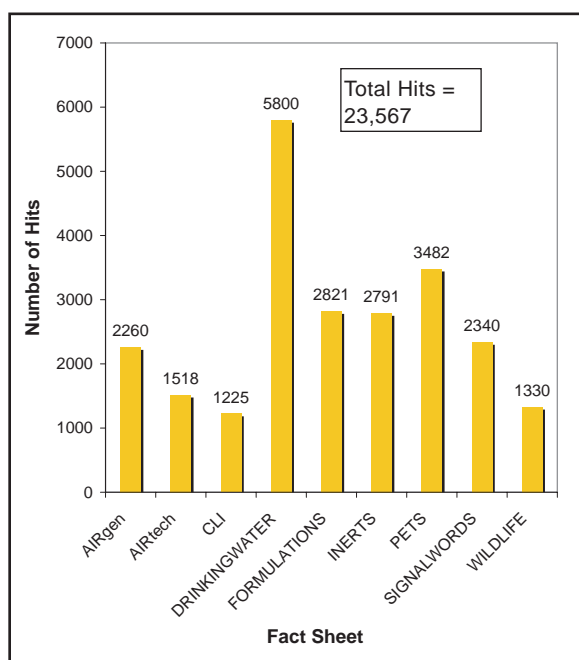
Graph 4.6 - Hits to Medical Case Profiles



Graph 4.7 - Hits to Active Ingredient Fact Sheets



Graph 4.8 - Hits to Topic Fact Sheets



5. Type of Inquirer

Graph 5.1, Table 5.1, and Chart 5.1 summarize the profession/occupation of individuals contacting NPIC. The majority of inquiries made to NPIC are from the general public. Of the 24,472 inquiries received, there were 21,794 (89.1%) from the

general public, 701 (2.9%) from federal, state or local government agencies, 564 (2.3%) from human and animal medical personnel, 457 (1.9%) from information groups including the media, unions, environmental organizations and pesticide manufacturing or marketing companies, 593 (2.4%) from consumer

users including legal or insurance representatives, laboratory or consulting personnel, pest control operators, retail store personnel or farm personnel, and 327 (1.3%) inquiries from other professions/occupations.

Graph 5.1 - Type of Inquirer

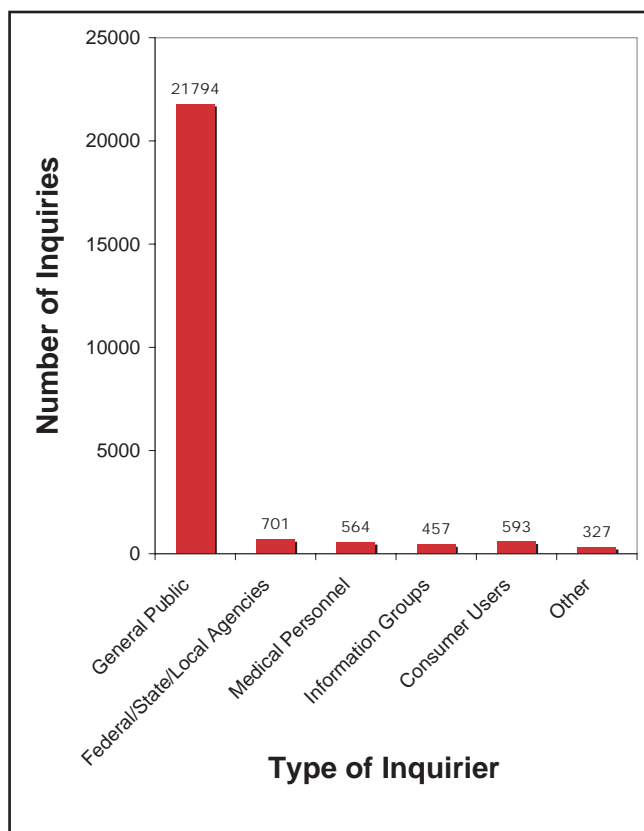
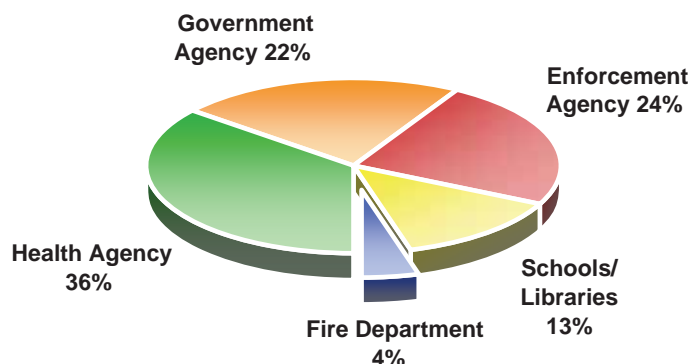


Table 5.1 - Type of Inquirer

Type of Inquirer	Number of Inquiries				
	2002	2003	2004	2005	2006
General Public	21537	20443	21334	21733	21794
Federal/State/Local Agency					
Health Agency	133	116	118	108	251
Government Agency	519	221	225	173	157
Enforcement Agency	111	387	292	184	169
Schools/Libraries	241	165	174	155	93
Fire Department	33	32	31	27	31
Medical Personnel					
Human Medical	333	315	290	250	279
Animal Vet./Clinic	230	238	292	238	281
Migrant Clinic	7	10	8	8	4
Information Groups					
Media	145	121	101	79	69
Unions/Info. Service	72	180	147	121	106
Environmental Org.	102	82	114	97	88
Pesticide Mfg./Mktg. Co.	174	202	198	179	194
Consumer Users					
Lawyer/Insurance	72	62	50	46	46
Lab./Consulting	65	56	106	62	37
Pest Control	196	161	183	163	155
Retail Store	257	308	384	302	316
Farm	58	37	71	54	39
Other	233	435	621	412	327
Grant Year Total =	24549	23606	24765	24422	24472

Chart 5.1 - Inquiries - Governmental Agencies



6. Type of Question

The types of questions received at NPIC are most often related to health effects and usage of pesticides (Chart 6.1 and Table 6.1). NPIC responded to 7,961 (32.5%) inquiries related to health effects of pesticides, including inquiries about general health, treatment and testing, and laboratory questions. In addition, there were 8,299 (33.9%) 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, preharvest intervals, and lawn care usage.

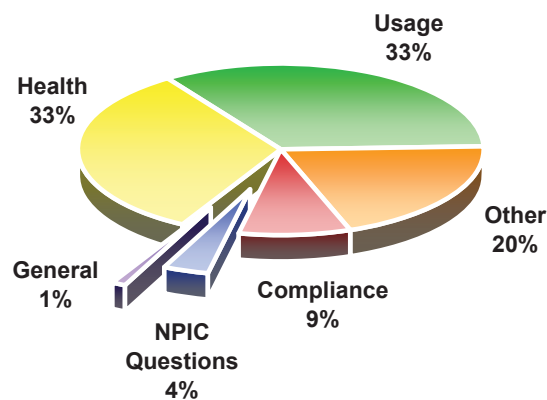
NPIC also responded to 2,142 (8.8%) inquiries involving compliance questions, including questions about regulations, disposal, and complaints. Lastly, there were 69 (0.3%) inquiries about other food safety issues, 274 (1.1%) inquiries involving general pesticide questions, 898 (3.7%) inquiries involving questions about NPIC, and 4,829 (19.7%) inquiries not classified according to type of question.

“I need to spray my apple tree this week, but my 7 year old loves to climb that tree. Is it safe for him to climb it after I spray?”

**Table 6.1 -
Type of Question**

Type of Question	Number of Inquiries				
	2002	2003	2004	2005	2006
Health Related					
Health	9287	7850	7891	6655	7192
Treatment	125	159	278	470	600
Testing Lab.	86	169	188	210	169
Usage Information					
Pest/Crop	2292	1918	2007	1764	1929
Chemical	2252	824	697	799	828
Pros and Cons	67	75	69	43	73
Safety/Application	2885	3559	3760	4430	4831
Cleanup	274	255	296	362	388
Harvest Intervals	88	123	162	154	224
Lawn Care	12	40	28	22	26
Compliance					
Regulations	1565	1597	1484	1365	1322
Complaints	506	492	747	879	658
Disposal	165	134	164	201	162
Food Safety	237	227	184	166	69
General	201	323	325	250	274
NPIC Questions	1125	1042	847	749	898
Other	3376	5045	5638	5900	4829
Grant Year Total =	24549	23608	24765	24422	24472

**Chart 6.1 -
Type of Question**



7. Reason for Inquiry

Specialists identify the reason for inquiry for all inquiries received by NPIC (Table 7.1 and Charts 7.1 and 7.2). The reason for inquiry for all information inquiries is Concern/Knowledge. The reason for inquiry for incident inquiries varies according to the nature of the incident. Of the 3,392 inquiries for which a reason was available, there were 2,738 (80.7%) about pesticide exposure, and 585 (17.2%) about accidents. There were 60 (1.8%) inquiries about odor only, and 9 (0.3%) inquiries for other reasons. The reason for all other (non-pesticide) inquiries is N/A–Unknown.

Table 7.1 - Reason for Inquiry

Reason for Inquiry	Number of Inquiries				
	2002	2003	2004	2005	2006
Information Inquiries					
Concern/Knowledge	22586	21476	20988	19019	20567
Incident Inquiries					
Exposures					
Dermal - Acute	496	482	655	863	782
Dermal - Chronic	10	12	18	21	50
Ingestion - Acute	400	443	647	885	968
Ingestion - Chronic	6	7	3	12	15
Inhalation - Acute	140	115	227	296	289
Inhalation - Chronic	12	20	61	94	134
Exposure Possible	150	127	163	281	319
Unknown/Many	219	176	181	154	177
Occupational	20	7	14	9	4
Accidents					
Misapplic. - Homeowner	172	165	229	337	384
Misapplic. - PCO	41	37	42	39	30
Misapplic. - Other	17	24	29	36	35
Spill - Indoor	74	59	44	54	44
Spill - Outdoor	19	10	16	14	27
Contamination - Home	3	3	5	5	8
Contamination - Other	2	2	7	7	13
Drift	49	33	37	30	41
Fire - Home	0	0	0	1	2
Fire - Other	0	1	0	1	0
Industrial Accident	0	0	0	0	1
Odor Only	32	24	42	67	60
Testing Laboratory	0	0	0	0	0
Other	22	30	33	13	9
N/A-Unknown	79	356	1324	2184	513
Grant Year Total =	24549	23609	24765	24422	24472

Chart 7.1 - Pesticide Exposures

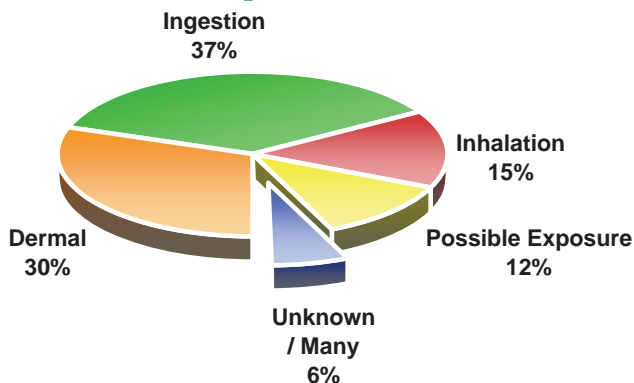
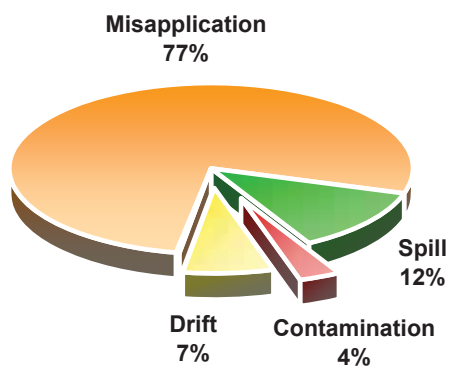


Chart 7.2 - Pesticide Accidents



8. Action Taken

NPIC specialists respond to inquiries in many ways, including the provision of verbal information, transfer to poison control, discussion and contact information for other agencies or organizations, and information sent by e-mail, mail, or fax. Actions taken by specialists in response to inquiries are summarized in Table 8.1, and Charts 8.1 and 8.2. Most inquiries (22,752; 93%) were answered by providing

discussion, verbal information and referrals to the inquirer.

Some inquiries (320; 1.3%), where the specialist determined a need, were transferred to Oregon Poison Control, Animal Poison Control Center, or the National Pesticide Medical Monitoring Program, as appropriate. For other inquiries, information in addition to that provided by NPIC was required to meet the needs of the inquirer - for those inquiries, NPIC provided

discussion and contact information for other agencies or organizations (10,589; 43.3%). Common NPIC referrals were to the EPA (1.4%), state lead agencies (3.2%), cooperative/county extension service (7.9%), Poison Control (3.1%) and Animal Poison Control (1.3%), and the manufacturer/registrant (26.4%). Some inquirers received information via fax (410; 1.7%), mail or e-mail (922; 3.8%).

Table 8.1 - Action Taken

Action Taken	Number of Inquiries				
	2002	2003	2004	2005	2006
Provided Verbal Information/Discussion	17304	16703	15335	12844	12231
Provide Transfer to:					
Oregon Poison Center	59	71	70	99	109
Animal Poison Control Center	87	95	51	98	105
National Pesticide Medical Monitoring Program	407	209	193	128	106
Provide Discussion and Contact Information for:					
EPA HQ or Regional Office	365	337	515	389	332
State Lead Agencies	746	544	757	825	781
Cooperative/County Extension	1461	1171	1624	1946	1926
Human Poison Control	81	74	315	578	766
Animal Poison Control	110	104	115	244	318
Manufacturer/Registrant	2743	2803	4199	5762	6466
E-mail, Mailed Information, Brochure, Publication	822	1018	994	1047	922
Other/FAXED Information	251	454	587	451	410
Grant Year Total =	24549	23609	24765	24422	24472

Chart 8.1 - Action Taken

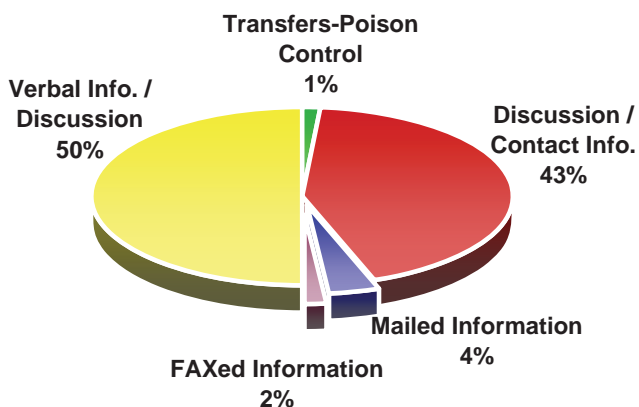
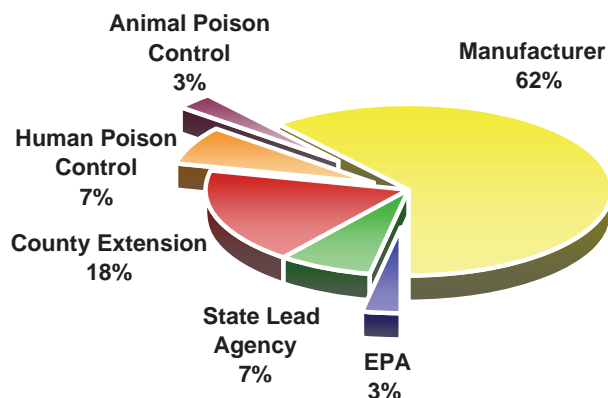


Chart 8.2 - Discussion/Contact Information

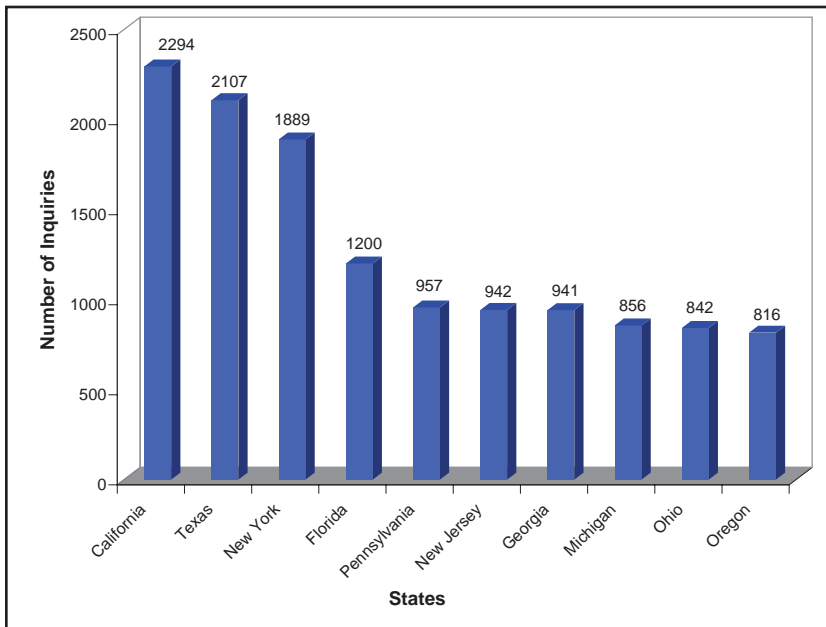


9. Inquiries by State

Table 9.1 lists the number of inquiries received by NPIC from each state. The largest number of inquiries came from California, followed by Texas, New York, and Florida following the same order as the population (Graph 9.1). Based on population, a disproportionate number of inquiries were received from Oregon.

Graph 9.2 summarizes inquiries by EPA region. NPIC received 17.6% of inquiries from Region 4, 14.6% from Region 5, 12.0% from Region 9, 11.7% from Region 2, 11.6% from Region 6. The least represented region was Region 8, with only 2.5% of inquiries received.

Graph 9.1 - Top 10 States



Graph 9.2 - Inquiries by EPA Region

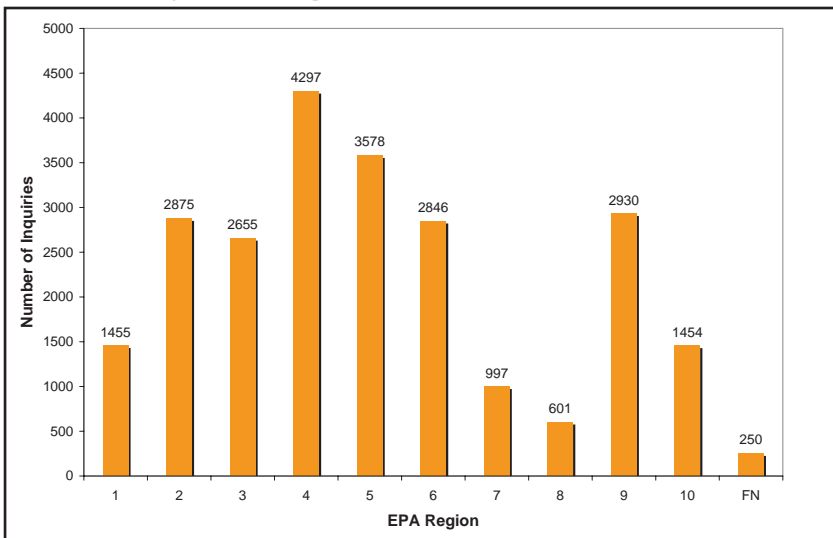


Table 9.1 - Listing of States and Foreign Nations Using NPIC

EPA Region	State Code	State	# of Inquiries
0		Not recorded	535
10	AK	Alaska	42
4	AL	Alabama	295
6	AR	Arkansas	161
9	AZ	Arizona	433
9	CA	California	2294
FN	CN	Canada	118
8	CO	Colorado	277
1	CT	Connecticut	311
3	DC	DC	165
3	DE	Delaware	58
4	FL	Florida	1200
FN	FN	Foreign	132
4	GA	Georgia	941
9	HI	Hawaii	61
7	IA	Iowa	226
10	ID	Idaho	121
5	IL	Illinois	774
5	IN	Indiana	377
7	KS	Kansas	186
4	KY	Kentucky	322
6	LA	Louisiana	254
1	MA	Massachusetts	715
3	MD	Maryland	647
1	ME	Maine	123
5	MI	Michigan	856
5	MN	Minnesota	353
7	MO	Missouri	411
4	MS	Mississippi	179
8	MT	Montana	86
4	NC	North Carolina	671
8	ND	North Dakota	34
7	NE	Nebraska	174
1	NH	New Hampshire	119
2	NJ	New Jersey	942
6	NM	New Mexico	106
9	NV	Nevada	142
2	NY	New York	1889
5	OH	Ohio	842
6	OK	Oklahoma	218
10	OR	Oregon	816
3	PA	Pennsylvania	957
2	PR	Puerto Rico	39
1	RI	Rhode Island	110
4	SC	South Carolina	249
8	SD	South Dakota	41
4	TN	Tennessee	440
6	TX	Texas	2107
8	UT	Utah	125
3	VA	Virginia	684
2	VI	Virgin Islands	5
1	VT	Vermont	77
10	WA	Washington	475
5	WI	Wisconsin	376
3	WV	West Virginia	144
8	WY	Wyoming	37
		Total =	24472

10. Top 10 Active Ingredients for All Inquiries

When inquiries to NPIC involve discussion of a specific product or active ingredient, specialists record the product and the active ingredient in the NPIC Pesticide Inquiry Database. The active ingredient permethrin was discussed in more inquiries than any other single active ingredient (Table 10.1, Graph 10.1). Of the 1,042 inquiries involving permethrin, 186 (17.9%) were incident inquiries and 856 (82.1%)

were inquiries for information. See Table 10.1 and Graph 10.1 for this and similar information for the active ingredients most commonly discussed in inquiries made to NPIC. Note that an inquiry may involve discussion of more than one active ingredient; thus totals reflect the number of times active ingredients are discussed during all inquiries. Graph 10.1 illustrates the number of informational inquiries and incident inquiries for the top active ingredients that NPIC received in the 2006 grant year. The certainty index is an estimate by NPIC as to whether the incident was definite-

ly (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 inquiries where the inquirer reported an exposure, accident, or odor, but no health effects were reported. Of the 186 times that permethrin was mentioned during incident inquiries in which effects were reported, 8.1% of the cases were assigned a certainty index of 1 (definite) or 2 (probable).

Graph 10.1 - Top 10 Active Ingredients for All Inquiries

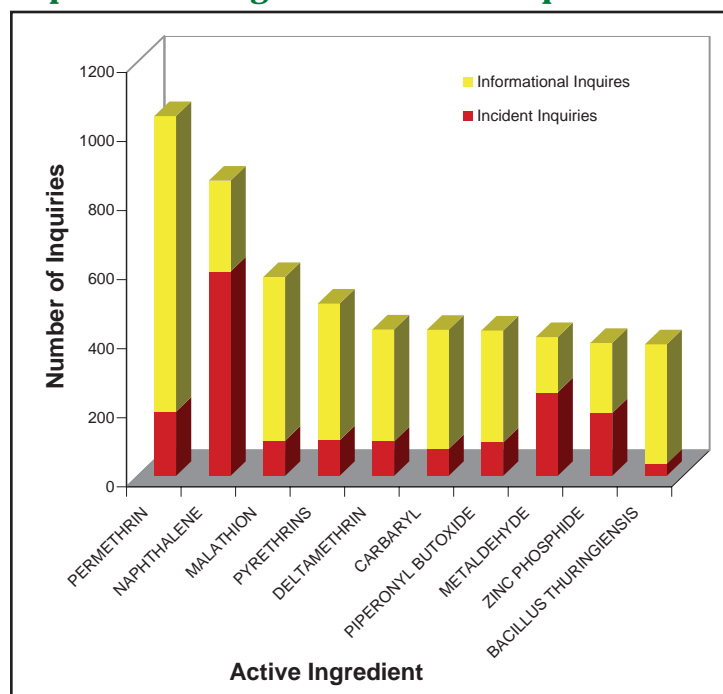


Table 10.1 - Top 25 Active Ingredients for All Inquiries

Active Ingredient	Total Inquiries	Incident ¹⁾ Inquiries	Information Inquiries
PERMETHRIN	1042	186 (15)	856
NAPHTHALENE	855	592 (3)	263
MALATHION	576	102 (4)	474
PYRETHRINS	499	103 (6)	396
DELTA METHRIN	424	100 (3)	324
CARBARYL	423	78 (2)	345
PIPERONYL BUTOXIDE	421	97 (4)	324
METALDEHYDE	402	242 (48)	160
ZINC PHOSPHIDE	385	182 (3)	203
BACILLUS THURINGIENSIS	381	35 (0)	346
PARADICHLOROBENZENE	374	184 (1)	190
CAPSAICIN	365	71 (1)	294
POTASSIUM SALTS OF FATTY ACIDS	361	115 (0)	246
2,4-D	359	67 (1)	292
FIPRONIL	334	53 (0)	283
CAPTAN	302	42 (0)	260
BORIC ACID	293	93 (0)	200
GLYPHOSATE	242	49 (0)	193
DICAMBA	241	41 (0)	200
MECOPROP	227	42 (0)	185
PETROLEUM HYDROCARBONS	214	33 (0)	181
SULFUR	214	41 (0)	173
BIFENTHRIN	202	42 (1)	160
DEET	174	16 (1)	158
BLACK PEPPER OIL	170	18 (0)	152
Total - Above Pesticides	9480	2624 (93)	6858

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

11. Top 10 Active Ingredients for Incident Inquiries

The most common active ingredients reported during incident inquiries are listed in Table 11.1 and Graph 11.1. Also, Table 11.1 summarizes the number of reported incidents involving human and animal entities exposed to specific active ingredients. Naphthalene was reported to be involved in more incidents (592) than any other active ingredient - less than 0.5% of these incidents had a certainty index of 1 or 2. Metaldehyde was involved in the second largest number (242) of incidents - 19.8% of the incidents (242) had a certainty index of 1 or 2.

Metaldehyde and methoprene had the highest percentage of incidents, with a certainty index of 1 or 2, 19.8% and 15.6%, respectively.

Of the total active ingredients listed in Table 11.1, 3.7% of incident inquiries were assigned a certainty index of 1 (definite) or 2 (probable).

Graph 11.1 - Top 10 Active Ingredients for Incident Inquiries

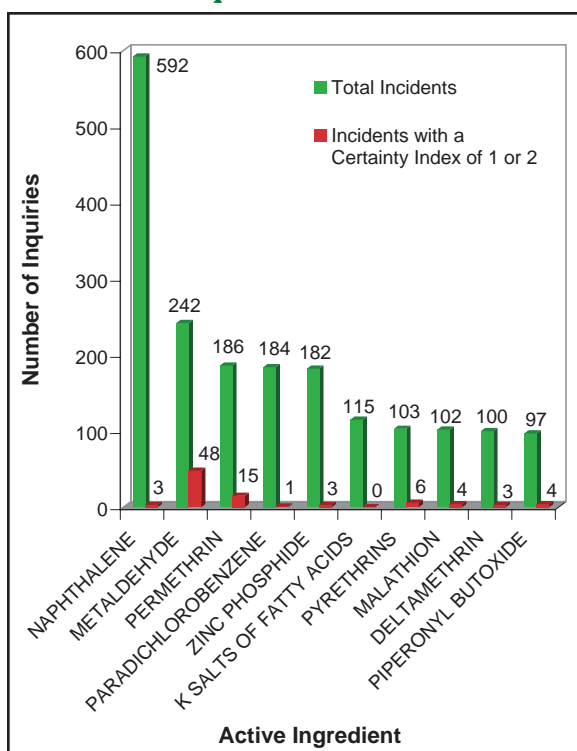


Table 11.1 - Top 25 Active Ingredients for Incident Inquiries

Active Ingredient	Total Incidents ¹⁾	Human Incidents	Animal Incidents	Other Incidents	Information Inquiries
NAPHTHALENE	592 (3)	433 (3)	74 (0)	85 (0)	263
METALDEHYDE	242 (48)	41 (0)	186 (48)	15 (0)	160
PERMETHRIN	186 (15)	84 (1)	73 (14)	29 (0)	856
PARADICHLOROBENZENE	184 (1)	137 (1)	20 (0)	27 (0)	190
ZINC PHOSPHIDE	182 (3)	11 (0)	156 (3)	15 (0)	203
POTASSIUM SALTS OF FATTY ACIDS	115 (0)	75 (0)	31 (0)	9 (0)	246
PYRETHRINS	103 (6)	61 (0)	31 (6)	11 (0)	396
MALATHION	102 (4)	66 (4)	3 (0)	33 (0)	474
DELTA METHRIN	100 (3)	58 (1)	35 (2)	7 (0)	324
PIPERONYL BUTOXIDE	97 (4)	72 (1)	21 (3)	4 (0)	324
BORIC ACID	93 (0)	54 (0)	37 (0)	2 (0)	200
CARBARYL	78 (2)	36 (0)	21 (2)	21 (0)	345
CAPSAICIN	71 (1)	51 (1)	17 (0)	3 (0)	294
2,4-D	67 (1)	41 (0)	12 (1)	14 (0)	292
FIPRONIL	53 (0)	16 (0)	31 (0)	6 (0)	283
GLYPHOSATE	49 (0)	28 (0)	11 (0)	10 (0)	193
BROMADIOLONE	47 (0)	5 (0)	41 (0)	1 (0)	63
DIPHACINONE	45 (0)	4 (0)	40 (0)	1 (0)	28
METHOPRENE	45 (7)	5 (0)	39 (7)	1 (0)	75
BIFENTHRIN	42 (1)	24 (1)	12 (0)	6 (0)	160
CAPTAN	42 (0)	21 (0)	2 (0)	19 (0)	260
MECOPROP	42 (0)	28 (0)	9 (0)	5 (0)	185
DICAMBA	41 (0)	27 (0)	9 (0)	5 (0)	200
SULFUR	41 (0)	20 (0)	11 (0)	10 (0)	173
INDOLE-3-BUTYRIC ACID	40 (0)	21 (0)	17 (0)	2 (0)	22
Total - Above Pesticides	2699 (99)	1419 (13)	939 (86)	341 (0)	6209

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

Naphthalene and metaldehyde were involved in the highest number of incidents, 592 and 242, respectively. Metaldehyde and methoprene had the highest percentage of incidents with a certainty index of 1 or 2, 19.8% and 15.6%, respectively.

12. Location of Incident

For incident inquiries, NPIC specialists record the reported location of the reported exposure. Of the 3,327 known locations where incidents occurred, 96.1% occurred in the home or yard, 1.1% occurred in an agricultural setting, 0.9% occurred in an office building or school, and 0.6% occurred in a retail store or business (Table 12.1). Of the 3,388 total location incident inquiries, 3.5% were assigned a certainty index of 1 or 2.

**Table 12.1 -
Location of Pesticide Incident**

Location	Number of Incident ¹⁾ Inquiries				
	2002	2003	2004	2005	2006
Unclear/Unknown	47 (3)	50 (5)	27 (6)	33 (2)	13 (0)
Home or Yard	1622 (178)	1556 (174)	2207 (248)	2929 (136)	3196 (114)
Agriculturally Related	59 (11)	35 (3)	50 (5)	42 (4)	35 (1)
Industrially Related	7 (1)	4 (0)	6 (0)	11 (0)	9 (0)
Office Building, School	37 (1)	23 (1)	29 (5)	46 (0)	31 (2)
Pond, Lake, Stream Related	8 (0)	7 (0)	5 (1)	4 (0)	12 (0)
Nursery, Greenhouse	9 (0)	8 (1)	8 (1)	8 (0)	4 (0)
Food Service/Restaurants	3 (2)	4 (1)	4 (0)	10 (0)	6 (0)
Retail Store/Business	15 (2)	16 (2)	21 (3)	29 (2)	20 (0)
Roadside/Right-of-Way	4 (1)	10 (1)	13 (1)	19 (0)	8 (0)
Park/Golf Course	9 (0)	3 (0)	18 (2)	5 (1)	6 (0)
Other	64 (7)	60 (14)	67 (9)	54 (3)	48 (2)
Total =	1884 (206)	1776 (202)	2455 (281)	3190 (148)	3388 (119)

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



13. Environmental Impact

NPIC specialists record reported environmental impacts discussed in incident inquiries. The most common reported environmental impacts are damage to property and damage to plant material, including food crops and other plants or trees. Of the 403 times that a specific environmental impact was reported, 1.2% of the cases were assigned a certainty index of 1 (definite) or 2 (probable). Out of all of the applicable reported environmental impacts, damage to property was the only one assigned a certainty index of 1 or 2. (Table 13.1)

**Table 13.1 -
Reported Environmental Impact**

Environmental Impact	Number of Incident ¹⁾ Inquiries				
	2002	2003	2004	2005	2006
Air	17 (2)	18 (2)	48 (5)	42 (2)	34 (0)
Water	14 (1)	8 (0)	8 (1)	10 (0)	12 (0)
Soil	8 (0)	9 (0)	24 (0)	12 (0)	13 (0)
Food Crops/Process	64 (0)	85 (1)	85 (0)	120 (1)	99 (0)
Property	168 (11)	168 (6)	261 (21)	284 (7)	219 (5)
Poultry/Livestock	6 (2)	4 (1)	5 (1)	6 (1)	1 (0)
Plants/Trees	65 (0)	43 (0)	88 (1)	51 (0)	25 (0)
Not Applicable	1527 (190)	1423 (189)	1926 (252)	2654 (136)	2982 (115)
Other	15 (0)	19 (3)	10 (0)	11 (1)	7 (0)
Total =	1884 (206)	1777 (202)	2455 (281)	3190 (148)	3392 (120)

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



14. Certainty Index

Table 14.1 and Graph 14.1 summarize the assignment of the certainty index for all incident inquiries received by NPIC. Inquiries are sorted according to the type of entity; human entities are further sorted according to gender and groups of entities. Multiple entities may be discussed in one incident in-

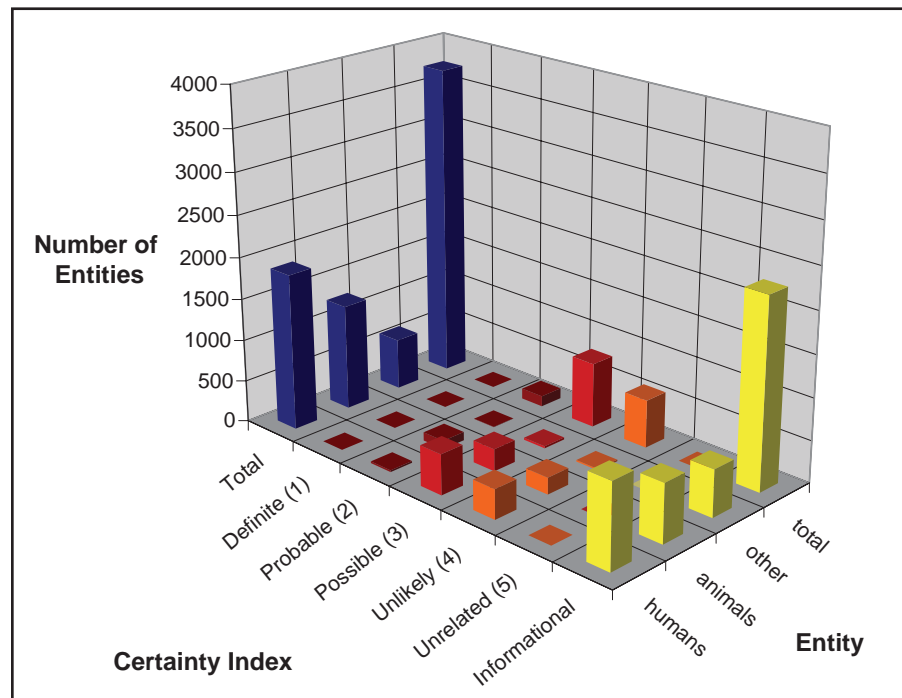
quiry; thus totals reflect the number of entities (as opposed to number of incidents) discussed during the course of incident inquiries to NPIC. Of the total number of entities discussed in incident inquiries to NPIC (3,745), 3.4% of the cases were assigned a certainty index of definite (1) or probable (2), 20.7% of the cases were assigned a certainty index of possible (3), 15.3%

of the cases were assigned a certainty index of unlikely (4), 0% of the cases were assigned a certainty index of unrelated (5), 60.6% of the cases did not involve effects and so were assigned the certainty index of zero (0), information only.

Table 14.1 - Incident Inquiries by Certainty Index (CI)

CI for All Categories of Entities					Breakdown of Human Entity Incident			
Certainty Index	Humans	Animals	Other	Total	Male	Female	Groups	Gender Not Stated
Total Inquiries in Operational Year = 24472								
Information Only (0)	1009	698	563	2270	408	508	84	9
Definite (1)	0	0	0	0	0	0	0	0
Probable (2)	21	102	4	127	10	9	2	0
Possible (3)	484	265	25	774	186	248	50	0
Unlikely (4)	356	200	18	574	134	199	22	1
Unrelated (5)	0	0	0	0	0	0	0	0
TOTAL =	1870	1265	610	3745	738	964	158	10

Graph 14.1 - Certainty Index for Incidents



15. Description of Entities

Table 15.1 and Chart 15.1 provide a more detailed summary of categories of entities discussed in incident inquiries. Of the 3,762 entities involved in incidents reported to NPIC, 49.7% were human, 33.9% animal, and 16.3% were other types of non-target entities (building or environment, for example).

Chart 15.1 - Description of Entities

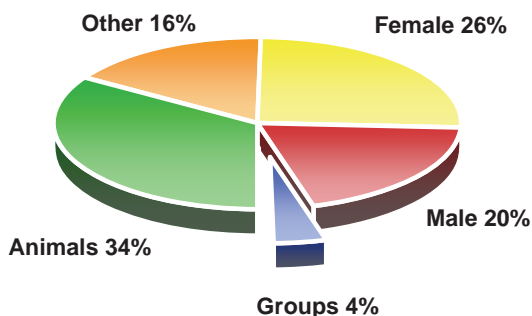


Table 15.1 - Description of Entities

Description of Entities	Number of Entities ¹⁾				
	2002	2003	2004	2005	2006
All females -					
Female	416 (28)	388 (25)	599 (58)	805 (10)	935 (9)
Female-pregnant	25 (0)	26 (1)	22 (1)	28 (0)	28 (0)
Female suicide attempt	0 (0)	0 (0)	2 (2)	1 (1)	3 (0)
Total all females =	441 (28)	414 (26)	623 (61)	834 (11)	966 (9)
All males -					
Male	345 (42)	292 (30)	452 (47)	643 (9)	734 (10)
Male suicide attempt	0 (0)	2 (1)	2 (0)	4 (1)	4 (0)
Total all males =	345 (42)	294 (31)	454 (47)	647 (10)	738 (10)
All groups -					
Family	68 (7)	38 (4)	75 (8)	75 (8)	128 (1)
Non-family group	13 (1)	13 (4)	12 (5)	12 (5)	30 (1)
Total all groups =	81 (8)	51 (8)	87 (13)	87 (13)	158 (2)
Gender not stated -					
Child - sex unknown	4 (0)	6 (0)	2 (0)	10 (0)	9 (0)
Adult - sex unknown	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)
Other - sex unknown	1 (0)	1 (1)	1 (0)	0 (0)	0 (0)
Total gender not stated =	5 (0)	7 (1)	3 (0)	10 (0)	10 (0)
Total all humans =	872 (78)	766 (66)	1167 (121)	1596 (27)	1872 (21)
All animals -					
Single animal	715 (130)	717 (136)	954 (169)	1199 (120)	1204 (98)
Group of animals	44 (7)	60 (11)	54 (9)	81 (10)	67 (7)
Wildlife	7 (0)	10 (0)	6 (1)	4 (2)	6 (0)
Total all animals =	766 (137)	787 (147)	1014 (179)	1284 (132)	1277 (105)
Other entities:					
Building-home/office	127 (0)	128 (2)	234 (7)	316 (0)	219 (1)
Other places	242 (1)	211 (1)	298 (2)	333 (2)	394 (3)
Total other entities =	369 (1)	339 (3)	532 (9)	649 (2)	613 (4)
Total all entities =	2007 (216)	1892 (216)	2713 (309)	3529 (161)	3762 (130)

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

16. Entity Symptoms

Of the 1,872 human entities discussed in incident inquiries to NPIC, symptoms, or absence of symptoms, were reported for 1,584 entities (Table 16.1). Of these entities, 27.5% reported symptomatic health effects (effects that are consistent with a significant exposure to the pesticide in question), 50.6% were asymptomatic, and 21.9% reported atypical health effects (Chart 16.1). Chart 16.2 provides similar information for animal entities.

Table 16.1 - Reported Symptoms of Entities

Reported Symptoms	Number of Entities ¹⁾				
	2002	2003	2004	2005	2006
Human symptoms -					
Symptomatic	462 (107)	345 (97)	542 (172)	484 (81)	435 (64)
Asymptomatic	225 (23)	223 (19)	344 (31)	600 (61)	802 (121)
Atypical	145 (14)	157 (19)	226 (17)	332 (39)	347 (36)
Total humans =	832 (144)	725 (135)	1112 (220)	1416 (181)	1584 (221)
Animal symptoms -					
Symptomatic	376 (160)	391 (174)	456 (207)	446 (155)	365 (114)
Asymptomatic	275 (15)	319 (15)	446 (33)	559 (40)	633 (62)
Atypical	72 (12)	73 (11)	121 (13)	186 (17)	211 (27)
Total animals =	723 (187)	783 (200)	1023 (253)	1191 (212)	1209 (203)
Total symptoms =	1555 (331)	1508 (335)	2135 (473)	2607 (393)	2793 (424)

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

Chart 16.1 - Symptoms - Humans

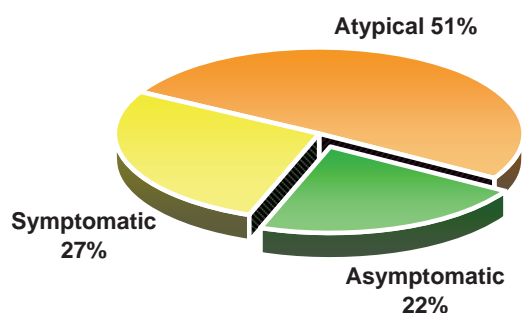
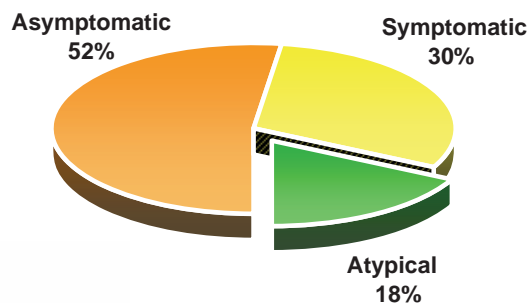


Chart 16.2 - Symptoms - Animals



17. Deaths and Other Outcomes

Amongst the 1,872 human entities, one human death was reported (Table 17.1). A medical examiner called regarding a deceased male who intentionally ingested a product containing 2% zinc phosphide. The medical examiner inquired about the other ingredients in the ingested product.

The number of animal and human deaths, and other outcomes have been fairly constant over the last 5 years. For the current year, of the 1,277 animal victims, there were 38 deaths, with 10 of the cases assigned a certainty index of 1 or 2, indicating likely pesticide involvement. Table 17.1 and Chart 17.1 summarizes this information and also lists the number of entities associated with unusual circumstances.

Table 17.2 shows the active ingredients involved in the majority of the animal deaths. Permethrin, pyrethrins, n-octyl bicycloheptene dicarboximide, pyriproxyfen, metaldehyde, and piperonyl butoxide were reported to be associated with the largest number of deaths.

Table 17.1 - Additional Outcomes for Entities

Additional Outcomes	Number of Entities ¹⁾				
	2002	2003	2004	2005	2006
Human deaths -					
Male	1 (1)	0 (0)	0 (0)	2 (1)	1 (0)
Female	1 (1)	0 (0)	1 (1)	0 (0)	0 (0)
Total human deaths =	2 (2)	0 (0)	1 (1)	2 (1)	1 (0)
Animal deaths -					
Single animal	45 (25)	33 (11)	55 (24)	38 (9)	31 (9)
Group of animals	9 (4)	10 (3)	10 (2)	15 (2)	7 (1)
Wildlife	7 (0)	4 (0)	2 (1)	2 (2)	0 (0)
Total animal deaths =	61 (29)	47 (14)	67 (27)	55 (13)	38 (10)
Other -					
Unusual cases	116 (21)	95 (21)	107 (26)	109 (9)	117 (7)
Total additional outcomes =	179 (52)	142 (35)	175 (54)	166 (23)	155 (17)

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

Chart 17.1 - Deaths and Other Outcomes

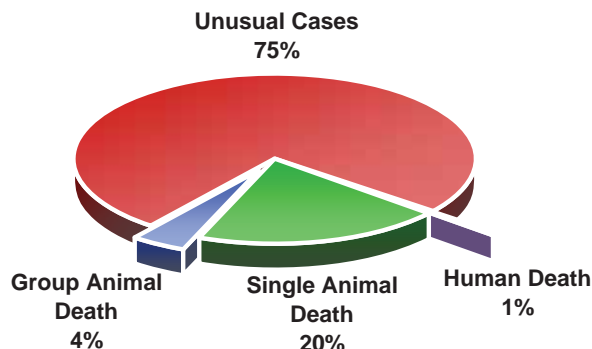


Table 17.2 - Active Ingredients Involved in Animal Deaths

Active Ingredient ¹⁾	Number of Deaths
PERMETHRIN	9
PYRETHRINS	9
N-OCTYL BICYCLOHEPTENE DICARBOXIMIDE	6
PYRIPROXYFEN	6
METALDEHYDE	5
PIPERONYL BUTOXIDE	5
CARBARYL	4
METHOPRENE	4
TETRACHLORVINPHOS	3
D-PHENOTHRIN	2
ETHOFENPROX	2
NAPHTHALENE	2

¹⁾ Note that a pesticide product may contain more than one active ingredient.

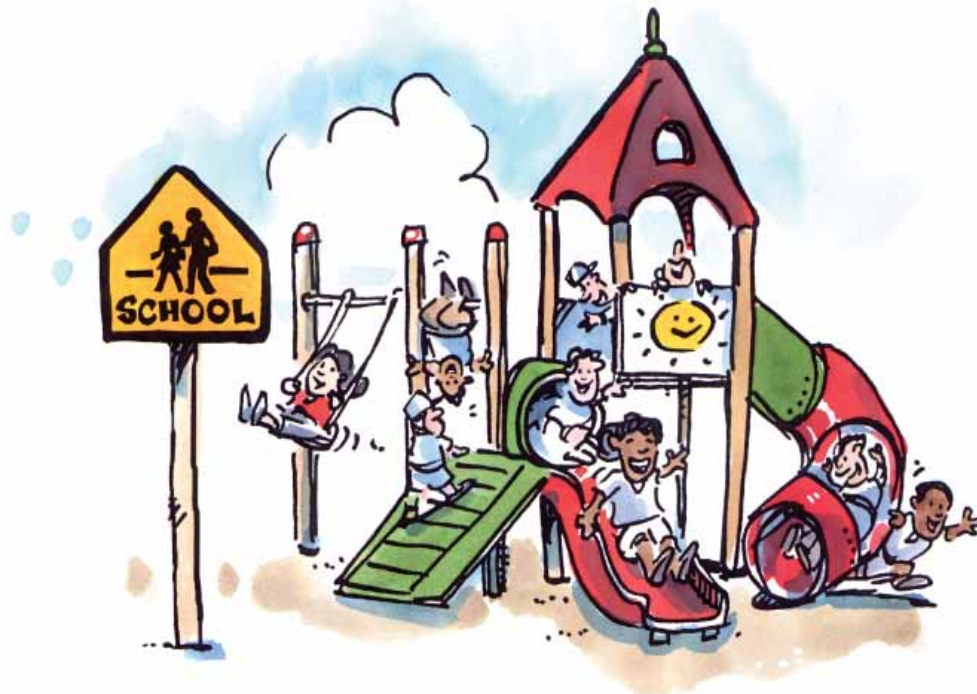
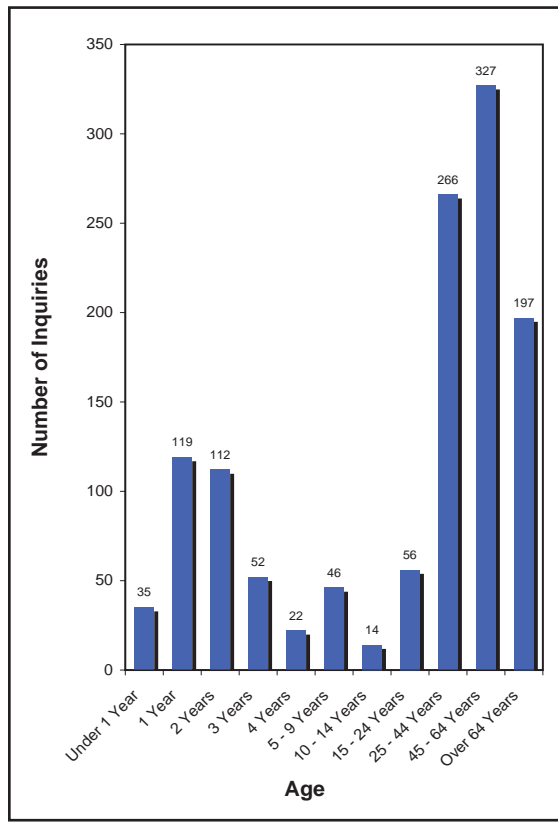
18. Entity Age

Table 18.1 and Graph 18.1 summarize information about the ages of human entities discussed in incident inquiries to NPIC. Of these 1,246 entities, 27.3% were less than 5 years of age (primarily consisting of ages 1 and 2), 4.8% were between the ages of 5 and 14, 47.6% were between the ages of 15 and 24, 47.6% were between the ages of 25 and 64, and 15.8% were over age 64.

Table 18.1 - Reported Ages of Human Entities

Age Category	Number of Entities				
	2002	2003	2004	2005	2006
Under 1 Year	9	7	12	27	35
1 Year	23	26	42	90	119
2 Years	24	22	50	90	112
3 Years	15	15	24	42	52
4 Years	10	10	11	22	22
5 - 9 Years	14	29	32	39	46
10 - 14 Years	10	8	15	20	14
15 - 24 Years	20	30	41	57	56
25 - 44 Years	156	148	228	243	266
45 - 64 Years	182	200	273	313	327
Over 64 Years	106	82	125	139	197

Graph 18.1 - Age of Human Entities





Report on Subcontracts

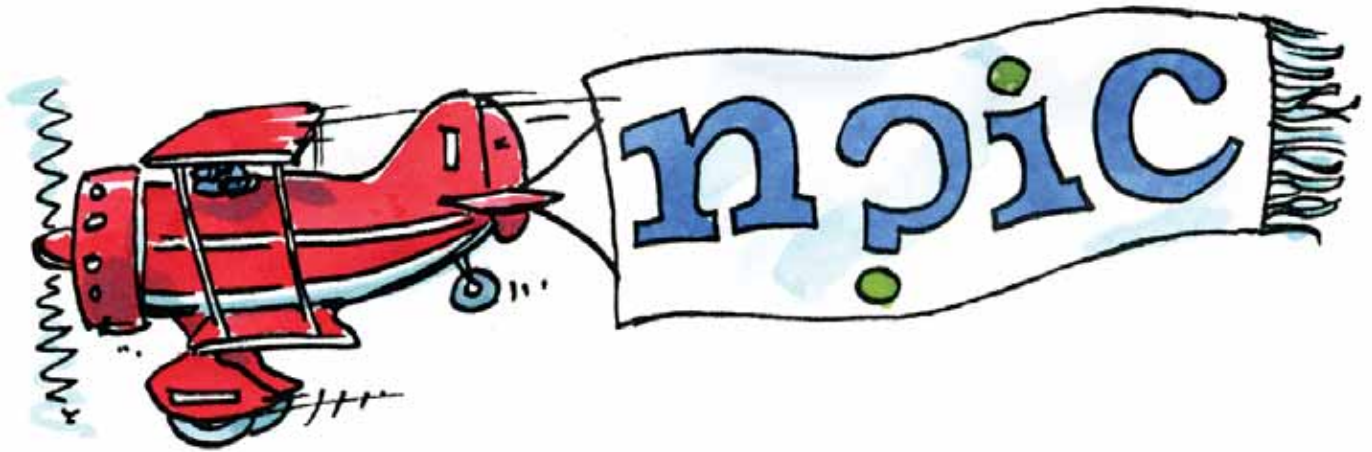
Oregon Poison Center

NPIC specialists transferred 109 inquiries to the Oregon Poison Center. These inquiries were transferred to the center because the specialists deemed that the inquirer's situation represented an acute poisoning emergency. The NPIC quarterly reports present information for the inquiries transferred in each quarter.

National Animal Poison Control Center

In the current year, 105 inquiries were transferred to the Animal Poison Control Center (APCC). The situation presented in each inquiry was considered to be an emergency; therefore, the inquiry was transferred to APCC. The nature of the inquiries transferred is detailed in the NPIC quarterly reports.





The development of the 2006 Annual Report was a collaborative effort involving all of the NPIC staff and faculty. This section acknowledges the additional work of Cameron Carlson in design and formatting and Dr. Stone in coordinating the talents of the NPIC team.

