

**2005 ANNUAL
PESTICIDE POISONING
SURVEILLANCE REPORT**

Pesticide Poisoning Surveillance Program

Division of Environmental Health
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Iowa Annual Pesticide Poisoning Surveillance Report January 1, 2005 through December 31, 2005

Pesticide Poisoning Surveillance Program Overview

Iowa Administrative Code section 641-1.3(1) requires pesticide poisonings to be reported to the Iowa Department of Public Health (IDPH). Pesticides are defined under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA) as “any substance or mixture of substances intended to prevent, destroy, repel or mitigate insects, rodents, nematodes, fungi, weeds, microorganisms, or any other form of life declared to be a pest by the Administrator of the U.S. Environmental Protection Agency (EPA) and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant. Pesticides include herbicides, insecticides, rodenticides, fungicides, disinfectants, wood treatment products, growth regulators, insect repellents, etc.”

Pesticide poisonings were added to the list of reportable diseases in *Iowa Administrative Code* section 641-1.3(1) because IDPH was concerned about adverse human health effects from exposure to pesticides. The Pesticide Poisoning Surveillance Program within the Division of Environmental Health of the IDPH monitors, collects, and analyzes pesticide poisonings to determine the extent to which Iowans are being affected by pesticide exposure. The information gathered by this program is disseminated to governmental agencies, the public, and health care professionals. In addition, IDPH is required to submit its findings annually to the Iowa Department of Agriculture and Land Stewardship (IDALS).

Incident Report Sources for 2005 Reports

In 2005, IDPH received reports primarily from the Iowa Statewide Poison Center.

Pesticide Poisoning Case Classification Criteria

Beginning in 2003, IDPH used the National Institute of Occupational Safety and Health system for case classification. Reports received from the Iowa Statewide Poison Center are scored on three criteria to determine the case classification. Each criterion is scored on a scale of 1 to 4. The three criteria are:

- A. Documentation of pesticide exposure.
 - B. Documentation of adverse health effects.
 - C. Evidence supporting a causal relationship between pesticide exposure and health effects.
- A. Scoring of Documentation of Pesticide Exposure
1. Laboratory, clinical or environmental evidence is available to corroborate exposure to a pesticide. At least one of the following must be satisfied to receive a score of “1”:
- Analytical results from foliage residue, clothing residue, air, soil, water, or biologic samples showing the presence of a pesticide.
 - Observation of residue and/or contamination, including damage to plant material from herbicides, by a trained professional. This may be a plant pathologist, agricultural inspector, agricultural extension agent, industrial hygienist, or any other licensed or academically trained specialist with expertise in plant pathology and/or environmental effects of

pesticides. A licensed pesticide applicator not directly involved with the application may also be considered a trained professional.

- Biologic evidence of exposure through response to administration of an antidote such as 2-PAM, Vitamin K1, or repeated doses of atropine.
 - Documentation by a licensed health care professional of a characteristic eye injury or dermatologic effects at the site of direct exposure to a pesticide product known to produce such effects.
 - Clinical description by a licensed health care professional of two or more post-exposure health effects, at least one of which is a sign, or an objective finding that can be observed and described by a licensed health care professional.
2. Evidence of exposure based solely upon written or verbal report. At least one of the following must be satisfied to receive a score of "2":
 - Report by case.
 - Report by witness.
 - Written records of application.
 - Observation of residue and/or contamination, including damage to plant material from herbicides, by other than a trained professional.
 - Other evidence suggesting that an exposure occurred.
 3. Strong evidence that no pesticide exposure occurred.
 4. Insufficient data.

B. Documentation of Adverse Health Effect

1. Two or more new post-exposure abnormal signs (objective findings that can be observed and described by a licensed health care professional) and/or test or laboratory findings reported by a licensed health care professional.
2. Two or more new post-exposure abnormal symptoms, which are subjective evidence of a disease or a condition as perceived and reported by the patient, were reported. When new post-exposure signs and test or laboratory findings are insufficient to satisfy a "1" score, they can be used in lieu of symptoms toward satisfying a "2" score.
3. No new post-exposure abnormal signs, symptoms, or test/laboratory findings were reported.
4. Insufficient data, which includes having only one new post-exposure abnormal sign, symptom, or test or laboratory finding.

C. Evidence Supporting a Causal Relationship between Pesticide Exposure and Health Effects

1. Where the findings documented under the Health Effects criteria are one of the following:
 - Characteristic for the pesticide and the temporal relationship between exposure and health effects is plausible.

- Consistent with an exposure-health effect relationship based upon the known toxicology of the pesticide.
2. Evidence of exposure-health effect relationship is not present.
 3. Definite evidence of a non-pesticide causal agent.
 4. Insufficient toxicologic information is available to determine causal relationship between exposure and health effects.

The matrix below provides the case classification categories and the criteria scores needed to place the case into a specific category.

CLASSIFICATION CATEGORIES ¹											
CLASSIFICATION CRITERIA	Definite Case	Probable Case		Possible Case	Suspicious Case	Unlikely Case	Insufficient Information		Not a Case		
									Asymptomatic ²	Unrelated ³	
A. Exposure	1	1	2	2	1 or 2	1 or 2	4	-	-	3	
B. Health Effects	1	2	1	2	1 or 2	1 or 2	-	4	3	-	
C. Casual Relationship	1	1	1	1	4	2	-	-	-	-	3

Case Classification of 2005 Pesticide Poisoning Reports

During 2005, IDPH received 443 reports of pesticide poisoning. Table 1 below shows the case classification of these reports. Of the 443 reports received by IDPH, 13 (3.0 percent) were classified as “definite” pesticide exposures. “Probable” cases accounted for 59 (13.3 percent) of the reports, and “possible” cases accounted for 231 (52.1 percent) of the reports. Most of the “possible” cases would probably have been classified as “probable” or “definite” if the person who was exposed had seen a health care provider to verify the signs and symptoms of pesticide exposure in addition to calling the Iowa Statewide Poison Center for information. The rest of the reports were classified as “suspicious,” “insufficient information,” “asymptomatic,” “unlikely case,” or “unrelated.”

Table 1 -- Categories of Pesticide Exposure 2005

Category	Number	Percentage
Definite Case	13	3.0%
Probable Case	59	13.3%
Possible Case	231	52.1%
Suspicious Case	1	0.2%
Insufficient Information	20	4.6%
Asymptomatic	106	23.9%
Unlikely Case	12	2.7%
Unrelated	1	0.2%
Total 2005	443	100.0%

Class of Pesticides in 2005 Reports

Insecticides accounted for 202 (42.9 percent) of the pesticide poisoning reports received in 2005, and disinfectants were named in 99 (21 percent) of the reports. Herbicides and repellants were each named in 64 (13.6 percent) of the reports, and 34 (7.2 percent) reports named a rodenticide. Fungicides were named in four (0.85 percent) of the reports, and a combination of fungicides and insecticides was named in four (0.85 percent) of the reports. Table 2 below shows the reports of pesticide poisoning by class in 2005.

Table 2 -- Class of Pesticide for 2005 Reports

Class	Number	Percentage
Repellant	64	13.60%
Disinfectant	99	21.00%
Fungicide	4	0.85%
Fungicide/Insecticide	4	0.85%
Herbicide	64	13.60%
Insecticide	202	42.90%
Rodenticide	34	7.20%
Total 2005	471*	100.00%

*Adds up to more than 455 because 23 reports listed at least two pesticides, and five reports listed at least three pesticides.

Pesticides Named in 2005 Reports of Pesticide Poisoning

EPA and IDALS identify a specific pesticide by the EPA Registration Number. It is important to discover the EPA Registration Number for products involved in pesticide poisonings so that IDALS can determine whether there is a pattern of new signs and/or symptoms associated with a specific product. If such a pattern is identified, then IDALS can seek changes in the product label to reduce human exposure and resulting pesticide poisonings. In most of the cases reported in 2005, there was insufficient information to determine the EPA Registration Number of the product, so IDPH has classified products by the general name or type of product. Table 3 below shows the products that accounted for the largest numbers of pesticide poisoning. Table 4 on pages 7 through 10 shows the actual products that were named in the pesticide exposure reports.

Table 3 – Type of Product for 2005 Reports

Type of Product	Number of Reports
Home and garden insect control	108
Insect repellant	50
Bleach	42
Flea and tick control products	31
D-Con	23
Round-up	15
2,4-D	14
Lysol	10
Tempo	8

Table 4 -- Pesticides Named in 2005 Pesticide Exposure Reports

Pesticide and EPA Registration Number	Number of Reports
2,4-D (unknown)	14
3m ultrathon insect repellent 8 (58007-7)	1
8 insect control with pyrethrin (4-?)	1
Ace home insect control (9688-80)	1
Andersons golf products turf fert 18-5-9 w/millennium ultra herbicide (unknown)	1
Annihilator insecticide with pyrethroid (4691-164)	1
Asana 1.9 EC (353-502)	1
Atrazine (Unknown)	2
Avitrol (11649-?)	1
Aztec 4.67% granular insecticide (264-811-5481)	1
BACK COUNTRY INSECT REPELLENT (498-165-79529)	1
Balance pro (264-600)	1
Bayer advanced home pest control indoor and outdoor insect killer RTU (72155-27)	1
Bayer advanced powerforce carpenter ant & termite killer + concentrate (72155-58)	1
Baythroid (3125-351 OR 264-745)	1
Ben's 100 insect repellent (56575-7)	1
Bio spot flea and tick mist with nylar (270-307)	1
Black flag bug bomb (475-286)	1
Black flag roach killer (69421-102)	1
Bleach (Unknown)	37
Bonide aerosol ant, roach, and spider killer (4-392)	1
Bonide fungonil multipurpose fungicide (67572-2-4)	1
Captan (unknown)	1
Chlorine water/shock treatment (unknown)	1
Chlorpyrifos (unknown)	1
Cinch (352-625)	2
Citronella candle (33025-1 or 4822-422)	1
Clorox bleach (5813-50)	5
Clorox clean-up cleaner with bleach (5813-21)	3
Cobra (Unknown)	1
Comet disinfectant cleaner with chlorinol (3573-51)	2
Coppertone bug and sun (6148-11 OR 66306-5-6148)	1
Cornerstone (42750-60-1381)	1
Countdown (unknown)	1
Counter 15G (241-238)	1
Country Vet Farm and Home CV 40 (9444-173)	1
Crossbow Weed and Brush Killer (62719-260)	2
Curtail herbicide (62719-48)	1
Cutter advanced (121-?)	1
Cutter insect repellent aerosol backwoods (121-68)	2
Cutter insect repellent pump spray (unscented formula MMI) (121-34)	1
Cutter just for kids insect repellent (121-76)	3
Cutter skinsations insect repellent (121-78)	1
Cylence ultra (11556-131)	1
D-con (3282-?)	2
D-con bait pellets (3282-66)	2
D-con mouse prufe II (3282-65)	8
D-Con ready mixed baitbits (3282-81)	11
Decall plus or procall d plus (unknown)	1
Deep woods off for sportsmen (4822-167)	19
Degreaser (unknown)	1
Dextol multitude insect spray (192-198)	1
Diazinon (unknown)	1
Diazinon AG500 (100-461-66222)	1
Dollar general pine oil (99-24)	1
Dragon sevin dust 10% (16-98)	1
Duette bleach automatic toilet bowl cleaner (6836-274-74010)	1

Table 4 -- Pesticides Named in 2005 Pesticide Exposure Reports

Pesticide and EPA Registration Number	Number of Reports
Duocide la flea and tick spray for cats and dogs (2382-126)	1
Ear mite lotion for cats from francodex labs (2382-54-62712)	1
Earl May grass, weed, and vegetation control concentrate (4-360-3772)	1
Ectiban (773-65-1386)	1
Enforcer asian lady beetle and box elder bug spray (40849-4)	2
Enforcer bugmax 365 (73049-187-40849)	2
Enforcer flea fogger II (2724-454-40849)	1
Enforcer ratmax rat and mouse killer (7173-211-40849)	1
Enoz cedar moth balls (1475-120)	1
Fantastik oxy power (3696-138)	1
Fastrac place pacs (12455-97)	1
Ferti-lome systemic insecticide granules (7401-26)	1
Flea and tick repellent for dogs (unknown)	1
Flea and tick spray (unknown)	1
Flea spray (unknown)	1
Fly spray (unknown)	1
Fly stick (unknown)	1
Foaming disinfectant bathroom cleaner (10900-57-52421)	1
Formula 409 (5813-55)	3
Frontline plus for dogs (65331-5)	2
Fumiphos 60% aluminum phosphide pellets (30574-9 or 30574-11)	1
Glass Cleaner (Unknown)	2
Gly star plus (42750-61)	1
Gordon's Brush Killer (2217-543)	1
Grazon P plus D herbicide (62719-182)	1
Greased lightning (6836-193)	2
Halofenozide (62719-?)	1
Harness (524-?)	1
Hartz 2 in 1 flea and tick spray for cats (2596-87)	2
Hartz 2 in 1 rid flea shampoo for dogs (2596-71)	2
Hartz advanced car flea and tick drops (2596-151)	1
Hartz control pet care system flea and flea egg killer for dogs (2596-140)	1
Hartz flea and tick killer (unknown)	1
Hartz flea killing collar for dogs (2596-34)	1
Hartz one spot for dogs and puppies releve (over 30 lbs) (unknown)	1
Hawk rodenticide (12455-69-3240)	1
Home defense indoor citrus home insect killer (45987-2-239)	1
Hot shot (unknown)	1
Hot shot ant killer plus (9688-79-8845)	3
Hot shot fogger III (478-126-8845)	4
Hot shot hit roach and ant bug killer (9688-185-8845)	1
Hot shot roach and ant killer 2 (fresh floral scent) (9688-86-8845)	1
Hot shot wasp and hornet spray plus (9688-62-8845)	1
Jungle laboratories fungus eliminator (33034-?)	1
Just One Bite Rat and Mouse Bait (270-372)	1
Kay chemical sink sanitizer (5389-14)	1
Keystone LA (62719-479)	1
Liberty herbicide (264-660)	1
Lorsban (unknown)	2
Lorsban 4E (62719-220)	2
Lo-vol 400 2,4,-D weed killer (228-139-2935)	1
Lysol (777-?)	10
Lysol sanitizing wipes (777-68)	2
Lysol toilet bowl cleaner with bleach (777-83)	1
Malathion (unknown)	2
Mole repellent (unknown)	1
Mosquito be gone (unknown)	1

Table 4 -- Pesticides Named in 2005 Pesticide Exposure Reports

Pesticide and EPA Registration Number	Number of Reports
Mosquito fog spray from Amoco (unknown)	1
Mothballs (unknown)	4
Mouse glue trap (unknown)	1
Mycodex all in one spray (270-359-43591)	1
Ni-712 disinfectant spray (11694-99-42666)	1
Odo-ban (66243-1 OR 66243-2)	2
Off (unknown)	12
Off insect repellent (pump spray) (4822-205)	6
Off insect repellent II - fresh scent (4822-380)	1
Off maximum strength (4822-215)	1
Off Skintastic family formula insect repellent - summer splash (4822-415)	7
Off sportsman's insect repellent (4822-276)	1
Off yard and deck area repellent (4822-394)	1
Organophosphates (unknown)	2
Ortho Bug-b-Gone Max (2596-146)	1
Ortho home defense indoor and outdoor insect killer (239-2663)	3
Ortho isotox insect killer formula (239-2595)	2
Ortho roach, ant, and spider killer (239-2679)	2
Ortho weed-b-gon lawn weed killer (239-2342)	2
Ortho weed-b-gon max (239-599)	1
ortho weed-b-gone lawn weed killer (239-2342A)	2
ortho weed-b-gone weed killer concentrate (228-424-239)	1
Oxidizer 501 (unknown)	1
Patrol one (11715-61-61668)	2
Power House Ant and Roach Killer (498-127-51463)	1
Pramitol 25e (66222-22)	1
Princep 4L (100-526)	1
Proline flea spray (28293-128-65525)	1
Pyrethrin (unknown)	2
Quimag quimicos aguila - copper sulfate crystal (73385-1)	1
Raid ant and roach killer 17 for household use (4822-447)	1
Raid Ant Killer (4822-473)	5
Raid bug bomb (4822-452)	8
Raid earth options hornet spray (73825-1-4822 OR 4822-534)	1
Raid flea killer plus - carpet (4822-470)	1
Raid Flea Killer Plus Fogger (4822-229)	3
Raid flying insect killer (4822-513)	2
Raid wasp and hornet spray (4822-271)	2
Ramik green bait (2393-508-134)	1
Raptor herbicide (241-379)	1
Real kill wasp & hornet killer II (9688-62-478)	1
Regent 4SC insecticide (264-EUP-116)	1
Repel insect repellent (23% deet) (305-50)	2
Repel lemon eucalyptus insect repellent (lotion and spray lotion) (305-56)	1
Resolve (8155-5-40208)	1
Rid lice control spray (432-1134-73470)	1
Rid topical spray 0.5% (73049-301-73470)	1
Rid-a-bug flying insect killer (46515-48-9688)	2
Riverdale razor herbicide (228-366)	1
Roach bait (unknown)	1
Roach trap (unknown)	1
Round-up (unknown)	15
Rubigan E.C. (Unknown)	1
Saber extra insecticide ear tags (59-234)	1
Safer cleaner for pets (42697-6)	1
Sanimaster 4 (3377-58-6109)	1
Scrub free disinfectant bathroom cleaner (1839-83-10772)	1

Table 4 -- Pesticides Named in 2005 Pesticide Exposure Reports

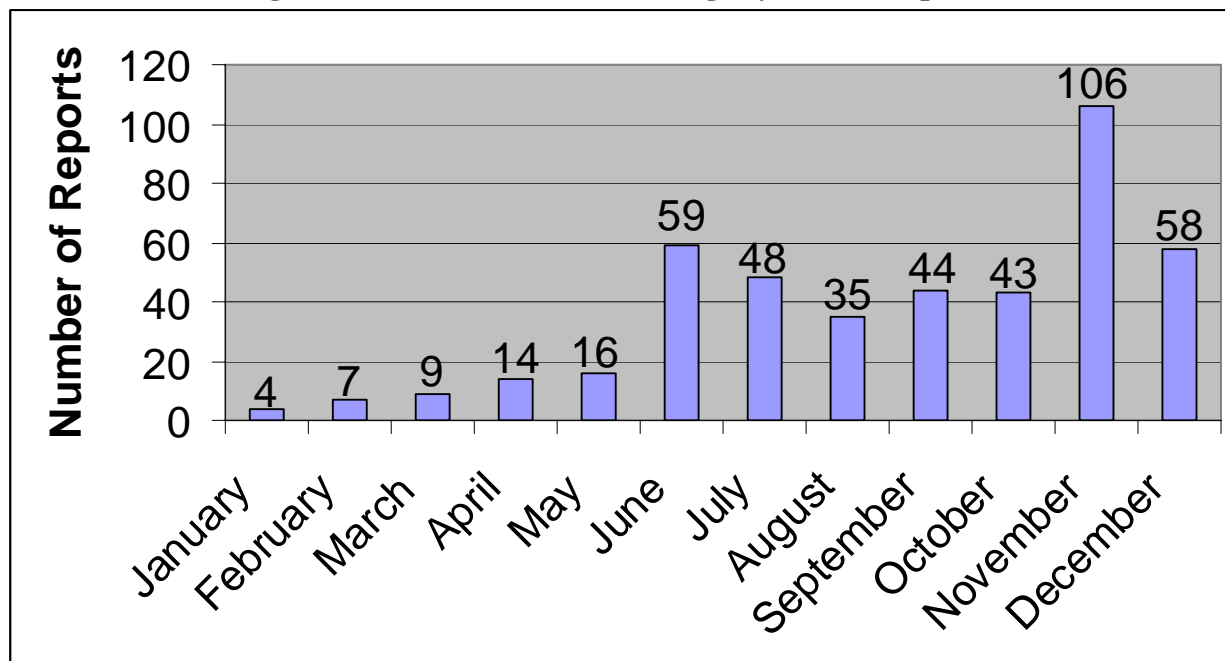
Pesticide and EPA Registration Number	Number of Reports
Sergeants flea and tick repellent for cats (21165-25-2517)	1
Sergeants gold flea and tick spray (1021-1622-2517)	2
Sergeants protect squeeze on flea and tick control for dogs (270-278-2517)	1
Sevin (unknown)	2
Sevin 80S (264-316)	1
Simple Green (56782-2)	2
Skin so soft bug guard (806-?)	2
Skin so soft bug guard insect repellent spf 30 (806-13)	2
Soft scrub with bleach (5813-25)	3
Spectracide 6000 lawn and garden insect control from spectrum (8845-95)	1
Spectracide bug stop (9688-84-8845)	10
Spectracide Bug stop bug bomb (9688-78-8845)	1
SSI-50 by Ecolabs (47000-73-1677)	1
Sticky mouse trap (unknown)	1
Suspend SC (432-763)	2
Swat fly repellent ointment (270-103)	1
Synergize (66171-7)	1
Taiga Z (100-1112-1381)	1
TAT Area Fogger II (506-159)	3
Tat Flea and Tick Killer with Residual Action (506-158)	1
Tech-trol sustained action wipe-on (59-216-270)	1
Tempo (unknown)	1
Tempo 2 EC (3125-352)	1
Tempo sc ultra (3125-498)	5
Tempo ultra WP insecticide (432-1304)	1
Terro Ant Killer (149-8)	5
The Works Shower Cleaner (6836-193-80306)	2
The Works Toilet Bowl Cleaner (5965-1 OR 5965-2)	4
Tilex disinfects instant mildew remover (5813-24)	1
Tomcat (12455-5-3240)	1
Tomcat ultra (12455-69-3240)	1
Triazine herbicide (unknown)	1
Trimec lawn weed killer (2217-570-829)	2
Unknown disinfectant (unknown)	1
Unknown fogger (unknown)	3
Unknown herbicide (unknown)	1
Unknown insect repellent (unknown)	3
Unknown insecticide (unknown)	21
Valent select 2 EC herbicide (59639-3)	1
Vapona insecticide (4691-130)	1
Vet-Kem paramite sponge-on dip for dogs (2724-169-11785)	1
Vinyl fly t (unknown)	1
Warrior (100-1112)	1
Wasp spray - carbamate with other insecticide (unknown)	1
Water-based flea and tick killer (unknown)	1
Way Lay 3.2 AG (705-9-53883)	1
WC Insect Finish (499-374-16101)	1
Windex (4822-491)	2
X-terminator insecticide ear tags (4691-142-44716)	1
Total 2005	471*

*Adds up to more than 455 because 23 reports listed at least two pesticides, and five reports listed at least three pesticides.

Month of Exposure for 2005 Reports

During 2005, the largest number of pesticide poisoning reports (106) was received in November, followed by June (59), December (58), July (48), September (44), and October (43). The smallest number of reports was received in January (4), February (7), and March (9). On average, there were 37 pesticide poisonings reported to IDPH each month. Figure 1 shows the number of reports by month. The number of reports for November and December of 2005 increased substantially compared to 2004 (4 and 6, respectively) because the Iowa State Poison Control Center started to report to IDPH via an electronic extract of the Toxicall database.

Figure 1 – 2005 Pesticide Poisonings by Month Reported



Gender/Age Comparisons for 2005 Reports

The gender classification of 2005 pesticide poisonings included 244 males (55.1 percent) and 199 females (44.9 percent). The number of reports for males compared to females was significantly different for individuals 5 years of age or younger (101 males compared to 62 females), but were not significantly different for the other two age categories. Of the 443 reports received in 2005, 219 (49.4 percent) were for individuals 20 years of age or older. An additional 163 (36.8 percent) were for individuals 5 years of age or younger, and 61 (13.8 percent) were for individuals 6 to 19 years of age. Table 5 below details the gender and range of age groups for pesticide poisonings reported in 2005.

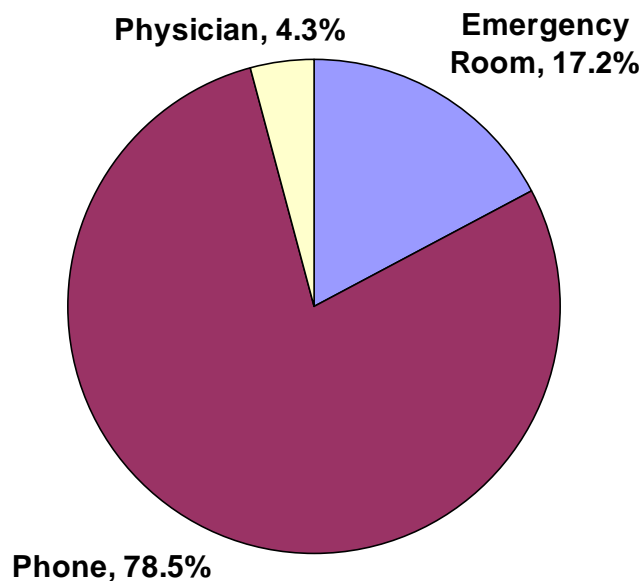
Table 5 -- Gender/Age Comparisons of 2005 Pesticide Poisonings

Age	Sex		Total
	Female	Male	
<5 years	62	101	163
6-19 years	34	27	61
≥20 years	103	116	219
Total 2005	199	244	443

Source of Health Care for 2005 Pesticide Poisonings

Phone consultations were the source of health care for 348 (78.5 percent) of the pesticide poisoning reports. Emergency rooms were the source of health care for 76 (17.2 percent) of the reports, and physicians were the source of care for 91 (4.3 percent) of the reports. Figure 2 shows the type of health care sought for pesticide exposures in 2005.

Figure 2 – Source of Health Care for 2005 Reports



Type of Exposure for 2005 Reports

Ocular exposures accounted for 151 pesticide poisoning reports (27.9 percent) received by IDPH. The next most common type of exposure was dermal at 140 reports (25.8 percent). Inhalation exposures accounted for 129 (23.8 percent) of the reports, and ingestion accounted for 122 (22.5 percent) of the reports. The sum of the types of exposure is greater than the number of reports because many reports listed more than one mode of exposure. Table 6 lists the types of pesticide exposure in further detail.

Table 6 -- Type of Pesticide Exposure for 2005 Reports

Type of Exposure	Number	Percentage
Dermal	140	25.8%
Ingestion	122	22.5%
Inhalation	129	23.8%
Ocular	151	27.9%
Total	542*	100.0%

*Adds up to more than 443 because many reports contained more than one source of exposure.

Signs and/or Symptoms of Pesticide Poisoning for 2005 Reports

The most common sign and/or symptom reported in 2005 was eye irritation with 148 reports (26.5 percent). The next most common signs and/or symptoms were skin irritation with 102 reports (18.3 percent), respiratory with 68 reports (12.2 percent), and gastrointestinal with 45 reports (8.1 percent). In 108 reports (19.3 percent), the callers to the Iowa State Poison Control Center reported exposure to one or more pesticides, but did not have any signs or symptoms. Table 7 shows the signs and/or symptoms reported in 2005.

Table 7 -- Signs and/or Symptoms in 2005 Reports of Pesticide Poisoning

Sign and/or Symptom	Number	Percentage
Chest pain	15	2.7%
Central nervous system	29	5.2%
Eye irritation	148	26.5%
Gastrointestinal (nausea, vomiting)	45	8.1%
Headache	14	2.5%
None	108	19.3%
Oral irritation	29	5.2%
Respiratory (coughing, wheezing, shortness of breath)	68	12.2%
Skin irritation	102	18.3%
Total 2005	302*	100.0%

*The total number is more than 443 because many reports listed more than one sign and/or symptom.

Site of Pesticide Poisoning for 2005 Reports

The home or the immediate surrounding area of the residence (house, lawn, garage, and garden) was the site of pesticide poisoning for 376 (87.9 percent) of the reports in 2005. A farm workplace was the site for 15 (2.4 percent) of the reports in 2005, while other workplaces accounted for 35 (8.1 percent) of reports in 2005 and 17 (1.6 percent) of the pesticide poisonings occurred in other locations.

Figure 8 -- Location of Exposure in 2005 Reports

Location	Number	Percentage
Farm	15	2.4%
Home	376	87.9%
Workplace	35	8.1%
Other	17	1.6%
Total 2005	443	100.0%

County Reported for 2005 Reports of Pesticide Poisoning

The 443 reports of pesticide poisoning for 2005 occurred in 86 counties. Polk County, a densely populated county, reported 52 pesticide poisonings. Linn County reported 32 cases, Black Hawk County reported 29 cases, and Scott County reported 28 cases, Woodbury County reported 18 cases, Johnson County reported 17 cases, Dubuque County reported 14 cases, and Story County reported 11 cases. The county was unknown for four of the reports. The map on the next page shows 2005 reports of pesticide poisoning by county.

Conclusions and Recommendations

During 2005, IDPH received 443 reports of pesticide poisoning. Of the 443 reports received by IDPH, 231 (52.1 percent) were classified as “possible” pesticide exposures. “Probable” cases accounted for 59 (13.3 percent) of the reports. Only 13 (3 percent) of the reports were classified as “definite” cases. Most of the “possible” cases would probably have been classified as “probable” or “definite” if the person who was exposed had seen a health care provider to verify the signs and symptoms of pesticide exposure in addition to calling the Iowa Statewide Poison Center for information.

Insecticides accounted for 42.9 percent of the pesticide poisoning reports in 2005. Home and garden insect control products, insect repellants, bleach, flea and tick control products, D-Con, Round-up, 2,4-D, Lysol, and Tempo were the products most often named in the reports. Pesticide poisonings were more likely to occur in the home or in the immediate areas surrounding the residence (ex: lawn, garden, garage) than in other areas. Most people (78.5 percent) contacted the Iowa Statewide Poison Center by telephone and did not seek medical attention after a pesticide exposure.

Overall, the number of reports was greater for males than for females (244 reports compared to 199 reports). Of the 443 reports received in 2005, 219 (49.4 percent) were for individuals 20 years of age or older. An additional 163 (36.8 percent) were for individuals 5 years of age or younger, and 61 (13.8 percent) were for individuals 6 to 19 years of age.

Ocular exposures accounted for 151 reports (27.9 percent) received by IDPH. The next most common type of exposure was dermal at 140 reports (25.86 percent). Inhalation exposures accounted for 129 (23.8 percent) of the reports, and ingestion accounted for 122 (22.5 percent) of the reports. The most common sign and/or symptom reported in 2005 was eye irritation with 148 reports (26.5 percent). The next most common signs and/or symptoms were skin irritation with 102 reports (18.2 percent), respiratory with 68 reports (12.2 percent), and gastrointestinal with 45 reports (8.1 percent). In 108 of the reports, the callers to the Iowa Statewide Poison Center reported a pesticide exposure, but did not have any symptoms because of the exposure.

In the future, more must be done to protect the public from pesticide exposures. First, since 87.9 percent of the pesticide poisonings reported in 2005 occurred in or around the home, IDPH must educate the public about the proper usage of pesticides. Second, IDPH is now receiving reports on a weekly basis from the Iowa Statewide Poison Center immediately, and most of the reports contain the EPA registration number or enough information to obtain the EPA registration number so that IDPH and IDALS can immediately take necessary follow-up actions. Finally, IDPH is emphasizing reporting by health care professionals. A new poster that has been distributed statewide lists the requirements for environmental disease reporting. In addition, physicians are encouraged to contact the Iowa Statewide Poison Center whenever they have a case of pesticide exposure or pesticide poisoning since IDPH automatically receives reports from the Iowa Statewide Poison Center.