California Environmental Protection Agency

Department of Pesticide Regulation

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ANNUAL PESTICIDE ILLNESS REPORT RELEASED

SACRAMENTO --There were 1,987 reported cases of illness in 1990 with a potential or confirmed link to pesticide use, according to a report released this week by Cal/EPA's Department of Pesticide Regulation.

Although pesticide use is most often associated with agriculture, more than two-thirds of the cases involved non-agricultural uses of pesticides. Typically, these cases involved exposure to disinfectants used by employees of restaurants, janitorial companies, municipal water treatment plants, swimming pools, and hospitals.

Of the 1,987 illness cases with a potential or confirmed link to pesticide use, 1,372 involved non-agriculture use of pesticides and 615 occurred in agriculture. In the agricultural workplace, reported cases among agricultural field workers remained lower than levels seen in earlier years, a downward trend first seen in 1989.

"From 1982 through 1988, there were an average of 349 cases per year associated with exposures to field residues," said James W. Wells, DPR director. "In 1989, there were only 162 such cases, and in 1990, there were 165 cases.

"Preliminary data shows cases among field workers in 1991 continues to remain lower than the average seen in the 1980's," Wells added. "While it is too early to draw firm conclusions, we are certainly pleased that our efforts to protect workers from overexposure to field residues seem to be working."

Wells said that in 1988 and 1989, DPR increased the re-entry interval for several pesticides that had been involved in earlier illness episodes involving large groups of field workers. This lengthened the interval between pesticide application and when workers could re-enter a field. In addition, the insecticide phosalone was taken off the market after a DPR investigation implicated it in a series of illnesses.

"We are continuing to work to reduce the number of farm worker illnesses," Wells said. "At the same time, we want to make sure that pesticide users in other occupations are aware of the hazards involved in being careless in handling disinfectants and other antimicrobials."

Although the word "pesticide" is usually associated with products used to control insects and weeds, disinfectants such as sodium hypochlorite (chlorine bleach) are also pesticides, because they kill germs and other pests.

In 1990, of the total illness cases with a possible or confirmed relationship to pesticide exposure, 43 percent (847 cases) were caused by exposure to disinfectants and other antimicrobials. Typically, these injuries involved splashes into eyes, or inhalation of vapors.

"People often take sanitizers and disinfectants for granted, forgetting that any substance can be dangerous if it is improperly used," said Wells. "It's important to carefully read and follow label instructions. Pesticide-related illnesses in the non-agricultural workplace often occur when people ignore warnings on the label intended to protect pesticide users."

The 1990 data was released in DPR's annual summary of investigations of illness and injury reports submitted by physicians, who are required to report cases they believe may be related to pesticide use. The 1990 report was released at this time because of delays caused in part by the extensive investigation and analysis required of all reported cases. Every pesticide-related illness or injury reported to the state is investigated by the agricultural commissioner in the county where the illness occurred. Under state law, agricultural commissioners are county enforcement agents for pesticide laws and regulations. The investigative files for the illnesses are then analyzed by DPR specialists to determine whether the illness was related to pesticide exposure.

There were 2,995 illness reports received in 1990. After investigation, 1,987 were classified either possibly, probably or definitely related to pesticide exposure. Most cases reported were in the workplace.

Investigations of 11 deaths in 1990 revealed four definitely related to pesticide exposure, including a suicide and a man who died after ignoring warning signs and seeking shelter under the tarpaulin of a fumigated residence. Another person suffered chlorine lung damage that contributed to his death, although it was not the direct cause. One agricultural applicator died of parathion ingestion.

A crash that killed a crop dusting pilot was considered possibly related to pesticide exposure because the pilot made a wrong turn, and the chemicals being applied may have affected his judgment. The other six deaths investigated were found not to have been caused by pesticides.

The report notes that illnesses that occur outside the working environment are probably under-reported. This is because the system relies heavily on reports from physicians, which are usually made when a worker is treated under workers' compensation. However, Wells said, "because we get a cross-section of illnesses that occur, it's extremely unlikely that any particular type of problem would be missed."

DPR uses the information gathered in the illness investigations to determine if changes need to be made in worker protections, label directions or work practices to avoid unnecessary exposure to pesticides.

A free copy of the report is available from the Department of Pesticide Regulation, Worker Health and Safety Branch, 1220 N Street, Suite 620, Sacramento, CA 95814, (916) 654-0455.

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Note: Attached are summaries of all illnesses by county, and of agricultural illnesses by type of work task.

1990 Case Reports of Illness and Injury Attributed to Pesticide Exposure By County

(includes both occupational and non-occupational cases)

	Agricultural[1]					Non-Agricultural					Total Ag & Non-Ag
	Systemic		Topical		Total Ag	Systemic		Topical		Total Non-Ag	
	Def/ Prob[2]	Pos[3]	Def/ Prob	Pos		Def/ Prob	Pos	Def/ Prob	Pos		
Alameda	0	1	1	0	2	13	6	25	0	44	46
Alpine	0	0	0	0	0	0	0	0	0	0	0
Amador	0	0	0	0	0	0	0	0	0	0	0
Butte	1	4	0	1	6	3	1	9	1	14	20
Calaveras	0	0	0	0	0	2	0	2	0	4	4
Colusa	0	1	1	2	4	0	0	0	0	0	4
Contra Costa	1	1	0	1	3	5	3	9	4	21	24
Del Norte	0	1	0	0	1	1	0	4	0	5	6
El Dorado	0	0	0	0	0	0	0	2	1	3	3
Fresno	20	16	17	31	84	70	27	19	6	122	206
Glenn	0	1	0	1	2	1	0	2	0	3	5
Humboldt	0	0	2	0	2	1	1	4	1	7	9
Imperial	0	1	1	3	5	0	0	2	0	2	7
Inyo	0	0	0	0	0	0	0	0	0	0	0
Kern	15	19	21	61	116	2	4	12	0	18	134
Kings	2	8	10	4	24	2	0	4	0	6	30
Lake	0	0	0	0	0	0	0	1	1	2	2
Lassen	0	0	0	0	0	1	0	0	0	1	1
Los Angeles	1	2	1	1	5	59	48	109	16	232	237
Madera	16	4	5	3	28	0	2	3	1	6	34
Marin	0	0	0	0	0	2	0	5	1	8	8
Mariposa	0	0	1	0	1	8	7	0	0	15	16
Mendocino	0	1	1	0	2	2	0	8	0	10	12

	Agricultural[1]					Non-Agricultural					Total Ag & Non -Ag
	Systemic		Topical		Total Ag	Systemic		Topical		Total Non-Ag	
	Def/ Prob[2]	Pos[3]	Def/ Prob	Pos		Def/ Prob	Pos	Def/ Prob	Pos		
Merced	5	4	5	1	15	17	1	3	1	22	37
Modoc	3	0	0	1	4	0	0	0	0	0	4
Mono	0	0	0	0	0	0	0	1	0	1	1
Monterey	18	8	12	8	46	18	2	6	2	28	74
Napa	0	0	4	1	5	5	2	10	0	17	22
Nevada	0	0	0	0	0	1	0	3	1	5	5
Orange	1	1	3	3	8	24	13	41	4	82	90
Placer	0	0	0	1	1	2	0	3	0	5	6
Plumas	0	0	0	0	0	1	2	0	0	3	3
Riverside	6	5	8	7	26	13	1	19	3	36	62
Sacramento	0	2	2	1	5	18	5	30	3	56	61
San Benito	0	0	0	1	1	0	0	3	0	3	4
San Bernardino	1	0	2	1	4	13	4	17	2	36	40
San Diego	0	5	7	4	16	20	18	35	8	81	97
San Francisco	0	0	0	0	0	7	2	7	1	17	17
San Joaquin	3	7	6	5	21	14	49	19	1	83	104
San Luis Obispo	2	2	1	1	6	10	20	10	1	41	47
San Mateo	1	0	0	3	4	5	7	4	1	17	21
Santa Barbara	3	11	2	1	17	2	8	6	2	18	35
Santa Clara	1	2	1	1	5	39	22	36	5	102	107
Santa Cruz	4	7	8	4	23	3	4	8	2	17	40
Shasta	0	0	0	0	0	4	0	2	1	7	7

	Agricultural[1]					Non-Agricultural					Total Ag & Non-Ag
	Systemic		Topical		Total Ag	Systemic		Topical		Total Non-Ag	
	Def/ Prob[2]	Pos[3]	Def/ Prob	Pos		Def/ Prob	Pos	Def/ Prob	Pos		
Sierra	0	0	0	0	0	0	0	0	0	0	0
Siskiyou	4	0	1	0	5	2	0	0	0	2	7
Solano	1	0	2	1	4	7	3	7	1	18	22
Sonoma	0	0	1	3	4	3	10	12	0	25	29
Stanislaus	1	12	7	3	23	15	3	12	3	33	56
Sutter	0	1	2	1	4	0	1	0	1	2	6
Tehama	0	0	1	1	2	0	0	1	0	1	3
Trinity	0	0	0	0	0	0	0	0	0	0	0
Tulare	4	16	6	21	47	7	8	6	4	25	72
Tuolumne	0	0	0	0	0	0	0	3	0	3	3
Ventura	2	3	4	18	27	33	5	9	1	48	75
Yolo	0	2	2	1	5	3	4	5	1	13	18
Yuba	0	0	0	2	2	1	1	0	0	2	4
TOTAL	**116**	**148**	**148**	**203**	**615**	**459**	**294**	**538**	**81**	**1372**	**1987**

Source: Department of Pesticide Regulation, 1993

[1] Cases classified as agricultural are those in which people were exposed to pesticides that had been or were being used to contribute to the production of an agricultural commodity.

[2] “Def/prob” indicates that after evaluation, cases were classified as definitely or probably related to pesticide exposure.

[3] “Pos” indicates that after evaluation, cases were classified as possibly related to pesticide exposure.

Illness and Injuries Reported by Physicians in California Associated with Agricultural[1] Use of Pesticides — 1990 —

Activity	SYSTEMIC ILLNESS		TOPICAL INJURY		Overall Total
	Def/ Prob[2]	Pos[3]	Def/ Prob	Pos	
Mixer/loader	10	12	23	7	52
Applicator	25	46	73	45	189
Field worker	3	32	11	117	163
All other ag workers	65	53	40	34	192
Ag non-occupational[4]	13	5	1	0	19
Total:	**116**	**148**	**148**	**203**	**615**

Source: Department of Pesticide Regulation, 1993

[1] Cases classified as agricultural are those in which people were exposed to pesticides that had been or were being used to contribute to the production of an agricultural commodity.

[2] "Def/Prob" indicates that cases were evaluated as definitely or probably related to pesticide exposure.

[3] "Pos" indicates that cases were evaluated as possibly related to pesticide exposure; that is, exposure occurred, and there was no evidence that the subsequent dysfunction was *not* caused by the pesticide.

[4] Non-occupational exposures are all those that occur while the exposed person is not working. Almost all of the agricultural non-occupational exposures were people who were drifted upon.