

# Occupational Disease in California Attributed to Pesticides and Other Agricultural Chemicals — 1966





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1966



STATE OF CALIFORNIA  
DEPARTMENT OF PUBLIC HEALTH  
BUREAU OF OCCUPATIONAL HEALTH

## SOURCE OF DATA

When an injured employee requires medical attention other than ordinary first aid treatment, the attending physician must file a report, the *Doctor's First Report of Work Injury*, with the Division of Labor Statistics and Research in the California Department of Industrial Relations (*State of California Labor Code*, 1965, Section 6407). The employer also files a report, the *Employer's Report of Industrial Injury*. By definition, work injury includes occupational disease.

Under interagency agreement, doctors' reports of occupational disease for a selected list of disease conditions are routed by the Division of Labor Statistics and Research for review by the Bureau of Occupational Health of the California Department of Public Health.

## COVERAGE

This report deals with occupational disease attributed to pesticides and other agricultural chemicals as reported for the 80 percent of the 7.2 million employed persons in California covered under the California Workmen's Compensation law in 1966. Among those excluded are federal employees, maritime workers, railroad workers in interstate commerce and the self-employed.

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## SUMMARY

The 1,347 reports of occupational disease attributed to pesticides and other agricultural chemicals received in 1966 compares with 1,340 in 1965 and 1,328 in 1964.

Occupational diseases are not included from among self-employed farmers and unpaid family labor, 28 percent of the agricultural work force, and from self-employed one-man operations in structural and agricultural pest control work. Data in this review, therefore, undoubtedly understate the incidence of occupational disease attributed to pesticides and other agricultural chemicals.

The rate of occupational disease from agricultural chemicals in agricultural services (6.6 reports per 1,000 workers) was nearly twice that for workers in all agriculture (3.5 reports per 1,000 agricultural workers).

Since 1951, there have been 32 occupational fatalities implicating agricultural chemicals. In this same period, 82 children and 22 other adults died in California from accidents attributed to pesticides and other agricultural chemicals, a total of 136 accidental deaths.

Organic phosphate pesticides were implicated in 19 percent of the 1,347 reports in this series; followed by herbicides, 11 percent; fertilizers, 10 percent; halogenated hydrocarbon pesticides, 7 percent; and phenolic compounds, 7 percent.

There were 233 reports of systemic poisonings in 1966. The organic phosphate pesticides were blamed in 173 of these.

Forty percent of workers with occupational disease attributed to agricultural chemicals were expected to lose some time from work. Ten percent of such workers were hospitalized.

Farm laborers accounted for more than half (704) of the 1,347 reports of occupational disease attributed to agricultural chemicals; nonfarm laborers, 15 percent; and operatives, including truck and tractor drivers, 14 percent.

Eighty percent of pest control chemicals moved beyond local areas are moved by truck. Chemicals are usually transported in concentrated form, creating potential health hazards in transportation and storage of pesticides in the event of mishap.

## BACKGROUND

Occupational disease caused by agricultural chemicals continues to be one of the most important occupational health problems in the State. Diseases caused by these chemicals include a high proportion of serious acute illness. In 1966, 42 percent of the 557 reports of all occupational poisonings were attributed to agricultural chemicals, although only 5 percent of the 27,626 reports of all occupational diseases received were attributed to these chemicals. Further, these cases are concentrated in the agriculture industry which has the highest rate of occupational disease in California: 11.9 reports per 1,000 agricultural workers in 1966, or more than two and a half times that for all industrial divisions (4.5 per 1,000 workers for all industry).

The acute effects of pesticides and other agricultural chemicals on workers in California, as recognized and reported by physicians, have been summarized by the Bureau of Occupational Health of the California Department of Public Health since 1950. While limited to the segment of the population covered by the California Workmen's Compensation law, these data are the only regularly available information in the United States on acute conditions caused by agricultural chemicals. As such, they have been of continuing interest to persons concerned with the effects of agricultural chemicals on the health of people. Although the use of pesticides and other agricultural chemicals is widespread in home and garden, the effects of this contact on the health of the general population are not completely known.

Comments in earlier reports of the Bureau of Occupational Health pointed to needed improvements for the protection of workers using agricultural chemicals. These comments still apply, as demonstrated by a review of the 1966 doctors' reports. Among the needed protective measures are: provision of washing facilities for farm workers in the fields; adequate supervision of agricultural chemical users; improvement in the engineering of crop-dusting aircraft and related equipment; and standardization of labeling on pesticide containers. As recently as the summer of 1967, an outbreak of pesticide poisoning in the San Joaquin Valley was reported to have sickened about 25 peach pickers. Yet similar outbreaks among fruit pickers had occurred there in 1959 and 1963.

## DEFINITIONS

The terms pesticides and other agricultural chemicals as used in this review include such materials as insecticides, herbicides, rodenticides, fungicides, defoliant, fertilizers, hormones, soil additives, and wood preservatives, which



are commonly used to promote growth or to destroy plant or animal life. Occupational disease arising from exposure to these materials occurs in agricultural pursuits and such nonagricultural activities as structural pest control, wood treatment, manufacture, transportation and distribution of the chemicals. Data concerning occupational disease are, therefore, included for both the agricultural and nonagricultural industries.

For classification of occupational disease conditions reported by physicians, the term systemic poisoning refers to generalized illness caused by a toxic substance in which signs and symptoms are present in more than one system of the body. Reported cases are classified to respiratory condition if signs and symptoms are limited to the respiratory tract. Skin condition refers to a morbid reaction of the skin; burns and abrasions are excluded from this category. Eye condition refers to any condition of the eye caused by a chemical substance, and chemical burn is the corrosive destruction of tissue caused by contact with a chemical. Generalized allergic manifestations or signs and symptoms limited to any other single system of the body are assigned to the category other and unspecified. Beginning in 1964, eye conditions and chemical burns were included in the review for the first time in many years.

## INCIDENCE

The 1,347 doctors' reports of occupational disease attributed to pesticides and other agricultural chemicals received in 1966 compares with 1,340 reports in 1965 and 1,328 in 1964. Although still high, the number of reports appears to be leveling off beginning in 1960. This trend was interrupted by an increase in 1963 when an outbreak of parathion poisoning occurred among peach pickers in the San Joaquin Valley. Similar outbreaks among citrus fruit pickers took place in 1959 (Table 1).

Reports of occupational disease are received only for wage and salary workers covered under the California Workmen's Compensation law. Thus, such diseases among self-employed farmers and unpaid family labor, 28 percent of the agricultural work force, are not included. There are also many self-employed one-man operations in structural and agricultural pest control work, at high risk from pesticides, for whom occupational disease reports are also not received. Data in this review, therefore, undoubtedly understate the incidence of occupational disease attributed to pesticides and other agricultural chemicals.

Rates of occupational disease reports attributed to agricultural chemicals have been computed for selected industries by relating the number of occupational disease reports for a given industrial category to the estimated annual average wage and salary employment for the same group. Occupational disease rates

are based on all occupational disease reports, both lost time and nonlost time. They are not comparable with work injury rates prepared by the Division of Labor Statistics and Research of the California Department of Industrial Relations for lost time work injury only.

REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO  
AGRICULTURAL CHEMICALS PER 1,000 WORKERS  
CALIFORNIA, 1966

WORKERS	REPORTS PER 1,000 WORKERS
Agriculture	3.5
Farm Laborers (Including Foremen)	3.3
Agricultural Services	6.6
Structural Pest Control Operators	10.6
Mosquito Abatement Districts	a

<sup>a</sup> Employment and number of reports are too few to compute a meaningful rate.

Source: Reference Tables 7 and 8.  
Employment estimates from following State of California agencies: Department of Employment; Division of Labor Statistics and Research; Department of Public Health, Bureau of Vector Control.

Workers in agricultural services had a rate nearly twice that for workers in all agriculture. The 6.6 reports per 1,000 workers in 1966 was an increase of 8 percent over 1965 (6.1). The rate for structural pest control continued at a high level, 9.4 reports per 1,000 workers in 1965 and 10.6 in 1966.

Employees of mosquito abatement districts handle large quantities of agricultural chemicals and risk high exposure as a result. Seven reports were received for this group in 1966, 4 in 1965, and 8 in 1964, but the estimated number of workers employed was also small, an average of 600 in each year.<sup>1</sup>

These rates give some indication of relative risk, subject to the limitation that the number of workers actually exposed to agricultural chemicals is unknown, and may be considerably fewer than the estimate on which the rate is based. For example, most reports for workers in agricultural services came from pest control operators servicing farms. If the number of workers employed by these operators were known, the rate for pest control work, apart from other agricultural services, would be considerably higher.

<sup>1</sup> State of California, Department of Public Health, Bureau of Vector Control, Private communication.



## FATALITIES

Since 1951, there have been 32 occupational fatalities implicating agricultural chemicals. Thirteen of these were attributed to organic phosphate pesticides, 7 to methyl bromide, and 12 to such diverse agricultural chemicals as chlorate metabolite, anhydrous ammonia, sodium arsenate, pentachlorophenol, carbon tetrachloride, nicotine sulfate and paraquat (Table 2). In this same period, 82 children and 22 other adults died in California from accidents attributed to pesticides and other agricultural chemicals, making a total of 136 accidental deaths.

In 1966, there were 8 accidental deaths, including those of 3 workers, and 18 suicides in which it was officially determined that an agricultural chemical was the agent (Table 3). A description of two occupational fatalities from poisoning follows:

One fatality involved parathion. After spraying peach trees with parathion all the preceding day and for three and a half hours that day, a young farm laborer of 28 became acutely ill at noon. This was reportedly the first time he had worked with parathion, although he had been employed as sprayer for 3 years. There was conflicting information about protective measures used. He wore an approved respirator. Sixty milligrams of parathion were extracted from one of his gloves and 2 milligrams from a patch on his trousers. Seven days after the exposure he died of complicating bronchopneumonia brought on by his severe parathion poisoning, confirmed by cholinesterase tests. Parathion, like other phosphate ester pesticides, is readily absorbed through the unbroken skin as well as by inhalation or ingestion of contaminated materials.

Another farm worker who died was spraying the herbicide, paraquat. He carried two identical containers on the tractor, one containing the herbicide, the other his drinking water. He took a drink from the wrong container.

Warnings have been issued by the Bureau of Occupational Health that pesticides should be kept in their original labeled containers and "empty" containers should never be discarded where others can use them or children could reach them. They should be decontaminated, buried at an authorized dump, or burned. Recently, in 1967, reports have been received of a California farm worker who died after drinking parathion which had been placed in a plastic Clorox-type container, thinking it was water, and of four men who died because they drank from a wine bottle in which an arsenical herbicide had been mixed.

## SUMMARY OF 1966 DATA

### GEOGRAPHIC DISTRIBUTION

Reports came from 50 of California's 58 counties. As in past years, many of the reports (38 percent) were from the San Joaquin Valley.

### CHEMICAL AND CLINICAL TYPE OF DISEASE

Organic phosphate pesticides were implicated in 19 percent of the 1,347 reports of occupational disease attributed to agricultural chemicals; followed by herbicides, 11 percent; fertilizers, 10 percent; halogenated hydrocarbon pesticides, 7 percent; and phenolic compounds, 7 percent. Other specified chemicals accounted for 14 percent of the total, and in 33 percent of the reports the chemical was not identified.

As in other years, skin conditions, eye conditions, systemic poisonings and chemical burns, in that order, were the most commonly reported of the occupational diseases in this series.

There were 233 reports of systemic poisonings in 1966, nearly one and a third times as many as in 1965 (179). The organic phosphate pesticides were blamed in 74 percent of these, although they accounted for but 19 percent of all occupational diseases from agricultural chemicals. Parathion, as usual, was the most frequently identified chemical, with 102 reports, followed by Phosdrin, malathion and Systox.

The halogenated hydrocarbon pesticides are the most widely used, and these chemicals accounted for 94 reports. With the exception of methyl bromide, carbon tetrachloride and endrin, pesticides in this group generally cause less acute illness among people than the organic phosphates. There were 40 reports attributed to the DDT, chlordane, lindane group, and 30 to methyl bromide. No reports involving carbon tetrachloride used as an agricultural chemical were received in 1966; there was 1 report in 1965; 2 in 1964.

The fungicide, sulfur, was named as agent in 75 occupational disease reports. Of these, 33 were skin conditions and a like number eye conditions; 5 were chemical burns. Although these three classes of occupational disease do not usually cause a loss of time from work, 45 percent of the workers with conditions attributed to sulfur were expected to lose some time from work. (Sulfur was grouped with other specified agricultural chemicals in previous reports.)



## TIME LOST FROM WORK AND HOSPITALIZATION

The severity of illness caused by agricultural chemicals is indicated by the greater frequency with which workers were expected to lose time from work with such illness, as well as by the greater frequency with which they were hospitalized, compared with occupational illness from all causes. As used in this review, the term *hospitalization* excludes treatment solely in the hospital emergency room or outpatient department.

Forty percent of workers with occupational disease attributed to agricultural chemicals were expected to lose some time from work, nearly twice the proportion as for all agents. Ten percent of such workers were hospitalized, almost three times the proportion of those hospitalized for illness from all causal agents.

For illness attributed to organic phosphate pesticides, physicians advised their patients to take time off from work even more frequently than for all agricultural chemicals, and found it necessary to hospitalize more than 1 in 4 of these patients. Most such workers were expected to be back on the job within a week. Organic phosphate pesticides can cause serious illness; however, within 48 hours the patient is usually dead or well on the way to recovery. Although recovered and able to work, the worker should not have to handle or be exposed to phosphate esters until his cholinesterase level returns to normal.

ESTIMATED TIME LOST FROM WORK AND HOSPITALIZATION	TOTAL OCCUPATIONAL DISEASE	OCCUPATIONAL DISEASE ATTRIBUTED TO AGRICULTURAL CHEMICALS			
		Total	Organic Phosphate Pesticides	Methyl Bromide	Sulfur
Total	100.0 (27,626)	100.0 (1,347)	100.0 (253)	100.0 (30)	100.0 (75)
Estimated Time Lost From Work					
Time lost from work	22.8	40.1	58.5	50.0	45.3
No time lost from work	62.8	45.8	25.3	33.3	37.3
Not stated	14.4	14.1	16.2	16.7	17.4
Hospitalization					
Hospitalized	3.5	10.0	28.1	40.0	2.7
Not hospitalized	96.3	89.8	71.5	60.0	97.3
Not stated	0.2	0.2	0.4	-	-

Source: Reference Table 9.  
State of California, Division of Labor Statistics and Research,  
*Doctor's First Report of Work Injury.*

As indicated in the text table, other agricultural chemicals such as methyl bromide and sulfur also had a disproportionately high percentage of disease conditions resulting in hospitalization or other work disability.

## AGE AND SEX

Women accounted for less than 10 percent (121) of the 1,347 reports, about the same as in the past. Median age of all workers with reported occupational disease was 35.5 years.

## INDUSTRIES INVOLVED

Occupational disease among workers in the agriculture industry accounted for 820 of the 1,347 reports (61 percent). Agriculture includes not only livestock and crop farming, but also such services to farms as cotton ginning, spraying and other horticultural and husbandry services. Spraying and pest control not connected with agricultural services are listed separately. Most reports concerned workers on farms, but 137 were employed in agricultural service industries, mainly pest control operators servicing farms.

Data in this review undoubtedly understate the incidence of occupational disease from pesticides and other agricultural chemicals in agriculture. The experience of the 90,000 self-employed farmers and unpaid family labor, 28 percent of those working in agriculture,<sup>1</sup> who also use agricultural chemicals, is not included and is unknown.

There were 222 agricultural aircraft operators licensed in California to use aircraft in pest control work in 1966.<sup>2</sup> Employees of 47 operators accounted for 74 reports of occupational disease attributed to agricultural chemicals, about one and a half times as many as were received in 1964 and 1965. The increase was in reports of systemic poisonings, nearly all of which identified organic phosphate pesticides as responsible. Swampers, flagmen, mixers and other laborers were the most frequently affected. Ten were pilots. Of the 74 ill workers, 31 were under the age of 20; 2 were reportedly 15 years old.

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<sup>1</sup> Estimated total of 323,600 persons working on farms and in agricultural services. Source: State of California, Department of Employment, *California Annual Farm Labor Report, 1966*, and Division of Labor Statistics and Research, Private communication.

<sup>2</sup> State of California, Department of Agriculture, *Agricultural Pest Control Operators, 1966* (Announcement Numbers PC-187, PC-192, and Announcement September 7, 1966).



REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO AGRICULTURAL CHEMICALS  
 BY CLINICAL TYPE OF DISEASE, AGRICULTURAL AIRCRAFT OPERATORS  
 CALIFORNIA, 1960-1966

YEAR	TOTAL	EYE CONDITION	CHEMICAL BURN	SYSTEMIC POISONING		OTHER CONDITION
				Total	Attributed to Organic Phosphates	
1960	101	a	a	78	na	23
1961	55	a	a	40	na	15
1962	32	a	a	23	20	9
1963	36	a	a	28	22	8
1964	50	10	2	25	20	13
1965	48	8	1	26	23	13
1966	74	10	2	49	46	13

na Not available.

a Categories not included in total statistics for this year.

Source: State of California, Division of Labor Statistics and  
 Research, *Doctor's First Report of Work Injury*.

Nonagricultural industries contributing large numbers of reports were manufacturing, 15 percent; State and local government, 6 percent; and trade and construction, each with 4 percent of the total. Most of the 204 reports from manufacturing industries came from chemical companies, generally, those specializing in agricultural chemicals, from food processors and from lumber and wood products companies. School districts accounted for 25 of the 86 reports from government; the reports concerned mainly gardeners and maintenance men.

Structural pest control work, a high risk category, has many self-employed one-man operations whose occupational diseases are not covered by the California Workmen's Compensation law. There were over 1,000 licensed structural pest control operators in 1966<sup>1</sup> employing an average of 3,091 workers.<sup>2</sup> These employees accounted for 33 cases of occupational illness attributed to pesticides and other agricultural chemicals. Skin and eye conditions predominated, and 8 of the 33 reports implicated halogenated hydrocarbon pesticides.

<sup>1</sup> State of California, Structural Pest Control Board, Private communication. There were 1,061 licensed structural pest control operators for fiscal year 1965-1966, 1,094 for fiscal year 1966-1967.

<sup>2</sup> State of California, Department of Employment, Private communication.

## OCCUPATION

Almost all occupational groups were represented, but farm laborers, as usual, accounted for more than half (704) of the 1,347 reports of illness attributed to pesticides and other agricultural chemicals. Organic phosphate pesticides were blamed in 22 percent of reports concerning farm laborers; herbicides, 11 percent; sulfur, 8 percent; and fertilizers, 7 percent.

More than 40 percent of the 704 farm laborers had a Spanish surname. This proportion continues high even though foreign contract laborers, mainly from Mexico, have been reduced to insignificant numbers in the last two years.<sup>1</sup> Many of these workers are known to have language difficulties. Employers of non-English speaking workers are required to provide work instructions in the language spoken by the employees.<sup>2</sup>

Nonfarm laborers, such as gardeners, warehouse and plant workers, accounted for 199 reports, 15 percent of all cases. The most frequently identified agents for this group were herbicides, phenolic compounds, organic phosphate pesticides and fertilizers.

Operatives, the third largest occupational category, made up 14 percent of the total. Among the 190 reports for operatives, 38 implicated organic phosphate pesticides; 34, fertilizers; and 16, halogenated hydrocarbon pesticides.

Ninety-six of the operatives were classified as truck and tractor drivers. Most drivers (56) worked for farmers and pest control operators. The others were employed in nearly every other industry category; only 9 worked for trucking firms.

## TRANSPORTATION OF PESTICIDES BY TRUCK

According to final figures on the 1963 Census of Transportation, 80 percent of pest control chemicals moved beyond local areas in the United States were moved by truck. However, most shipments were local; only a small proportion of the tonnage (23.6 percent) was shipped over 400 miles.<sup>3</sup>

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<sup>1</sup> State of California, Department of Employment, *California Annual Farm Labor Report, 1966*. Foreign contract laborers--1966, 1,200; 1965, 2,800.

<sup>2</sup> State of California, Department of Industrial Relations, Division of Industrial Safety, *Safety Orders for Agricultural Operations, November 1961*.

<sup>3</sup> U.S. Department of Agriculture, *The Pesticide Review, 1967*, p. 3, Washington, D.C.



Chemicals are usually transported in concentrated form so that even moderately toxic materials may be available in lethal quantities. Recent 1967 fatal poisonings of 17 persons in Mexico and of 63 in Colombia, South America, were caused by food contaminated with parathion during transportation or storage. Also in 1967, a spill of about 1,000 pounds of liquid parathion occurred on a highway in California. These three episodes are all examples of the severe health hazards to the general public, as well as to the truck drivers and warehouse workers handling these materials, in the event of mishap.

The Bureau of Occupational Health is working with other governmental agencies concerned with potential hazards arising in transportation and storage of pesticides to develop procedures for the prevention of dangerous accidents as well as for effective decontamination and treatment when accidents occur.

# Reference Tables



Table 1

REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO  
PESTICIDES AND OTHER AGRICULTURAL CHEMICALS  
CALIFORNIA, 1954-1966

YEAR	ALL INDUSTRIES	AGRICULTURE	OTHER
1954	391	248	143
1955	531	326	205
1956	789	464	325
1957	749	434	315
1958	910	599	311
1959	1,093	782	311
1960	975	668	307
1961	911	578	333
1962	827	545	282
1963	1,013	746	267
1964	1,328 (844 <sup>a</sup> )	821 (539 <sup>a</sup> )	507 (305 <sup>a</sup> )
1965	1,340 (779 <sup>a</sup> )	836 (520 <sup>a</sup> )	504 (259 <sup>a</sup> )
1966	1,347 (869 <sup>a</sup> )	820 (565 <sup>a</sup> )	527 (304 <sup>a</sup> )

<sup>a</sup> Excludes reports of eye conditions and chemical burns attributed to agricultural chemicals.

Note: From 1954-1963 eye conditions and chemical burns were excluded.

Source: State of California, Department of Public Health, Occupational Disease in California Attributed to Pesticides and Other Agricultural Chemicals, Annual Reports.

Table 2

OCCUPATIONAL FATALITIES ATTRIBUTED TO  
PESTICIDES AND OTHER AGRICULTURAL CHEMICALS  
CALIFORNIA, 1951-1966

YEAR	TOTAL	ORGANIC PHOSPHATES	METHYL BROMIDE	OTHER
Total	32	13	7	12
1951	-	-	-	-
1952	1	-	1	-
1953	4	3	-	1
1954	2	1	-	1
1955	1	-	-	1
1956	4	-	2	2
1957	2	1	-	1
1958	3	1	1	1
1959	5	1	2	2
1960	-	-	-	-
1961	3	2	-	1
1962	1	1	-	-
1963	1	1	-	-
1964	1	1	-	-
1965	1	-	1	-
1966	3	1	-	2

Source: State of California, Department of Public Health, Death Records and Occupational Disease in California Attributed to Pesticides and Other Agricultural Chemicals, Annual Reports.

Table 3

FATALITIES IMPLICATING AGRICULTURAL CHEMICALS  
CALIFORNIA, 1966

	TOTAL	ORGANIC PHOSPHATES	ARSENIC	STRYCHNINE	CYANIDE	NICOTINE	PHOSPHORUS	OTHER <sup>1</sup>
Total	26	2	7	8	1	1	3	4
Accidents	8	1	2	1	-	1	1	2
Workers	3	1	-	-	-	1	-	1
Children	5	-	2	1	-	-	1	1
Suicides <sup>2</sup>	18	1	5	7	1	-	2	2

<sup>1</sup> Includes the accidental deaths of 1 worker attributed to paraquat (herbicide) and 1 child to dichloro ethyl ether; 1 suicide to benzene hexachloride and 1 to an unidentified insect spray.

<sup>2</sup> In addition, there were 14 suicides and 1 unclassified death where determination of whether the chemical was intended for agricultural or other use could not be made: 4 due to arsenic, 8 to cyanide and 3 to mercury.

Source: State of California, Department of Public Health, Death Records, and post-mortem reports from several county coroners.



Table 4

REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO PESTICIDES AND OTHER  
AGRICULTURAL CHEMICALS BY INDUSTRY GROUP  
CALIFORNIA HEALTH JURISDICTIONS, 1966

HEALTH JURISDICTION	TOTAL	AGRICULTURE			MANUFACTURING					CONSTRUCTION	UTILITIES <sup>1</sup>	TRANSPORTATION AND COMMUNICATION	TRADE	STRUCTURAL PEST CONTROL	STATE AND LOCAL GOVERNMENT	OTHER AND UNSPECIFIED
		Total	Farms	Pest Control	Other Services	Total	Food and Kindred Products	Agricultural Chemicals	Allied Products							
Total	1,347	820	683	119	18	204	46	103	15	40	52	43	53	33	86	56
Alameda	32	14	14	-	-	5	-	1	1	3	4	2	1	2	3	1
Berkeley	5	-	-	-	-	1	-	-	-	1	1	-	-	1	2	-
County Health Jurisdiction	27	14	14	-	-	4	-	1	1	2	3	2	1	1	1	1
Amador	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Butte	14	8	6	2	-	-	-	-	-	-	2	2	-	1	1	-
Calaveras	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Colusa	6	2	2	-	-	2	2	-	-	-	-	-	-	-	-	2
Contra Costa	33	5	5	-	-	15	1	10	3	1	3	1	2	-	-	7
Del Norte	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
El Dorado	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-
Fresno	117	83	69	13	1	19	6	12	1	-	-	3	6	2	3	1
Glenn	7	3	3	-	-	2	1	1	-	-	-	1	1	-	-	-
Humboldt	6	-	-	-	-	5	-	-	-	5	-	1	-	-	-	-
Imperial	47	34	23	11	-	5	-	5	-	-	-	1	2	-	3	2
Kern	100	79	60	19	-	12	1	11	-	1	3	1	2	2	2	-
Kings	23	19	17	2	-	2	-	2	-	-	-	-	1	-	-	1
Lake	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Los Angeles	113	26	23	1	2	23	2	9	1	11	14	9	7	9	15	10
Long Beach	2	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1
Pasadena	3	-	-	-	-	3	1	2	-	-	1	1	1	1	1	1
Vernon	7	-	-	-	-	3	1	2	-	-	-	1	1	1	1	1
County Health Jurisdiction	101	26	23	1	2	20	1	7	1	11	12	7	6	7	15	8
Madera	26	21	16	5	-	2	1	-	-	1	-	-	2	-	1	-
Marin	2	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-
Mendocino	5	1	1	-	-	1	-	-	-	1	-	-	-	-	2	1
Merced	29	25	20	5	-	1	1	-	-	-	2	-	-	-	1	-
Monterey	60	43	24	18	1	11	-	10	-	1	1	1	1	2	1	-
Napa	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-
Orange	43	21	20	-	1	5	1	1	1	2	3	-	1	-	9	4
Placer	3	2	1	1	-	-	-	-	-	1	-	-	-	-	-	-
Plumas	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-
Riverside	75	39	36	2	1	21	17	1	3	-	1	2	3	4	-	5
Sacramento	21	15	11	2	2	-	-	-	-	-	-	3	-	3	2	1
San Benito	5	4	4	-	-	-	-	-	-	1	-	-	-	-	-	-
San Bernardino	23	12	10	1	1	2	1	-	-	1	2	1	-	2	3	1
San Diego	57	38	35	2	1	3	-	-	-	3	-	1	3	2	7	3
San Francisco	6	3	3	-	-	3	-	-	2	1	-	-	-	-	-	-
San Joaquin	48	18	12	5	1	15	2	13	-	1	4	3	-	5	2	-
San Luis Obispo	4	-	-	-	-	-	-	-	-	1	-	-	-	-	3	-
San Mateo	26	13	10	-	3	3	-	-	1	2	2	-	1	-	3	4
Santa Barbara	25	19	16	2	1	3	-	2	1	-	-	-	-	-	2	1
Santa Clara	46	17	16	-	1	9	3	5	-	1	3	2	6	3	2	4
San Jose	12	2	2	-	-	4	1	3	-	1	-	3	1	1	-	-
County Health Jurisdiction	34	15	14	-	1	5	2	2	-	1	2	2	3	2	1	4
Santa Cruz	14	9	7	2	-	-	-	-	-	1	-	2	-	2	2	-
Shasta	3	-	-	-	-	1	-	-	-	1	1	-	-	-	1	-
Siskiyou	4	-	-	-	-	2	-	1	-	1	1	-	-	-	1	-
Solano	8	5	4	1	-	1	1	-	-	-	-	-	-	-	2	-
Sonoma	5	3	3	-	-	1	-	-	-	1	1	-	-	-	-	-
Stanislaus	38	31	26	5	-	3	-	3	-	-	-	2	-	-	-	2
Sutter	30	23	22	1	-	-	-	-	-	-	-	3	-	1	3	-
Tehama	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Tulare	133	120	109	11	-	4	2	2	-	-	1	-	2	2	3	1
Tuolumne	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Ventura	67	40	34	5	1	17	2	14	1	-	2	2	3	-	2	1
Yolo	16	11	8	2	1	1	1	-	-	-	-	-	1	1	2	-
Yuba	13	10	10	-	-	1	-	-	-	1	-	-	1	-	-	1
Out of State	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Stated	2	1	-	1	-	-	-	-	-	-	-	1	-	-	-	-

<sup>1</sup> Includes publicly owned utilities.

Note: Health jurisdictions are not listed if no reports were received during 1966.

Source: State of California, Division of Labor Statistics and Research, Doctor's First Report of Work Injury. Statistics compiled by State of California, Department of Public Health.

Table 5

REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO PESTICIDES AND OTHER AGRICULTURAL CHEMICALS  
CALIFORNIA HEALTH JURISDICTIONS, 1966

HEALTH JURISDICTION	TOTAL	ORGANIC PHOSPHATES PESTICIDES	HALOGENATED HYDROCARBON PESTICIDES	HERBICIDES	FERTILIZERS	PHENOLIC COMPOUNDS	OTHER SPECIFIED AGRICULTURAL CHEMICALS <sup>1</sup>	NOT STATED
Total	1,347	253	94	145	133	91	193	438
Alameda	32	2	3	1	1	5	4	16
Berkeley	5	1	1	-	1	1	-	1
County Health Jurisdiction	27	1	2	1	-	4	4	15
Amador	1	-	-	-	-	-	-	1
Butte	14	2	1	-	1	3	2	5
Calaveras	1	-	-	-	-	1	-	-
Colusa	6	-	-	1	2	-	1	2
Contra Costa	33	3	2	2	3	8	8	7
Del Norte	1	-	-	1	-	-	-	-
El Dorado	1	-	-	-	-	1	-	-
Fresno	117	18	12	17	17	1	13	39
Glenn	7	-	-	-	1	-	4	2
Humboldt	6	-	-	-	-	5	1	-
Imperial	47	12	1	10	11	-	6	7
Kern	100	25	7	12	11	1	18	26
Kings	23	3	-	2	6	1	2	9
Lake	1	-	-	-	-	-	-	1
Los Angeles	113	9	15	10	4	17	11	47
Long Beach	2	-	-	-	-	-	-	2
Pasadena	3	-	1	-	-	1	-	1
Vernon	7	2	-	-	-	1	1	3
County Health Jurisdiction	101	7	14	10	4	15	10	41
Madera	26	7	-	5	3	1	6	4
Marin	2	-	-	1	-	1	-	-
Mendocino	5	-	-	1	-	1	2	1
Merced	29	8	2	7	1	1	1	9
Monterey	60	23	5	1	6	3	1	21
Napa	1	-	-	-	-	-	-	1
Nevada	1	-	-	-	-	1	-	-
Orange	43	3	2	6	7	2	4	19
Placer	3	-	1	1	-	1	-	-
Plumas	1	-	-	-	-	1	-	-
Riverside	75	9	6	14	7	6	19	14
Sacramento	21	1	3	-	4	1	5	7
San Benito	5	-	-	-	2	1	1	1
San Bernardino	23	1	-	3	-	3	3	13
San Diego	57	4	4	7	-	5	5	32
San Francisco	6	-	-	-	-	1	1	4
San Joaquin	48	4	5	6	14	2	11	6
San Luis Obispo	4	-	-	1	-	1	-	2
San Mateo	26	-	1	4	1	2	2	16
Santa Barbara	25	9	2	4	1	-	1	8
Santa Clara	46	7	4	1	4	1	11	18
San Jose	12	1	-	-	2	1	3	5
County Health Jurisdiction	34	6	4	1	2	-	8	13
Santa Cruz	14	4	1	-	-	3	2	4
Shasta	3	-	-	-	-	1	1	1
Siskiyou	4	-	1	-	1	2	-	-
Solano	8	2	-	2	1	-	2	1
Sonoma	5	-	-	-	-	1	2	2
Stanislaus	38	10	3	3	4	1	9	8
Sutter	30	6	1	1	2	-	4	16
Tehama	1	1	-	-	-	-	-	-
Tulare	133	56	4	12	5	-	19	37
Tuolumne	1	-	-	-	-	1	-	-
Ventura	67	19	7	6	5	3	5	22
Yolo	16	1	-	2	8	-	2	3
Yuba	13	3	-	1	-	1	4	4
Out of State	2	-	-	-	-	-	-	2
Not Stated	2	1	1	-	-	-	-	-

<sup>1</sup> Includes lead and/or arsenic compounds, organo-mercury compounds, carbamates, sulfur and other fungicides.

Note: Health jurisdictions are not listed if no reports were received during 1966.

Source: State of California, Division of Labor Statistics and Research, Doctor's First Report of Work Injury. Statistics compiled by State of California, Department of Public Health.



Table 6

REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO PESTICIDES AND OTHER  
 AGRICULTURAL CHEMICALS BY CLINICAL TYPE OF DISEASE  
 CALIFORNIA, 1966

AGRICULTURAL CHEMICAL	TOTAL	SYSTEMIC POISONING	RESPIRATORY CONDITION	SKIN CONDITION	CHEMICAL BURN	EYE CONDITION	OTHER AND UNSPECIFIED
Total	1,347	233	70	452	116	362	114
Organic Phosphate Pesticides	253	173	3	26	2	13	36
Parathion	102	76	1	6	1	4	14
Systox	8	5	-	1	-	-	2
TEPP	5	2	-	-	-	3	-
Phosdrin	26	24	-	-	-	-	2
Malathion	21	5	2	7	1	1	5
Trithion	2	2	-	-	-	-	-
Thimet	4	2	-	-	-	1	1
Guthion	6	1	-	2	-	1	2
Bidrin	2	1	-	-	-	1	-
Other and unspecified	77	55	-	10	-	2	10
Halogenated Hydrocarbon Pesticides <sup>1</sup>	94	17	5	27	8	18	19
DDT, chlordane, lindane, kelthane	40	10	3	14	-	9	4
Endrin, aldrin, dieldrin, toxaphene	6	-	1	-	-	3	2
Methyl bromide	30	6	1	5	4	3	11
Other and unspecified	18	1	-	8	4	3	2
Lead and/or Arsenic Compounds	10	3	-	4	-	2	1
Herbicides (defoliant and weed killers)	145	3	4	43	28	62	5
Fertilizers	133	1	12	22	28	67	3
Organo-Mercury Compounds	13	1	-	2	5	3	2
Fungicides, Not Elsewhere Classified	29	2	4	11	3	7	2
Phenolic Compounds	91	1	2	36	23	29	-
Carbamates	2	1	-	1	-	-	-
Sulfur	75	-	3	33	5	33	1
Other Specified Agricultural Chemicals	64	14	7	12	5	20	6
Unspecified	438	17	30	235	9	108	39

<sup>1</sup> No reports attributed to carbon tetrachloride were received in 1966.

Source: State of California, Division of Labor Statistics and Research, Doctor's First Report of Work Injury.  
 Statistics compiled by State of California, Department of Public Health.

Table 7

REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO PESTICIDES AND OTHER  
AGRICULTURAL CHEMICALS BY INDUSTRY GROUP  
CALIFORNIA, 1966

AGRICULTURAL CHEMICAL	TOTAL	AGRICULTURE			MANUFACTURING					CONSTRUCTION	UTILITIES	TRANSPORTATION COMMUNICATION AND TRADE	STRUCTURAL PEST CONTROL	STATE AND LOCAL GOVERNMENT	OTHER AND UNSPECIFIED	
		Total	Farms	Pest Control	Other Services	Total	Food and Kindred Products	Agricultural Chemicals	Allied Products							Other Chemicals and Other
Total	1,347	820	683	119	18	204	46	103	15	40	52	43	53	33	86	56
Organic Phosphate Pesticides	253	183	105	76	2	46	2	39	3	2	1	5	5	5	6	2
Parathion	102	88	67	21	-	12	-	12	-	-	-	-	2	-	-	-
Systox	8	6	4	2	-	1	-	1	-	-	-	-	-	-	1	-
TEPP	5	3	1	2	-	1	-	1	-	-	-	-	-	1	-	-
Phosdrin	26	19	6	13	-	7	-	6	1	-	-	-	-	-	-	-
Malathion	21	10	6	4	-	2	1	1	-	-	-	4	-	-	4	1
Trithion	2	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-
Thimet	4	3	3	-	-	1	-	1	-	-	-	-	-	-	-	-
Outhion	6	6	4	2	-	-	-	-	-	-	-	-	-	-	-	-
Bidrin	2	-	-	-	-	2	-	-	-	2	-	-	-	-	-	-
Other and unspecified	77	47	13	32	2	20	1	17	2	-	1	1	2	3	2	1
Halogenated Hydrocarbon Pesticides <sup>2</sup>	94	49	44	3	2	18	6	12	-	-	2	4	6	8	2	5
DDT, chlordane, lindane, kelthane	40	19	18	1	-	7	-	7	-	-	2	1	3	4	1	3
Endrin, aldrin, dieldrin, toxaphene	6	4	4	-	-	1	-	1	-	-	-	-	-	1	-	-
Methyl bromide	30	17	16	-	1	6	6	-	-	-	-	1	-	3	1	2
Other and unspecified	18	9	6	2	1	4	-	4	-	-	-	2	3	-	-	-
Lead and/or Arsenic Compounds	10	7	7	-	-	1	-	-	-	1	-	-	-	-	1	1
Herbicides (defoliant and weed killers)	145	90	85	3	2	12	4	3	1	4	3	4	1	-	26	9
Fertilizers	133	73	64	5	4	37	2	29	4	2	2	3	9	-	6	3
Organo-Mercury Compounds	13	4	4	-	-	5	2	-	3	-	1	-	-	-	-	3
Fungicides, Not Elsewhere Classified	29	10	7	2	1	8	-	4	-	4	3	-	3	-	1	4
Phenolic Compounds	91	10	10	-	-	23	-	2	3	18	36	11	2	-	7	2
Carbamates	2	1	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Sulfur	75	63	58	5	-	8	3	5	-	-	-	-	3	-	1	-
Other Specified Agricultural Chemicals	64	24	20	2	2	20	16	2	-	2	-	4	5	5	3	3
Unspecified	438	306	279	22	5	26	11	7	1	7	4	12	19	15	33	23

<sup>1</sup> Includes publicly owned utilities.

<sup>2</sup> No reports attributed to carbon tetrachloride were received in 1966.

Source: State of California, Division of Labor Statistics and Research, Doctor's First Report of Work Injury. Statistics compiled by State of California, Department of Public Health.



Table 8

REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO PESTICIDES AND OTHER  
AGRICULTURAL CHEMICALS BY OCCUPATION  
CALIFORNIA, 1966

AGRICULTURAL CHEMICAL	TOTAL	PROFESSIONAL, TECHNICAL AND KINDRED WORKERS	FARM MANAGERS EXCEPT FARM MANAGERS AND OFFICIALS,	CLERICAL, SALES AND KINDRED WORKERS	CRAFTSMEN, FOREMEN AND KINDRED WORKERS	OPERATIVES AND KINDRED WORKERS			SERVICE WORKERS	FARM LABORERS			OTHER LABORERS			NOT STATED		
						Total	Truck and Tractor Drivers	Other		Total	Sprayers	Pickers	Other and Unspecified	Total	Gardeners			Other-1
Total	1,347	28	7	14	13	85	190	96	94	15	704	167	68	469	199	35	164	92
Organic Phosphate Pesticides	253	11	-	1	2	5	38	18	20	-	152	40	23	89	27	1	26	17
Parathion	102	2	-	-	1	1	7	3	4	-	79	20	22	37	5	-	5	7
Systox	8	1	-	-	-	-	1	-	1	-	5	2	-	3	1	-	1	-
TEPP	5	-	-	-	-	-	2	2	-	-	2	1	-	1	1	-	1	-
Phosdrin	26	1	-	-	-	2	5	3	2	-	14	5	-	9	2	-	2	2
Malathion	21	-	-	-	1	-	5	3	2	-	8	1	-	7	4	-	4	3
Trithion	2	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1
Thimet	4	-	-	-	-	-	1	-	1	-	3	-	-	3	-	-	-	-
Guthion	6	-	-	-	-	-	-	-	-	-	6	2	-	4	-	-	-	-
Bidrin	2	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	1	-
Other and unspecified	77	7	-	1	-	1	17	7	10	-	34	8	1	25	13	1	12	4
Halogenated Hydrocarbon Pesticides <sup>2</sup>	94	1	1	-	5	4	16	6	10	-	42	11	-	31	14	-	14	11
DDT, chlordane, lindane, kelthane	40	-	-	-	2	3	4	2	2	-	17	10	-	7	9	-	9	5
Endrin, aldrin, dieldrin, toxaphene	6	-	-	-	-	-	3	2	1	-	2	-	-	2	-	-	-	1
Methyl bromide	30	1	-	-	-	-	5	-	5	-	17	1	-	16	3	-	3	4
Other and unspecified	18	-	1	-	3	1	4	2	2	-	6	-	-	6	2	-	2	1
Lead and/or Arsenic Compounds	10	-	-	-	-	1	-	-	-	-	7	3	-	4	2	1	1	-
Herbicides (defoliant and weed killers)	145	2	1	4	-	6	12	8	4	2	80	42	-	38	28	10	18	10
Fertilizers	133	1	2	1	1	8	34	28	6	-	48	4	-	44	23	4	19	15
Organo-Mercury Compounds	13	-	-	2	-	1	3	1	2	-	2	-	-	2	1	-	1	4
Fungicides, Not Elsewhere Classified	29	1	-	-	-	6	6	2	4	-	8	1	-	7	8	2	6	-
Phenolic Compounds	91	1	-	1	-	33	12	4	8	-	8	1	-	7	27	-	27	9
Carbamates	2	-	-	-	-	-	-	-	-	-	1	-	-	1	1	-	1	-
Sulfur	75	1	-	-	-	1	7	4	3	-	56	5	4	47	5	1	4	5
Other Specified Agricultural Chemicals	64	2	-	-	-	2	14	2	12	2	20	9	-	11	20	-	20	4
Unspecified	438	8	3	5	5	18	48	23	25	11	280	51	41	188	43	16	27	17

<sup>1</sup> Includes warehousemen, a few fruit and vegetable packers and others.

<sup>2</sup> No reports attributed to carbon tetrachloride were received in 1966.

Source: State of California, Division of Labor Statistics and Research, Doctor's First Report of Work Injury. Statistics compiled by State of California, Department of Public Health.

Table 9

REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO PESTICIDES AND OTHER  
 AGRICULTURAL CHEMICALS BY ESTIMATED TIME LOST FROM WORK AND HOSPITALIZATION  
 CALIFORNIA, 1966

AGRICULTURAL CHEMICAL	TOTAL	ESTIMATED TIME LOST FROM WORK							HOSPITALIZATION			
		No Time Lost	Time Lost					Not Stated	Not Hospitalized	Hospitalized	Not Stated	
			Total	1-7 Days	8-14 Days	15 Days and Over	Indefinite					
Total	1,347	617	540	393	87	58	2	190	1,210	134	3	
Organic Phosphate Pesticides	253	64	148	102	24	21	1	41	181	71	1	
Parathion	102	20	69	54	6	9	-	13	77	25	-	
Systox	8	1	5	4	-	-	1	2	5	3	-	
TEPP	5	1	3	1	1	1	-	1	4	1	-	
Phosdrin	26	4	19	8	7	4	-	3	13	13	-	
Malathion	21	12	6	4	1	1	-	3	17	3	1	
Trithion	2	-	-	-	-	-	-	2	-	2	-	
Thimet	4	2	2	2	-	-	-	-	3	1	-	
Guthion	6	2	1	1	-	-	-	3	6	-	-	
Bidrin	2	2	-	-	-	-	-	-	2	-	-	
Other and unspecified	77	20	43	28	9	6	-	14	54	23	-	
Halogenated Hydrocarbon Pesticides <sup>1</sup>	94	43	38	31	6	1	-	13	76	18	-	
DDT, chlordane, lindane, kelthane	40	23	12	11	1	-	-	5	37	3	-	
Endrin, aldrin, dieldrin, toxaphene	6	3	2	2	-	-	-	1	5	1	-	
Methyl bromide	30	10	15	13	2	-	-	5	18	12	-	
Other and unspecified	18	7	9	5	3	1	-	2	16	2	-	
Lead and/or Arsenic Compounds	10	7	2	1	1	-	-	1	10	-	-	
Herbicides (defoliant and weed killers)	145	80	46	41	2	3	-	19	140	4	1	
Fertilizers	133	59	55	34	14	7	-	19	123	10	-	
Organo-Mercury Compounds	13	4	7	4	3	-	-	2	12	1	-	
Fungicides, Not Elsewhere Classified	29	13	10	6	3	1	-	6	26	3	-	
Phenolic Compounds	91	61	24	19	3	2	-	6	89	2	-	
Carbamates	2	1	1	-	1	-	-	-	1	1	-	
Sulfur	75	28	34	28	2	3	1	13	73	2	-	
Other Specified Agricultural Chemicals	64	29	27	23	2	2	-	8	57	7	-	
Unspecified	438	228	148	104	26	18	-	62	422	15	1	

<sup>1</sup> No reports attributed to carbon tetrachloride were received in 1966.

Note: Estimated time lost from work is based on the reporting physician's recommendation to the worker. A worker treated as a hospital outpatient or in the emergency room only is not hospitalized.

Source: State of California, Division of Labor Statistics and Research, Doctor's First Report of Work Injury. Statistics compiled by State of California, Department of Public Health.



Table 10

REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO PESTICIDES AND OTHER  
 AGRICULTURAL CHEMICALS BY INDUSTRY GROUP AND  
 CLINICAL TYPE OF DISEASE  
 CALIFORNIA, 1966

INDUSTRY GROUP	TOTAL	SYSTEMIC POISONING	RESPIRATORY CONDITION	SKIN CONDITION	CHEMICAL BURN	EYE CONDITION	OTHER AND UNSPECIFIED
Total	1,347	233	70	452	116	362	114
Agriculture	820	163	40	292	65	190	70
Farms	683	96	37	272	58	163	57
Pest control	119	67	1	15	5	20	11
Other services	18	-	2	5	2	7	2
Manufacturing	204	50	11	46	14	67	16
Food and kindred products	46	15	3	10	4	8	6
Agricultural chemicals	103	32	7	16	4	38	6
Other chemicals and allied products	15	1	-	4	3	5	2
Other	40	2	1	16	3	16	2
Construction	52	-	-	15	14	21	2
Transportation, Communication and Utilities <sup>1</sup>	43	4	1	17	1	16	4
Trade	53	3	6	16	4	16	8
Structural Pest Control	33	4	1	13	4	10	1
State and Local Government	86	7	8	29	7	28	7
Other and Unspecified	56	2	3	24	7	14	6

<sup>1</sup> Includes publicly owned utilities.

Source: State of California, Division of Labor Statistics and Research, Doctor's First Report of Work Injury. Statistics compiled by State of California, Department of Public Health.

Table 11

REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO PESTICIDES AND OTHER  
 AGRICULTURAL CHEMICALS BY AGE, SEX AND CLINICAL TYPE OF DISEASE  
 CALIFORNIA, 1966

AGE AND SEX	TOTAL	SYSTEMIC POISONING	RESPIRATORY CONDITION	SKIN CONDITION	CHEMICAL BURN	EYE CONDITION	OTHER AND UNSPECIFIED
Total	1,347	233	70	452	116	362	114
Men	1,226	210	58	401	116	341	100
Women	121	23	12	51	-	21	14
Age, Both Sexes	1,347	233	70	452	116	362	114
15 and Under	11	3	-	1	1	2	4
16-17	42	6	3	12	7	7	7
18-19	98	30	3	29	4	26	6
20-24	172	35	11	51	20	42	13
25-29	167	18	8	52	19	56	14
30-34	142	29	6	37	11	38	21
35-39	148	29	5	50	14	40	10
40-44	131	25	7	44	14	30	11
45-49	129	20	8	50	5	33	13
50-54	81	14	7	25	5	25	5
55-59	87	8	4	41	4	27	3
60-64	66	3	8	33	1	16	5
65-69	16	1	-	10	1	4	-
70 and Over	4	-	-	3	1	-	-
Age Not Stated	53	12	-	14	9	16	2
Median Age	35.5	33.2	39.0	38.7	31.1	35.2	32.9

Source: State of California, Division of Labor Statistics and Research, Doctor's First Report of Work Injury. Statistics compiled by State of California, Department of Public Health.



Table 12

REPORTS OF OCCUPATIONAL DISEASE ATTRIBUTED TO PESTICIDES AND OTHER  
 AGRICULTURAL CHEMICALS BY MONTH OF INJURY  
 CALIFORNIA, 1966

AGRICULTURAL CHEMICAL	TOTAL	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	GRADUAL ONSET	NOT STATED
Total	1,347	51	60	141	120	153	170	152	172	94	85	69	46	6	28
Organic Phosphate Pesticides	253	5	7	17	12	30	32	41	55	22	13	7	7	-	5
Parathion	102	3	3	8	5	12	19	21	15	7	4	1	3	-	1
Systox	8	-	1	-	-	2	-	2	1	-	-	-	-	-	2
TEPP	5	-	-	-	-	-	-	2	3	-	-	-	-	-	-
Phosdrin	26	-	2	1	2	1	-	1	8	5	3	3	-	-	-
Malathion	21	-	-	2	-	1	-	3	10	2	2	-	1	-	-
Trithion	2	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Thimet	4	-	-	1	1	1	-	-	1	-	-	-	-	-	-
Guthion	6	-	-	-	-	2	1	-	-	1	2	-	-	-	-
Bidrin	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Other and unspecified	77	1	-	5	4	11	12	10	17	7	2	3	3	11	2
Halogenated Hydrocarbon Pesticides <sup>1</sup>	94	4	6	11	3	10	16	8	8	7	7	2	7	-	5
DDT, chlordane, lindane, kelthane	40	2	2	3	1	7	5	5	7	2	2	1	2	-	1
Endrin, aldrin, dieldrin, toxaphene	6	-	-	1	-	1	-	2	-	2	-	-	-	-	-
Methyl bromide	30	1	3	3	1	1	10	-	1	2	3	1	3	-	1
Other and unspecified	18	1	1	4	1	1	1	1	1	2	2	-	2	1	3
Lead and/or Arsenic Compounds	10	-	1	2	-	2	1	2	-	1	-	1	-	-	-
Herbicides (defoliant and weed killers)	145	4	10	23	22	16	19	19	15	5	4	5	3	-	-
Fertilizers	133	2	7	20	22	19	14	12	10	8	4	9	4	-	2
Organo-Mercury Compounds	13	1	-	2	-	2	1	2	-	-	2	2	-	-	1
Fungicides, Not Elsewhere Classified	29	2	1	2	5	3	2	1	2	1	3	4	2	-	1
Phenolic Compounds	91	3	2	13	8	6	12	14	10	7	6	6	3	-	1
Carbamates	2	-	-	-	-	-	-	-	-	-	1	1	-	-	-
Sulfur	75	1	1	-	2	17	15	12	11	6	6	2	-	-	2
Other Specified Agricultural Chemicals	64	18	2	7	2	5	6	4	1	2	6	4	4	2	1
Unspecified	438	11	23	44	44	43	52	37	60	35	33	26	16	4	10

<sup>1</sup> No reports attributed to carbon tetrachloride were received in 1966.

Source: State of California, Division of Labor Statistics and Research, Doctor's First Report of Work Injury. Statistics compiled by State of California, Department of Public Health.

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