



An Analysis of Serious Occupational Diseases and Poisoning to Agricultural Workers in Florida During a Three-Year Period, 1987-1989¹

William J. Becker²

During the three-year period, 1987-1989, the Division of Workers' Compensation reported that there was a total of 8,715 serious occupational injuries or illnesses to agricultural workers in the State of Florida. A serious occupational injury or illness is one that keeps a worker off the job for one week or longer.

Among these 8,715 serious accidents, there was a total of 117 cases of occupational diseases and poisoning, or 1.34 percent of all the serious accidents. This report analyzes these 117 cases.

DISTRIBUTION OF THE ACCIDENTS

Over 50 percent of the accidents occurred in one year, as shown in Table 1; of these, 50 percent occurred in one accident in 1989. Forty cases were in one accident, where workers were overcome by pesticide poisoning in a vegetable field. The field had been sprayed the evening before, with a product requiring a 24-hour re-entry period. This re-entry was violated and 40 employees were seriously affected. (As a result, the agri-business lost its restricted pesticide use license and was fined the maximum under the existing rules and regulations.)

Table 1. Number of occupational diseases and poisonings by year

Year	Number
1987	19
1988	18
1989	80(40)
Total	117

Other than this one serious accident, there is no explanation for the increase in serious occupational diseases and poisonings over the preceding two years.

The 117 serious cases were widely distributed across the State of Florida, with at least one serious accident in 26 of the State's 67 counties. With the exception of one county that had 44 serious accidents (40 in the one accident) no other county had more than six such accidents over the three-year period.

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2. William J. Becker, Professor and Extension Safety Specialist, Agricultural Engineering Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences (IFAS), University of Florida, Gainesville, Florida.

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NATURE OF OCCUPATIONAL INJURIES AND ILLNESSES

The majority of the serious occupational diseases and poisonings are from pesticides, but not all. Table 2 provides information on the nature of these injuries and illnesses. Skin and respiratory system diseases make up the majority (68.4 percent) of the injuries and illnesses.

Table 2. Nature of occupational injuries and illnesses

Nature	Number	Percent
Skin Disease	43	36.8
Respiratory Disease	37	31.6
Other Diseases	9	7.7
Poisonings	8	6.8
Unknown	20	17.1
Totals	117	100.00

TYPES OF OCCUPATIONAL INJURIES AND ILLNESSES

Direct contact/absorption and inhalation are the two major types of injury and illness, as shown in Table 3, accounting for 99, or 84.6 percent of the serious injuries and illnesses. Ingestion caused another four injuries or illnesses. The remaining 14 cases were other or unknown, including drownings.

Table 3. Types of occupational injuries and illness

Type	Number	Percent
Direct Contact	67	57.3
Inhalation	32	27.4
Ingestion	4	3.4
Unknown	14	11.9
Total	117	100.00

AGENTS OF INJURY OF OCCUPATIONAL INJURIES AND ILLNESSES

Table 4 summarizes the agents of injury for the 117 serious occupational injuries and illnesses which occurred during the three-year period. Pesticides account for 70.1 percent of these. Other hazardous chemicals

account for 20.5 percent. Snake and insect bites, fungus infections and drownings are the remaining agents of injury.

Table 4. Agents of occupational injuries and illnesses

Agent	Number	Percent
Chemical & Pesticide	27	23.1
Poison & Infection	20	17.1
Insecticides	15	12.8
Other	20	17.1
Total	82	70.1
Hazardous Chemicals	24	20.5
Total	106	90.6
Other: snake, insect, fungus	11	9.4
Total	117	100.0

BODY PART AFFECTED BY OCCUPATIONAL INJURIES AND ILLNESSES

Table 5 indicates that of the 117 serious accidents in the occupational disease category 82, or 70.1 percent, are pesticide-related. These injuries or illnesses are nearly equally divided between internal (42) and external (40) problems, with the respiratory system and the skin most often being the affected body parts.

All the other hazardous chemical injuries and occupational diseases were external rashes, burns, bites or infections, except for two drownings.

SUMMARY

During the three-year period, 1987-89, Florida had 8,715 serious accidents among the agricultural work force. Of these, only 117 or 1.34 percent were classified as occupational diseases and poisonings. Pesticides were associated with 82 of these serious accidents; thus, only 0.94 percent of all serious agricultural accidents were pesticide-related. In addition, 40 of these 82 serious injuries were the result of one catastrophic accident. Without this one accident, the three-year rate would have been less than one-half percent of all the serious agricultural accidents.

Table 5. Body Parts affected by occupational injuries and illnesses

Body Part	Number	Percent
By Pesticides		
Respiratory	36	30.8
Gastro-intestinal	4	3.4
Nervous	2	1.7
Total Internal	42	35.9
Skin	36	30.8
Eyes	4	3.4
Total External	40	34.2
Total Pesticide	82	70.1
Other Chemicals	24	20.5
Occupational Diseases	11	9.4
Total External (Except two drownings)	35	29.9
Totals	117	100.0

EDITORIAL

The author is of the opinion that Florida agriculture is not unique among states in the type and number of pesticide accidents. Our state is ranked as one of the highest users of pesticide by any given measure. It follows, then, that other states would have a pesticide-accident rate equal to or lower than the State of Florida. National Safety Council data support this conclusion. Florida’s problem, however, is not pesticides, it is the hysteria and paranoia generated by various organizations and agencies and by the press.

Why is agriculture’s pesticide safety record so good? There are two primary reasons: first, Federal and state regulations have demanded safer products, safer transport, storage, mixing, loading, application and disposal; secondly, the chemical companies, cooperative extension service and various agricultural organizations have done an excellent job of training and retraining pesticide handlers and users at all levels, with the possible exception of the urban gardener.

What agriculture needs, in the area of health and safety, is *not* more rules, regulation and training with pesticides; but, rather, a national commitment to develop rules, regulations and training to impact the truly significant agricultural safety problems of:

- Tractor and machinery safety
- Overexertion (lifting, pushing and pulling)
- Slips, trips and falls.

There are other problems, also: livestock, power and hand tools, stress, alcoholism, and fires, to name a few. But, any study of agricultural accidents will show that pesticides, poisons or other hazardous chemicals are at or near the bottom of the list.

Let us place our agricultural safety problems in proper priority, and then use our limited resources to address the *real* safety problems of the farm worker and the farm family.