

● FARMWORKERS AND PESTICIDES

# WORKING WITH POISONS ON THE FARM

**Farmworkers are the people who are most closely and heavily exposed to the pesticides that prop up the chemically-intensive agricultural system currently in use in the United States. Most farmworkers are exposed to pesticides, and many report illness or injury as a result. Cancer, birth defects, and reduced fertility all occur in farmworkers more frequently than in the general population. Government regulations have not been adequate to protect farmworkers from pesticides, and improvements are slow in coming.**

**All of us who eat can use our food dollars to support agricultural practices that protect farmer and farmworker health.**

BY CAROLINE COX

**H**ow many times have you heard that you don't need to be concerned about the pesticides used to produce, for example, the grapes on your supermarket shelves? "There are no significant residues," you've been told. "Less than a few parts per million. Like a teaspoon in thousands of gallons of water. Don't worry."

There are many answers to this kind of argument, but one of the most important has to do with the workers on the farms that produce the food you eat. There are about one and a half million people who work as employees on American farms. Their work is crucial to the production of food crops. They handle every grape you eat, every strawberry, every cucumber, every apple, and every one of a multitude of fruits and vegetables that are grown using hand labor. They are the people who are most closely and heavily exposed to the pesticides that are required by the chemically-intensive agricultural system currently in use in the United States. Those few parts per million on the food you eat mean significant exposures for farmworkers in the fields where the food is produced.

Of the 25 most heavily used agricultural pesticides,<sup>1</sup> 5 are toxic to the nervous system<sup>2</sup>; 18 are skin, eye, or lung

irritants<sup>2</sup>; 11 have been classified by the U.S. Environmental Protection Agency (EPA) as cancer-causing<sup>3</sup>; 17 cause genetic damage<sup>4</sup>; and 10 cause reproductive problems<sup>4</sup> (in tests of laboratory animals). Annual use of pesticides causing

each of these types of health problems totals between one and four hundred million pounds. Farmworkers are on "the front lines"<sup>5</sup> of exposure to these pesticides.



U.S. EPA

Caroline Cox is JPR's editor.

## Do Pesticides Injure Farmworkers?

Farmworkers have been concerned about the effects of pesticides on their health for decades. One of the best examples, now almost 25 years old, is the first contract signed between California's farmworker union, the United Farmworkers Organizing Committee, and a major grape grower.<sup>6</sup> The contract, signed in 1970, had four clauses that specifically discussed pesticides. These included the requirement that a union health and safety committee be formed that would work with the grower to develop rules about the use of pesticides on the farm. Six pesticides (the insecticides DDT, aldrin, dieldrin, endrin, parathion and TEPP) were specifically banned by the contract. The health and safety committee was required to approve any use of organophosphate insecticides on the farm and was given authority to determine the length of time farmworkers would not be permitted to enter a sprayed field following treatment. The contract also included requirements for the grower to keep records of all pesticide treatments made on the farm and to make these available to the union.<sup>6</sup> Clearly, pesticides were an important issue.

Support for these concerns of farmworkers now comes from an impressive collection of health surveys and research studies. In the Pacific Northwest, several surveys of farmworkers have highlighted pesticide-related health problems. A 1988 survey of farmworkers in Washington found that a majority (60 percent) of farmworkers reported direct contact with pesticides. The average exposed worker had been exposed more than ten times. Between one-third and one-half of the exposed workers reported feeling some kind of ill effects following at least one of the exposure incidents.<sup>7</sup> A 1991 survey of Oregon farmworkers found that, over a three month period, over 60 percent of the workers on conventional farms had been exposed to pesticides. Over 50 percent sought medical attention because of pesticide-related symptoms and over 40 percent took days off from work because of the same problems.<sup>8</sup> In California, a recent review found that

## MANY PESTICIDE-RELATED ILLNESSES ARE UNREPORTED

Getting a complete picture of how pesticides are affecting farmworker health requires some knowledge about what pesticide-related illnesses occur and how frequently they occur. Unfortunately, such information is difficult or impossible to obtain.

Many ill farmworkers never see a physician. Many farmworkers are intimidated by their employers and do not feel they can see a physician about a work-related problem. Others may not have money for or transportation to medical care. In some cases, farmworkers may be reluctant to take time off from work, with resulting loss of pay, to see a doctor.<sup>1</sup>

Even if a sick farmworker sees a doctor, a pesticide-related illness may not be properly diagnosed or reported. Doctors can have problems with the "recognition, identification, and diagnosis of symptoms." In addition, health care professionals are "often unaware" of reporting requirements or "simply do not take the time."<sup>1</sup>

There are not adequate systems for collecting, compiling, and investigating pesticide illness that do get reported. In 1993, the U.S. General Accounting Office (GAO) concluded, on a national level, that there is no formal, mandatory system for reporting pesticide illnesses.

nearly one quarter of the pesticide applicators whose blood cholinesterase levels were being monitored had to be removed from work during the course of a year because levels had dropped below acceptable standards.<sup>9</sup> (Cholinesterase is an enzyme involved in transmission of nerve impulses. Its activity is inhibited by several common classes of insecticides.)

The surveys discussed above focused on short-term symptoms of pesticide poisoning. Even more serious, however, are the

EPA relies only on voluntary, informal reports and some national surveys.<sup>1</sup>

The situation is not much better at a state level. GAO found that only half of the states have a statute or regulation requiring physicians to report pesticide illnesses. Of the 25 states with such a requirement, only 8 have requirements specific to pesticide illnesses. Only one state, California, has what GAO found to be a "well-developed" monitoring system.<sup>1</sup> Even in California, some researchers estimate that as much as 80% of the pesticide illnesses is unreported.<sup>2</sup>

The result of this inadequate monitoring is that "there currently are no means of establishing valid and reliable national estimates of the nature and extent of pesticide-related illnesses." EPA's estimates of the number of pesticide poisonings among farmworkers vary by more than a factor of ten, from a low estimate of 20,000 poisonings per year to a high estimate of 300,000.<sup>1</sup>

1. U.S. General Accounting Office. 1993. Pesticides on farms: Limited capability exists to monitor occupational illnesses and injuries. Report to the Chairman, Committee on Agriculture, Nutrition, and Forestry, U.S. Senate, Washington, D.C. (December.)
2. Wilkinson, C. 1990. Introduction and overview (Chapter 1). In Baker, S. and C. Wilkinson (eds.). *Effects of pesticides on human health*. Princeton, N.J.: Princeton Scientific Publ. Co.

long-term effects that exposure incidents can have. A 1988 study of long-term problems in workers who had been poisoned by organophosphate insecticides examined workers an average of nine years after their exposure incident. The study found that exposed workers had lower scores on tests of intellectual functioning, academic skills, abstract thinking, and simple motor skills.<sup>10</sup> Similar results have been found in three more recent studies that looked at exposed workers approximately two years following exposure.<sup>11-13</sup>

## FIELD WORK

Piñeros y Campesinos Unidos del Noroeste (PCUN) organizes migrant farmworkers in Oregon. The following are several stories from PCUN about pesticides:

A dairy employee was rented, by his employer, a house near the dairy. One night he awoke gagging and coughing. He was shocked when he went downstairs and found a large cloud in his living room. He rushed himself and his family out of the house. Later he found out that the cloud was caused by the farm across the road spraying their crops with captan. Even though he had worked for the dairy since he was a teenager, he said nothing of the incident to either the owner of the field or his employer. The grower and dairy owner were good friends, and the man feared for his job if he raised a complaint.

Another interesting story involves a mixer/loader who worked in the hops fields. He had been trained about the hazards of pesticides, and knew he was entitled to protective equipment, and how to use it. But his boss told him to make a "homebrew" (a mix of several pesticides), by pouring all the pesticides together and mixing them by hand, literally. He stuck his bare hand into the bucket and stirred. He asked nothing, and said nothing. Even though he knew he was putting his hand in poisons, he knew that if he didn't he would lose his job, and his wife and kids would not eat.

These stories illustrate one of PCUN's basic beliefs, that only a shift in power to give the worker some rights will allow these unjust practices to be righted. —Chris Dickens

Chris Dickens is an NCAP Intern and a South Eugene High School student.

### Chronic Effects of Pesticides on Farmworker Health

Chronic health effects, such as an increased risk of cancer, reduced fertility, or increased frequency of birth defects, are among the more frightening potential consequences of pesticide exposure. Does farmworkers' exposure to pesticide put them at higher risk of these long-term problems? The answer to this question appears to be yes. Because chronic diseases are difficult to associate with a particular exposure incident, careful research is needed to allow an unequivocal answer.

A recent review of studies of farmworkers and their risk of cancer described seven studies in four states (California, Utah, Texas, and New Jersey), as well one nationwide study, that identified cancer risks in farmworkers that were significantly higher than expected. Farmworkers suffered at above-average frequency from liver cancer, lung cancer, cancer of the pharynx, multiple myeloma, cancer of the stomach, cervical cancer, prostate cancer, and testicular cancer. Clearly, "descriptive data and ... research on cancer among farmworkers and family workers are urgently needed."<sup>14</sup>

The problems pesticide exposure might cause for children whose parents are exposed during pregnancy are also deserving of careful study. These kinds of problems are dramatized by tragic incidents. For example, a pregnant woman became ill, along with over 30 other members of her crew, from exposure to three insecticides while working in a cauliflower field. After birth, doctors discovered her daughter had multiple birth defects, including problems with her circulatory system and a defective eye. The infant died at the age of two weeks. Her physician believed the birth defects were caused by oxydemeton-methyl, one of the three insecticides.<sup>15</sup>

During the last ten years, a number of studies have documented this kind of effect. Examples include the following:

- A survey of babies born in Imperial County, California, found that parents working in agriculture had an increased risk (approximately double) of having children born with reduced limbs.<sup>16</sup>

- A study of children born with extrahepatic biliary atresia (EHBA: a liver defect which is lethal unless the child receives a liver transplant) found that fathers who worked on farms and were exposed to pesticides were twice as likely to have children with EHBA. Exposed mothers also had an increased risk of children with EHBA.<sup>17</sup>

- A survey of couples seeking treatment at an infertility clinic found that when couples sought treatment because of low sperm counts, the men were ten times as likely to be agricultural workers as were men from couples seeking treatments for other reasons. The men with low sperm counts reported long-term (5 - 21 years) exposure to insecticides and other pesticides.<sup>18</sup>

Compounding the concerns raised by these kinds of studies, many farmworker children work alongside their parents. This means that they are exposed to pesticides as they work; this exposure adds to any prenatal exposure. For example, a recent survey of children working on farms in New York found that nearly half had worked in fields still wet with pesticides and over one-third had been sprayed directly or indirectly.<sup>19</sup>

### Current Regulations Inadequately Protect Farmworkers from Pesticides

Government regulations have so far done little to protect farmworkers from the hazards of pesticides. The common cliché "too little, too late" seems to apply well to these regulations. EPA first issued worker protection regulations in 1974, two years after the agency was created. However, the regulations consisted of four rather general rules (for example, "a prohibition against spraying workers and other persons") and EPA concluded, in 1983, that they were inadequate. It took until 1988 to propose new regulations, which were finally adopted in 1992 and would take effect two years later.<sup>20</sup> Congress has since delayed complete implementation until 1995.<sup>21</sup>

When implemented, the regulations will include some very simple protective measures, including the following requirements:

- The regulations establish restricted-entry intervals for all agricultural pesticides. (During these intervals, most agricultural workers are excluded from treated areas.)

- Employers must notify workers about the date, location, and products used in pesticide applications.
- Employers must provide clean water, soap, and towels for "decontamination."
- Employers must provide emergency transportation to a medical care facility for any workers injured by pesticides.
- Employers must provide safety training for employees.<sup>22</sup>

EPA estimates that the new regulations, should "avert 80 percent of the adverse health effects of pesticides" (estimated to be at least 16,000 incidents annually).<sup>20</sup> It remains to be seen how well the new regulations will be implemented or enforced. However, there can be no question that the best way to protect farmworkers from pesticide exposure is to promote alternative pest management techniques.

### What You Can Do

If you don't want yourself, your children, or your environment contaminated with pesticides, it's also important not to ask someone else to be exposed in order to produce your food. We all need to make changes in our food purchasing habits in order to protect farmworkers from pesticides. It's up to us! Because consumer dollars are the foundation of the agricultural system in the U.S., everyone who buys food has several simple ways to reduce pesticide hazards experienced by farmworkers. Take the following steps:

- Buy organically grown, locally produced food whenever possible. Ask your store to make such food more available.
- Do you make use of local day care centers, schools, senior centers, hospitals, cafeterias, or restaurants? Encourage any of these businesses to purchase locally produced, organically grown foods.
- Buy food that has been grown and processed with fewer pesticides. Encourage and support companies and growers that use biological pest control systems and pest prevention techniques to eliminate or reduce the need for chemical pesticides.
- Support farmworker unions. Here in the Northwest, three farmworker unions are asking for consumers to support their calls for boycotts. Food boycotts have been used by farmworker unions during the last several decades to successfully initiate contract negotia-

### Boycotts Initiated by Farmworker Unions

#### California

United Farmworkers, AFL-CIO (UFW)  
Highway 58  
La Paz, Keene, California 93570  
(805) 822-5571

boycott of nonunion table grapes

#### Oregon

Pineros y Campesinos Unidos  
del Noroeste (PCUN)  
300 Young St.  
Woodburn, Oregon 97071  
(503) 982-1031

boycott of Steinfeld's pickles,  
sauerkraut, and relishes  
boycott of Norpac frozen and canned  
fruits, vegetables, and juices (sold  
under the brand names Flav-R-Pac  
and Santiam)

#### Washington

The United Farm Workers of  
Washington State, AFL-CIO, (UFWWS)  
P.O. Box 200  
Granger, Washington 98932  
(509) 839-4903

boycott of U.S. Tobacco-owned Stimson  
Lane wines (sold under the brand  
names Chateau Ste. Michelle,  
Columbia Crest, Farron Ridge,  
Saddle Mountain, Snoqualmie,  
Allison Combs, and V.M. Whitby)

tions. The UFW estimates that 17 million Americans participated in their first grape boycotts during the late 1960s and early 1970s. The economic incentives and power provided by this kind of boycott are immense.

Farmworker poisonings are clearly incompatible with a sustainable agriculture system that produces healthy food, preserves soil fertility, keeps farmers and farmworkers healthy, and improves environmental quality. Farmers and farmworkers need our support and our food dollars as they develop these sustainable farming practices. ✦

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