

By William

Mexico's Killing Fields

Mexican farmworkers are being poisoned by the pesticides used to produce year-round vegetables for the U.S. market

Avelino Guzman is one of the lucky ones. A Mixtec Indian from the state of Oaxaca, in southern Mexico, he has survived years of working in the vegetable fields of Culiacán and San Quintín with his health apparently intact. But his voice falls to a half whisper when he describes what those years were like: For a few dollars a day, he and dozens of others marched along the row crops, spraying pesticides from tanks strapped to their backs. A fine chemical mist swirled around their cotton shirts, coating their sweat-streaked faces. Some, overcome by the toxic cloud, fell to the ground to vomit uncontrollably or pass out from dizziness. Of these, the fortunate ones recovered after a few days; the more seriously poisoned lapsed into a coma and died. Nobody complained, however. "If you complained," says Guzman, "they would fire you."

These are the farmworkers who grow America's vegetables. In the fertile San Quintín valley, on the Pacific coast of the Baja Peninsula, and in Culiacán, the much larger vegetable-growing region on the northwest coast of mainland Mexico, they pick half of the tomatoes and even more of some of the other fresh vegetables consumed in the U.S. during the winter months. Their inexpensive labor has attracted droves of American investors as well as multinational corporations eager to form partnerships with Mexican growers.

But this kind of commerce carries a heavy price. Agricultural and health experts say the indiscriminate use of

pesticides in Mexico severely poisons thousands of workers each year, resulting in hundreds of deaths. These chemical compounds also taint much of the produce that we import from Mexico every winter, a consequence of Mexico's failure to regulate the use of pesticides and the inability of our Food and Drug Administration (FDA) to adequately monitor the produce that crosses the border.

"The people down there are being poisoned so we can enjoy cheap produce at all times of the year," says Angus Wright, a professor of environmental studies at Sacramento State University and a specialist in Mexican agriculture. "The situation has gotten worse for farmworkers because of the use of even more dangerous pesticides. The way they're using this stuff is murder, and the chain of responsibility runs from the growers to the consumers."

It is hard to be precise about the number of pesticide poisonings in Mexico, but it is clear that workers there are exposed to greater risks than their U.S. counterparts. A World Health Organization (WHO) study in 1972 estimated about 500,000 accidental pesticide poisonings each year worldwide, resulting in more than 9,000 deaths. Third World countries, which use only about one-seventh of the world's pesticides, account for one-half of the world's pesticide poisonings and three-fourths of the deaths, WHO estimated. And these figures are extremely conservative, since most poisonings are not reported and pesticide use throughout the

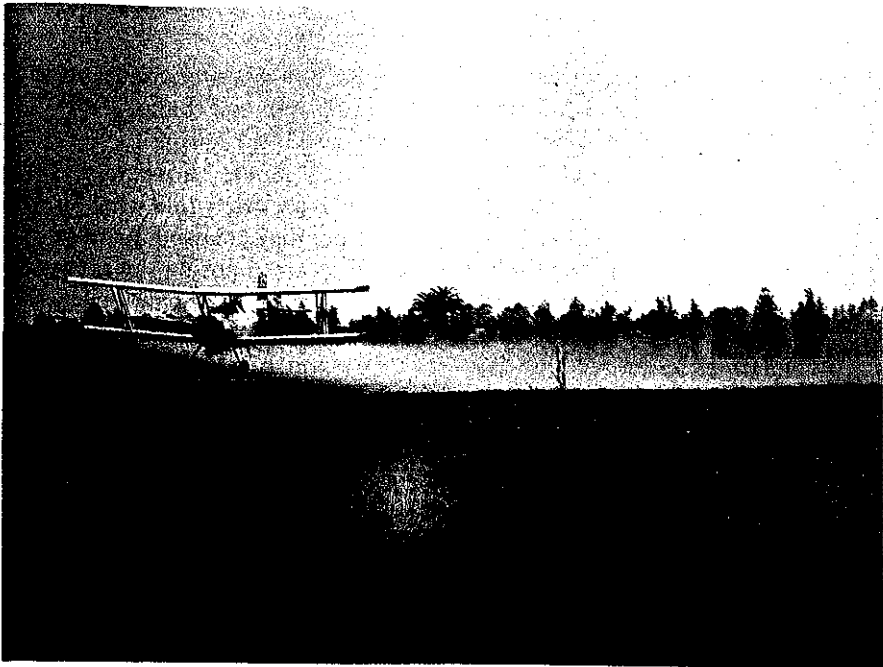
world has skyrocketed in the past 15 years.

The newer pesticides are also more deadly. In the wake of a U.S. ban on such pesticides as DDT and dieldrin, many Mexican farmers who grow export crops had to switch from long-lasting organochlorine products to less persistent but more acutely toxic—and more expensive—organophosphate compounds. The latter break down more quickly and leave less residue on fruits and vegetables. These poisons, however, are powerful nerve toxins that can be lethal to anyone exposed to them fairly soon after a spraying.

High-profit scenario

Mexico is the largest foreign provider of fresh fruits and vegetables for the U.S. supermarkets, exporting more than a billion pounds of fresh produce to this country each year. This represents a small percentage of the total produce consumed in this country, but most Mexican produce is imported for sale between November and May, when U.S. farms are producing less. During the winter months, American supermarkets are chock-full of Mexican fruits and vegetables—especially tomatoes, cucumbers, bell peppers, eggplant and squash; also strawberries, melons and citrus fruits.

In the past ten years the dramatic devaluation of the peso and the U.S. appetite for fresh produce have created a bonanza for Mexican vegetable exporters, many of them closely allied with or financed by U.S. produce distributors and investors. Although



In northern Mexico, spraying of pesticides (top) is essential to the large-scale production of tomatoes and other vegetables destined for export to the U.S. Spraying goes virtually unregulated; even children, who are especially susceptible to pesticide poisoning (above), are allowed to work the recently sprayed vegetable fields.

Mexican law prohibits foreigners from owning land, American dollars have spurred agricultural development in northern Mexico, lured by the cheap labor and land. According to Carlos Chico, who is service manager for the Unión Nacional de Productores e Hortalizas, Mexico's growers' union, U.S. investors and produce brokers supply everything from technological know-how to cash for the worker payrolls.

Nowhere is this trend more evident than in the bustling farming village of San Quintín, on Baja's Pacific coast, 150 miles from the border town of Tijuana. When the Mexican government completed a new paved road to the region in the early 1970s, San Quintín became readily accessible to the U.S. The cheap labor supply, inexpensive land and water and the absence of enforcement of regulations provided all the ingredients for growth.

At least 15,000 acres of vegetables, mainly tomatoes, now are being grown in the San Quintín valley, three times the amount grown just five years ago. The area has been transformed almost overnight into an important agricultural center that feeds northern Mexico and the U.S. Each of the large family growers in the valley has hooked up with American distributors and investors to help market his produce in the U.S.

From May through December, an estimated 40,000 farmworkers flood the San Quintín valley in search of work, and hundreds more have set up permanent residence in the area. Most are Mixtec Indians from the poverty-ridden region of Oaxaca.

Not all Mixtec find work, and many don't have housing. Even the workers who are given shelter in the huge migrant farm camps built by the growers in the last few years are exposed to diseases and squalid conditions. Thousands live in small rooms in long rows of corrugated tin sheds.

The diseases in the camps are compounded by the chemical spraying in the fields, where pesticides are applied with virtually no governmental controls. At night, even in town, the sweet, artificial-pine scent of pesti-

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cides such as parathion lingers in the air; in the fields, the fumes are almost overpowering. One of the new wave of organophosphate pesticides, parathion is up to 60 times as acutely toxic to humans as DDT. Yet in some areas of Mexico—where this pesticide is used more widely and far more freely than in the U.S.—doctors report that farmworkers are exposed routinely to the deadly chemical.

U.S. agricultural experts who work with Mexican growers claim these deadly compounds are no longer being used extensively in San Quintín. But Carlos Chico says that organophosphates like parathion are still used by most growers. "We don't use the new organic pesticides [the pyrethroids]," Chico explains, "because we don't have the technology for that." Angus Wright, one of the few firsthand observers from the U.S., confirms the use of organophosphates.

Doctors and government officials in San Quintín say parathion and other dangerous compounds such as methamidofos and aldicarb are still used commonly in the valley. "Parathion is one of our biggest problems," says Dr. Javier González Almada, director of the government's Seguro Social clinic south of San Quintín. "People come in with difficulty breathing or with symptoms of paralysis. Some begin to go into a coma."

At greatest risk are those who do the spraying. Few workers wear the legally required masks and rubber garments when applying pesticides; many take minor precautions, such as tying a bandanna over the nose and mouth, but the chemicals easily soak through and are absorbed through their skin.

There are also reports that field workers take atropine, a powerful drug that suppresses symptoms of organophosphate poisoning, in order to continue working in the field. Atropine can mask the body's initial reaction to pesticides, so workers do not need to leave the site, but in the high-pesticide environment, they can end up severely poisoned. Atropine

can be bought over-the-counter in Mexico, and one doctor fears it is being used like aspirin.

What's more, those who spray pesticides are rarely told what kinds of pesticides they are using or what dangers they are exposing themselves to. Some farmers even paint over their pesticide containers to keep the contents secret from their competitors, according to Fernando Salgado, who heads the San Quintín district office for agriculture and water resources, Secretaría de Agricultura y Recursos Hidraulicos. "People who are applying the pesticides have no idea what they are spraying," Salgado says.

Those who do the spraying are not the only victims. A few minutes after the sprayers walk among the rows of tomatoes dispensing poisonous fog, women and children follow to prune and pick the dead leaves off the plants. All of them breathe the noxious fumes.

Both the U.S. and Mexico have strict regulations that prohibit workers from entering the fields until highly toxic pesticides have broken down into less dangerous compounds. Most experts in both countries agree that these rules are rarely enforced south of the border. Many farmers do not even know they exist. "There is no law about going back into the fields after they spray," insists Carlos Chico of the growers' association.

The number of acute poisonings—the ones the clinics in the valley see—varies from a few each month to seven or eight a day, according to doctors in the valley's clinics. Just a stone's throw from one of the largest migrant camps in the valley is El Buen Pastor clinic, run by a California-based missionary organization called Mexican Medical. Since El Buen Pastor is the only facility with surgical and X-ray capability along a 500-mile stretch of Baja's western coast, the tiny one-story clinic has been overwhelmed by patients from the camps nearby.

No one really knows how many workers have fallen victim to agricultural chemicals. Nearly everyone

agrees that monitoring by government officials is minimal.

For most, the health effects will be gradual and nearly impossible to trace. Cancer and birth defects, which have been linked to many herbicides and fungicides used commonly in the fields, may not show up for years.

Pregnant women and children are particularly susceptible to pesticide residues. Doctors believe that the high rate of spontaneous abortion among women farmworkers may be linked to chemicals applied freely in the fields. In the government's San Quintin clinic two years ago, two children were born with identical lethal deformities: skulls partially formed and intestines protruding from their stomachs. Doctors there suspect pesticides must have played a role in those tragedies.

The joke is on us

Americans too may be unwitting casualties of the unrestrained use of pesticides south of the border. Several studies have shown a relatively high incidence of contamination in produce from Mexico, including residues of chemicals that are banned in the U.S. or severely restricted because they pose health and environmental dangers.

Although organophosphate pesticides are not persistent, they are showing up on U.S.-bound food because Mexicans use more spray per plant and use it closer to harvest time. The Mexicans also use pesticides not registered for use on food crops.

In 1983 the U.S. General Accounting Office (GAO) found that in 1981 nearly one-third of the produce entering the U.S. from Mexico contained illegal pesticide residues, despite the FDA's new emphasis on monitoring Mexican produce. Furthermore, said the GAO, much of the food had already reached the marketplace by the time the results of the FDA's residue-testing procedure were known. A December 1986 GAO report confirmed those earlier findings.

In 1984 the Natural Resources

Defense Council (NRDC), analyzing the FDA's computerized records, found that the FDA was testing regularly for fewer than a third of the 312 pesticides registered for use on crops in the U.S. An additional 1,200 pesticides are used elsewhere. The unscreened chemicals included widely used carcinogens such as 2,4,5-T, DBCP (dibromochloropropane) and EDB (ethylene dibromide).

Ironically, FDA officials trying to discredit the NRDC report say it is flawed because of inaccuracies in the FDA's own computer printouts. They acknowledge that Mexican produce generally has had a higher pesticide violation rate than domestically grown produce, "but that has dropped steadily over the years since we paid greater attention to it," says Ellis Gunderson, an FDA chemist.

Critics point out that the FDA samples only a fraction of the hundreds of millions of pounds of produce that cross the border every year. Although the U.S. Department of Agriculture checks every single shipment for cosmetic standards, insects and disease, only an estimated 1 out of every 14 truckloads is tested for residues of pesticides of any kind.

Howard Applegate, a professor of civil engineering with the University of Texas at El Paso, has been taking his own samples of produce coming across the border. He has discovered a host of residues of banned or severely restricted pesticides. "We have yet to get any vegetables from Mexico that are pesticide-free," he says. Applegate is sending his results to another lab this year for independent confirmation of his results. □

William Kistner is a staff writer for the Center for Investigative Reporting in San Francisco. Alex Kline provided research assistance for the article, which is part of the center's Natural Resources Project. This article was adapted from one that appeared in Mother Jones in December 1986.

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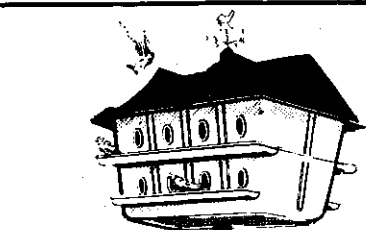
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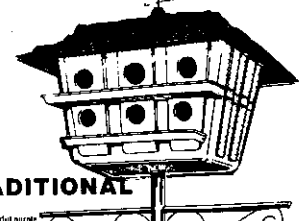
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