



NCFH

National Center for Farmworker Health, Inc

OCCUPATIONAL SAFETY

The agriculture industry is consistently one of the most dangerous industries in which to work in the United States. The occupational safety risks involved in farm labor are numerous and can include exposure to pesticides, skin disorders, infectious diseases, lung problems, hearing and vision disorders, and strained muscles and bones. Because of their general lack of access to quality medical care, these risks are even greater for the 2.5 million migrant and seasonal farm workers who work in the fields every year.

General Information

- Although agricultural crop and livestock production constitutes only 2% of the workforce, from 1994 to 1999, it represented 13% of all occupational deaths.ⁱ It is among the most dangerous occupations in the nation.ⁱⁱ In 2001, for every 100,000 agricultural workers in the U.S. there were 22.8 deaths for a total of 228 occupational deaths in agriculture. This compares to a rate of 4.3 deaths for every 100,000 workers in the total U.S. workforce during this same period.ⁱⁱⁱ

Injuries are not limited to adults. Child Labor Laws differ from state to state and many children work in the fields, sometimes alone, other times accompanied by parents. In *Agricultural Safety Information* published by NIOSH in 2001, they report that an average of 103 children are killed annually working on farms (1990-1996).^{iiib}

Every day, about 500 agricultural workers suffer lost-work-time injuries, and about 5% of these result in permanent impairment.^{iiib}

In a study of 287 migrant workers, 25 had reported an injury in the previous 3 years. Of these, 17 considered medical attention necessary. 41% of the injured workers did not receive medical attention within 24 hours, while 24% received no attention at all.ⁱⁱⁱ Another study found sprains and strains to be the most common occupational injury, constituting 43% of agricultural injuries. Fieldwork was the activity most commonly associated (39%) with injury.^{iv}

Musculoskeletal

Musculoskeletal injuries are inherent to agricultural labor. Harvesting requires heavy and repetitive lifting and quick wrist and hand movements, and the piece-rate wage system encourages a rapid work pace. Such ergonomic conditions lend themselves to back and muscle pain. "In 1996, 34% of lost-time injuries were sprains and strains and 24% were back injuries."^v

Respiratory Illness

Agricultural work exposes laborers to pesticides, dust, plant pollen, molds and other respiratory irritants. Prolonged exposure can lead to chronic respiratory illness.^{vi}

Obstructive lung disease has been linked to livestock and grain work, and asthma, hypersensitivity pneumonitis, and other respiratory problems have been linked to organic dusts.^{vii}

Skin Disorders

Skin disorders are common in agricultural workers, which have the highest incidence of skin disorders of all industrial classifications. In 1996, the incidence rate for all agricultural production was 27.6 per 10,000 workers, climbing to 28.1 per 10,000 workers for crop production. Comparatively, the rate was 6.9 per 10,000 workers for all private industry.^{viii}

A 1991 study published by the Migrant Clinicians Network concluded that dermatitis was the primary cause for clinic visits for males ages 20-29. Dermatitis was 150% more likely in the migrant study group than in the general population.^{ix}

Eye Injury

“Similar to dermatitis causing agents, farmworkers are exposed to potential eye irritants as they work including dust, pollen and chemicals. Untreated chronic eye problems can lead to serious damage; tree branches and accidents with agricultural tools can cause abrasions.”^x

Caused by exposure to chemicals, dusts and plant materials, eye problems are common in agricultural workers.^{xi} In 1996, eye injuries in agricultural employees occurred 14.2 times for every 10,000 workers, representing 4.8% of all lost-workday injuries.^{xii} Exposure to pesticides is a common cause of eye injuries. “About 25% of California reports of pesticide effects involve the eye.”^{xiii}

Infectious Diseases

Infectious diseases have been found to be associated with agricultural employment. Such diseases are often due to poor sanitation at work and home sites, including inadequate washing and drinking water.^{xiv} In the 2000 National Agricultural Workers Survey (NAWS) 15% of the farmworkers reported having no access to water for washing, while 16% had no access to toilets in the fields.^{xv} In an examination of 27 North Carolina labor camp water supplies, 44% tested positive for coliform contamination. A study in Utah “found that workers on farms without sanitation facilities had a clinic utilization rate for diarrhea 20 times higher than that of the urban poor.”^{xvi}

In one study, 28% of a California farm worker community lived in ‘back houses’—sheds, garages, and shacks. Such poor, crowded living conditions are conducive to the spread of infectious diseases, particularly tuberculosis. A CDC study suggests that farmworkers are six times more likely to become infected with tuberculosis than the general population.^{xvii}

Urinary tract infections are common among migrant farmworkers due to the lack of toilet facilities; they are particularly prevalent among women because their shorter urethra allows bacteria easy access to the bladder. These infections during pregnancy may contribute to miscarriages, fetal or neonatal deaths, and premature delivery.^{xviii}

In one study, 28% of migrants surveyed had some form of parasitic infection. It is estimated that this rate is anywhere from 11 to 59 times higher than the rate of parasitic infection in the general population of the United States.^{xviii}

Pesticide Exposure

Pesticide exposure is the cause of a variety of occupational illnesses, including eye injuries, cancer, respiratory illnesses and dermatitis. Between 1982 and 1993, California averaged 1500 reports of pesticide exposure each year. 41% of these exposures occurred in agricultural workers.^{xix}

Despite improvements in the enforcement of the Worker Protection Standard, many workers have not received training in pesticide application.^{xx} Between 1992 and 1996, nearly one-fifth of all hired crop workers had mixed or applied pesticides. Only 50% of these received training, while only 79% are able to read English well.^{xx} “The result is that agricultural workers are often ill prepared to protect themselves from the potentially hazardous chemicals found around them.”^{xxi}

High air temperatures and humidity put agricultural workers at special risk of heat stress. Pesticide workers and early-entry workers are at particularly great risk. The special clothing and equipment they wear for protection from exposure to pesticides can restrict the evaporation of sweat, blocking the body's natural way of cooling itself, which results in a buildup of body temperature. Exposure to certain pesticides can also produce sweating, and there can be combined effects with exposure to heat. In addition, pesticides are absorbed through hot, sweaty skin more quickly than through cool skin.^{xxia}

Although high cancer incidence rates indicate a link between cancer and agricultural labor, the migrant lifestyle has made conclusive studies difficult.^{xxii}

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- ⁱ Larson, A. (2002). Environmental / Occupational Safety and Health. *Migrant Health Issues, Monograph Series, 2*, 8-13.
- ⁱⁱ Villarejo, D., Baron, S.L. (1999). The Occupational Health Status of Hired Farmworkers. *Occupational Medicine: State of the Art Reviews, 14*, 613-635.
- ⁱⁱⁱ "Occupational injury deaths and rates by industry, sex, age, race, and Hispanic origin: United States, 1992-2001". National Center For Health Statistics, CDC 2003.
- ^{iv} "Agricultural Safety Information", National Institute for Occupational Safety and Health, 2001
<http://www.cdc.gov/niosh/injury/traumaagric.html>
- ^v Ciesielski, S., Hall, S.P., Sweeney, M. (1991) Occupational Injuries Among North Carolina Migrant Farmworkers. *American Journal of Public Health, 81*, 926-927.
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- ^{viii} Larson, A. (2002). Environmental / Occupational Safety and Health. *Migrant Health Issues, Monograph Series, 2*, 8-13.
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- ^x Villarejo, D., Baron, S.L. (1999). The Occupational Health Status of Hired Farmworkers. *Occupational Medicine: State of the Art Reviews, 14*, 613-635.
- ^{xi} Villarejo, D., Baron, S.L. (1999). The Occupational Health Status of Hired Farmworkers. *Occupational Medicine: State of the Art Reviews, 14*, 613-635.
- ^{xii} Dever, G.E. A. *Migrant Health Status: Profile of a Population with Complex Health Problems*. Migrant Clinicians Network, 1991.
- ^{xiii} Larson, A. (2002). Environmental / Occupational Safety and Health. *Migrant Health Issues, Monograph Series, 2*, 8-13.
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- ^{xv} Villarejo, D., Baron, S.L. (1999). The Occupational Health Status of Hired Farmworkers. *Occupational Medicine: State of the Art Reviews, 14*, 613-635.
- ^{xvi} Villarejo, D., Baron, S.L. (1999). The Occupational Health Status of Hired Farmworkers. *Occupational Medicine: State of the Art Reviews, 14*, 613-635.
- ^{xvii} Villarejo, D., Baron, S.L. (1999). The Occupational Health Status of Hired Farmworkers. *Occupational Medicine: State of the Art Reviews, 14*, 613-635.
- ^{xviii} Villarejo, D., Baron, S.L. (1999). The Occupational Health Status of Hired Farmworkers. *Occupational Medicine: State of the Art Reviews, 14*, 613-635.
- ^{xix} Larson, A. (2002). Environmental / Occupational Safety and Health. *Migrant Health Issues, Monograph Series, 2*, 8-13.
- ^{xx} Villarejo, D., Baron, S.L. (1999). The Occupational Health Status of Hired Farmworkers. *Occupational Medicine: State of the Art Reviews, 14*, 613-635.
- ^{xxi} Larson, A. (2002). Environmental / Occupational Safety and Health. *Migrant Health Issues, Monograph Series, 2*, 8-13.
- ^{xxii} "Heat Stress in Agriculture". National Agriculture Compliance Assistance Center, EPA 2002
- ^{xxiii} Edwards, Robert W., "Preliminary Report on the Intestinal Parasites in Migrant Farmworker Children in North Carolina." University of North Carolina,
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