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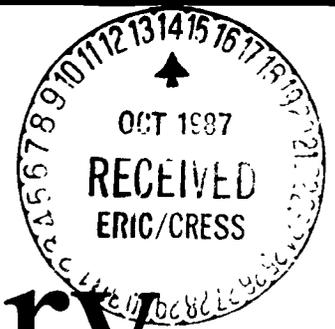
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ABSTRACT

The estimated three million United States migrant and seasonal farmworkers and their families suffer from a variety of occupational hazards and ailments exacerbated by limited, or nonexistent, health care services. Although existing migrant and seasonal farmworker health data is incomplete, general statements can be made about the health risks faced by this population. The migrant population suffers health problems related to poor sanitation and overcrowded living conditions at rates much higher than the nonmigrant population. Provision, maintenance, and use of field sanitation facilities such as toilets and potable drinking water at the worksite would substantially decrease the incidence of sanitation related health problems among farmworkers. Most migrants seek medical treatment for acute ailments rather than chronic conditions or preventive services. Parasitic infections afflict migrants an average of 20 times more than the general population. The full extent of pesticide poisoning is not known and needs further study. The dangers of agricultural labor on women and on the development of farmworker children are poorly documented. Agriculture is the second most dangerous occupation in the United States, yet farmworkers are rarely offered or able to afford health insurance, and in 20 states are not covered by workers' compensation of any kind. (JHZ)

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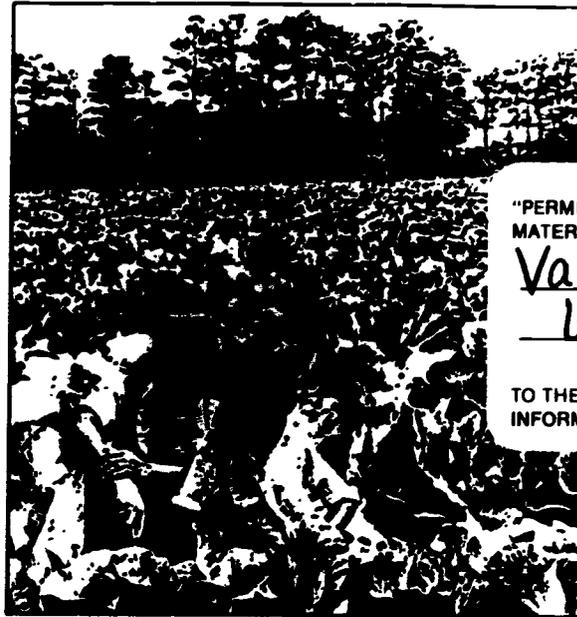
The Occupational Health of
Migrant and Seasonal Farmworkers
in the United States



Report Summary

Second Edition

ED292594



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Acknowledgement

This document summarizes and highlights *The Occupational Health of Migrant and Seasonal Farmworkers in the United States*. The intent of this summary is to identify health problems of migrant and seasonal farmworkers, while also identifying areas where health research on this population is incomplete. We hope that it will stimulate further research and the development of additional programs to improve migrant and seasonal farmworker health.

It is believed that this document serves this aim, yet it could not have been accomplished without the contributions of many individuals. I specifically wish to thank Sister Cecilia Abhold, S. P., Ann Therese Carozzo, Betty F. King, Sonia Leon Reig, and Valerie A. Wilk for their invaluable support and editorial direction, as well as Brian Thompson, and the staff of the National Rural Health Care Association for their unfailing help. Photographs herein are used with permission.

Barbara A. Schaaf
National Rural Health Care Association
November 1, 1985

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November, 1986

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Preface

This document summarizes and highlights the findings of a 1986 study by Valerie Wilk of the Farmworker Justice Fund, Inc., Washington, D.C., entitled *The Occupational Health of Migrant and Seasonal Farmworkers in the United States*. In this report summary we hope to provide information to stimulate further research on migrant and seasonal farmworkers, their work conditions, and the accompanying health hazards they face.

The full report and this publication were supported by the Office of Migrant Health (OMH), Department of Health and Human Services, and published by the National Rural Health Care Association in cooperation with the East Coast Migrant Health Project, and the Farmworker Justice Fund, Inc.

The Office of Migrant Health funded the report in order to refine its own funding priorities; focus on research issues that warrant funding by federal agencies, private and public organizations, and state and local governments; and identify interventions by migrant health centers that may improve the health of migrant and seasonal farmworkers.

Founded in 1962 by the passage of the National Migrant Health Act by the United States Congress, the Office of Migrant Health operates from the Bureau of Health Care Delivery and Assistance, Health Resources and Services Administration, U.S. Public Health Service, U.S. Department of Health and Human Services, Rockville, MD. With a FY 1985 budget of \$44 million, OMH funds 122 migrant health centers in over 300 rural areas, but its programs reach only 15% (460,000) of the estimated three million migrant and seasonal farmworkers and their families in the United States.

There is no comprehensive baseline health data on migrant and seasonal farmworkers. Although some farmworker health problems and hazards are well documented, others require much more investigation and research. An aggressive nationally coordinated effort to focus on preventive care, eliminate environmental hazards, and educate the farmworker and the agricultural employer on pertinent health issues is needed for sustained improvement of the health and welfare of farmworkers.

The entire report, *The Occupational Health of Migrant and Seasonal Farmworkers in the United States (2nd ed.)*, is available for sale from the National Rural Health Care Association, 301 E. Armour Boulevard, Suite 420, Kansas City, MO 64111. This *Report Summary* is available from NRHCA free of charge.

Executive Summary

The estimated three million U.S. migrant and seasonal farmworkers and their families suffer from a variety of occupational hazards and ailments exacerbated by limited, or non-existent, health care services. Even a good health care delivery system cannot by itself combat the many health problems of these farmworkers because so many of the problems are rooted in the abysmal conditions in which the farmworkers must live and work.

Existing migrant and seasonal farmworker health data is incomplete, due in part to the absence of a uniform definition of "migrant and seasonal farmworker" throughout government agencies, and also to the diversity of the farmworker population itself. Farmworkers include white, black, southeast Asian, and Hispanic men, women, and children dayhaul laborers (low-income urban dwellers who are daily bussed to and from farms), male migrant Puerto Rican, American black, and Jamaican workers living in labor camps, Mexican American migrant families living in towns and camps, year round local residents who do farm work during the agricultural season, and migrant Haitian workers. Although many different ethnic groups make up this population, nearly all bear the burden of poverty, unsanitary, unsafe living and working conditions, and a lack of continuity in receiving health care.

In *The Occupational Health of Migrant and Seasonal Farmworkers in the United States*, Valerie Wilk of the Farmworker Justice Fund, Inc., reviews existing literature and data on the health of these farmworkers. The report can be regarded as an educational tool for federal agencies, migrant and community health centers, researchers in the field, farmworker advocacy organizations, and the general public. In the report, Wilk identifies areas in which current data is merely anecdotal, incomplete, or otherwise is desperately in need of further research.

The general findings of *The Occupational Health of Migrant and Seasonal Farmworkers in the United States* are described below:

- The migrant population suffers health problems related to poor sanitation and overcrowded living conditions at rates much higher than the nonmigrant population;
- Provision, maintenance, and use of field sanitation facilities such as toilets, handwashing facilities and sufficient potable drinking water at the worksite would substantially decrease the incidence of sanitation-related health problems among farmworkers;
- The majority of migrant and seasonal farmworkers and their families seek medical treatment for acute ailments rather than chronic conditions or preventive services (e.g. check-ups or immunizations);
- Parasitic infections afflict migrant adults and children an average of 20 times more than the general population;
- The full extent of both acute and chronic pesticide poisoning still is not known and needs further study;
- The dangers of agricultural labor on women, particularly pregnant women and their newborn, and on the development of farmworker children are poorly documented;
- The health problems most frequently reported at migrant health clinics include dermatitis, injuries, respiratory problems, musculoskeletal ailments (especially back pain), eye problems, gastrointestinal problems, hypertension, and diabetes;
- Agriculture is the second most dangerous occupation in the United States.¹ Yet, farmworkers are rarely offered or able to afford health insurance, and in 20 states are not covered by workers' compensation of any kind.

At this point, there is no comprehensive body of information against which to measure the success — or failure — of federal programs aimed at migrant and seasonal farmworkers. It is essential that, at the very least, the health risks faced by this population be understood. Understanding these problems may lead to greater general interest in their health, promote research, and provide the impetus for a more comprehensive national preventive health program for farmworkers.

Report Recommendations

The recommendations of *The Occupational Health of Migrant and Seasonal Farmworkers in the United States* encourage the Office of Migrant Health and the U.S. Public Health Service to promote a coherent national research program on migrant and seasonal farmworker health, fostering coordination and funding of new research projects, and most importantly, making a commitment to implement research findings. This last phase is most critical, and sadly, most often neglected. In the last 20 years, migrant health literature is filled with recommendations that, though still valid, are yet to be implemented.

Collecting and analyzing this farmworker health data must serve one purpose — and one purpose only — to improve the health of the U.S. migrant and seasonal farmworker, providing those whose essential labor helps feed the American public with the health care they need and deserve.

More research may suggest a change in the methods of delivery of health services, or point to solutions to migrant problems that strike at the root of those problems, providing real answers instead of mere “band-aid” measures. Research findings may serve as supporting evidence for passage of protective legislation or regulations for farmworkers.

The report recommendations are outlined below:

- Improve coordination and communication among agencies that serve farmworkers at the national, state, and local levels;
- Develop standardized training materials and clinic protocols for migrant health care personnel;
- Institute a national clearinghouse/resource center on migrant and seasonal farmworker health issues;
- Give funding priority to preventive health care projects and services;
- Encourage migrant health programs to submit comments and testify when federal or state legislation/regulations that affect farmworkers are proposed;
- Improve the compatibility and efficiency of computer systems used by migrant health clinics;
- Delineate the current and future research priorities of federal agencies, identifying public and private sources for migrant health research;
- Devise ways to make health care services available and accessible to more farmworkers, e.g., explore models for farmworker health insurance coverage;
- Develop or facilitate research projects between migrant health programs and university schools of medicine or public health;
- Provide pre- and/or postdoctoral training fellowships for migrant health research; and
- Develop health studies that are collaborative, multi-center efforts to increase knowledge on key migrant and seasonal farmworker health issues.

A Family Affair

Occupational health hazards threaten not only the adult farmworker wage earner, but their entire families. Because of meager wages, even pregnant women, nursing mothers, and small children often are forced to work in the fields to help support the family. (Children perform 25% of all farm labor.)

Even those children not actually at work in the fields are exposed to dangers such as their parents' infectious diseases contracted at the workplace or pesticide poisoning from residues on parents' work clothes.

Other dangers, perhaps less obvious, but equally hazardous confront the farmworker family. The migratory lifestyle combines with the stress of heavy physical labor performed under abysmal conditions to create an environment that is ripe for child neglect and abuse. Few statistics are gathered on this issue, and further study is needed.²

Barriers To Care

Migrant and seasonal farmworkers face serious social problems: poverty, poor nutrition, unsafe unsanitary living and working conditions, physical isolation in remote rural areas, a mobile lifestyle, and for some conditions such as parasites, rates of illness comparable to those in developing nations. The lack of health care services or the inability to use available services is widespread.

Some obstacles to medical care are:

- Lack of transportation from the fields or labor camps to a health care facility;
- Language barriers between farmworkers and health care providers;
- Limited health clinic hours due to shortage of funds and staff;
- Farmworkers' lack of money to pay for basic health care services and their lack of insurance coverage; and
- Major cutbacks in critically important support programs.

A 1983 U.S. Department of Agriculture study reported that in 1981, the average annual income of migrant and seasonal farmworkers was \$3,995 and \$4,081, respectively. Given these paltry earnings and the more urgent needs of food and shelter, it is easy to understand why farmworker families seek preventive care and treatment of chronic illness less often than the general population.

In addition, the farmworkers' migratory lifestyle and the lack of communication between health facilities treating them result in a lack of continuity in the farmworkers' health care. This is particularly dangerous for patients who have chronic health conditions such as diabetes or hypertension.

It is imperative to develop a system for easy transmittal of medical information when patients travel from one harvest site to another; this will improve continuity of care. Use of computers for this purpose and for analysis of migrant and seasonal farmworker health data should be explored.

Living And Working Conditions

A variety of farmworker health problems, some life-threatening, are caused or exacerbated by overcrowded and unsanitary living and working conditions.

Substandard housing increases the risk of accidents and sanitation-related diseases. Many farmworker labor camps and housing units are located next to fields that regularly are treated with pesticides, subjecting them to pesticide drift or even direct spray. The housing is rarely equipped with laundry facilities, and pesticide-contaminated clothing often must be washed in a sink or bathtub, which exposes all the occupants to the pesticides.



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Overcrowded housing units, poor ventilation, and inadequate, faulty, or non-existent plumbing systems further spread disease. Garbage heaps and stagnant water outside housing units breed rats and insects, which harbor and transmit communicable diseases.

Some migrants do not have any housing, and are forced to live in the fields where they work, often using contaminated water from irrigation ditches for drinking, cooking, and bathing.

Health Effects Of Poor Field Sanitation

Migrant and seasonal farmworkers are at increased risk of contracting sanitation-related illnesses because of the lack of toilets, handwashing facilities, and potable drinking water at the worksite. A basic principle of public health is that poor hygiene causes illness.

Agricultural workers are the only occupational group in the United States who are denied the federal right to sanitary facilities and drinking water provided at the worksite. Farmworkers also are excluded from national labor laws and are denied many of the rights of other working people. For example, few states recognize the right of farmworkers to organize and bargain collectively, and some of those state laws contain powerful obstacles to union organizing and representation.

Furthermore, migrant and seasonal farmworkers are the only workers in the United States not protected against toxic substances by the Department of Labor's Occupational Safety and Health Administration (OSHA). Rather, pesticides are regulated by the U.S. Environmental Protection Agency (EPA). Because the fields where migrants work often are treated with pesticides, lack of aggressive and enforced federal regulation on chemical use directly affects farmworker health.

Some of the many illnesses and conditions caused or exacerbated by the primitive sanitary conditions, pesticide hazards, and accident risks in migrant and seasonal farmworkers' worksites and housing areas are described in the following sections.

Communicable Diseases

Migrant and seasonal farmworkers are susceptible to numerous infectious diseases. The lack of proper sanitary facilities in the home and in the workplace contributes to the spread of such diseases.

Diseases related to poor sanitation include dysentery, hepatitis, typhoid fever, and other respiratory and intestinal ailments. Diseases commonly spread by using the same eating and drinking utensils, drinking non-potable water — potable water being unavailable, — and fecal-oral contamination from the lack of toilet and handwashing facilities. (Since many crops are packaged directly in the fields, and some disease organisms (e.g. parasite eggs) are very hardy, washing the produce may not remove these organisms. The potential exists for contamination of crops and the transfer of diseases to the consumer.)

Poor sanitation contributes to a variety of health problems, including high rates of parasitic infections such as bacterial, protozoan, viral, and worm infections. The few extant studies of migrant farmworker children and adults show them to have higher rates of parasitic infections than either the general U.S. population, or even other rural or poor urban populations. (The rate of infection among migrants is estimated to be 11 to 59 times that of the general U.S. population.³)

Untreated parasitic conditions can lead to chronic anemia or malnutrition in both children and adults. The effects of parasitic infections on the human fetus are not fully understood, but low birth weight may well be one result.

Worm infections also create serious health hazards: barefoot farmworkers and children are at risk of contracting worm infections in areas where human or animal excrement is not properly disposed.

Farmworkers have higher than average rates of tuberculosis. For example, for non-whites in North Carolina's six major farmworker counties, tuberculosis rates were three to seven times higher than the average state-wide rate of 17.4 cases per 100,000.⁴

Urinary Tract Infections

The lack of toilets at the workplace increases the risk of urinary tract infections (UTI) for migrant and seasonal farmworkers.

Chronic urine retention encourages bacterial growth in the urinary tract, stretches and weakens the bladder walls, and increases susceptibility to bladder infection. Chronic UTI may lead to kidney infection or failure, or possibly even bladder cancer.^{5 6} Adequate water intake and regular, frequent elimination are necessary if one is to avoid UTI.

Women in general run a higher risk of UTI because their shorter urethra gives bacteria easier access to the bladder. In addition, maternal urinary tract infections during pregnancy have been associated with increased rates of miscarriages, fetal and neonatal deaths, as well as premature delivery with its attendant risks.⁵

Heat Stress

Migrant and seasonal farmworkers are four times more likely as the nonagricultural workforce to suffer a heat-related illness such as heat stroke, heat exhaustion or heat cramps due to strenuous outdoor labor in hot or humid climates.³ Heat stroke can be fatal.

Farmworkers are given few, if any, rest periods, and generally do not receive potable drinking water at the worksite, which is needed to replenish daily fluid loss. They also labor under the stress of working at a piece rate, or payment for each bushel or bucket picked rather than a set hourly wage.

Breathlessness, headache, muscle cramps, nausea, weakness, convulsions, delirium, coma, and death are some of the results associated with the lack of potable drinking water.⁷ Severe dehydration leads to an unhealthy rise in body temperature and heart rate, which in turn leads to circulatory shock.⁸ Increased body temperature also may lead to liver, kidney, heart, and finally, brain damage.⁹ Of those who get heat stroke, 25% to 75% die.¹⁰

Pesticide Related Illnesses

Knowledge of the full extent of acute and chronic pesticide poisoning among migrant and seasonal farmworkers is hampered by the lack of medical training to recognize and treat these problems, the lack of information among farmworkers about their workplace exposures, the reluctance of farmworkers to report poisonings, and the lack of a national reporting system to tabulate such poisonings. Additional research is necessary to understand the full implications of chronic pesticide exposure on farmworker health.

Approximately one billion pounds of pesticides are used in the United States each year. Fifteen hundred active pesticide ingredients are combined to make 40,000 registered products. These compounds are absorbed by the body through the skin (dermal absorption), lungs (inhalation), and mouth (ingestion). Research over the past decade indicates that 98-99% of all farmworker pesticide exposure is dermal.¹¹

The probability of contracting pesticide-related illnesses is escalated by direct spraying of farmworkers; indirect spraying from wind drift; direct dermal contact with the residues on crops; or transfer of residues while eating, smoking or defecating with pesticide-contaminated hands; and bathing in or drinking pesticide-contaminated water. A survey of 469 farmworkers in southern Florida found that close to 50% of the respondents reported having been sprayed with agricultural chemicals on at least one occasion while they worked.¹²



Photo by U.S. Environmental Protection Agency

Mild pesticide exposure may result in increased salivation, tearing, blurred vision, diarrhea, slowed heart rate, weakness, headaches, or listlessness. Severe pesticide exposure may cause difficulty in breathing, respiratory failure, paralysis, convulsions, coma, and death.

The full extent of pesticide contamination of migrant and seasonal farmworkers is not yet known. Most of the data on the effects of pesticide exposure have been collected on stable occupational groups such as pesticide manufacturers, mixers, and applicators, rather than on mobile field workers. In addition, most research has investigated the consequences of acute exposure, not the effects of chronic, incessant exposure.

Since both medical and lay knowledge about the chronic effects of pesticide poisoning is limited, accurate reporting of the extent of pesticide illness is questionable. A 1973 California study found a 300-fold difference between the actual rate of pesticide-related illness and the number of reported poisonings.¹³ Health care providers are unaware of the subtle effects of chronic pesticide exposure, and migrant and seasonal farmworkers themselves certainly do not have information about which chemicals were used and how many times they have been exposed. All in all, it is believed that pesticide poisoning is vastly under-reported.

The lack of medical training to correctly diagnose and treat such poisonings, lack of medical follow-up due to the migrants' transitory lifestyle, and the reluctance of migrant and seasonal farmworkers to take time off from work for medical treatment all create obstacles to the assessment and treatment of the medical disorders that farmworkers face. Only a fraction of physicians in the U.S. receive any extensive training in occupational/environmental disease to accurately assess the symptoms. According to a 1984 study, only 1,800 of the 433,600 physicians in the U.S. had such training.¹⁴

Continued research must be undertaken to find conclusive evidence on the relationships between chronic pesticide exposure and birth defects, blood, liver, and kidney diseases, cancers, menstrual dysfunction, sterility, stillbirths, and psychological and behavioral abnormalities.

The absence of a national reporting system for pesticide poisoning also severely hampers data collection. California is the only state that requires physicians to report suspected pesticide poisonings to government officials, although every state has laws regulating pesticide use. Without adequate statistics on pesticides and their effects on the body, the problem will continue to grow, harming — even killing — many innocent people.

Dermatitis

Dermatitis (skin rash) is the most common occupational health problem among migrant and seasonal farmworkers.

Stemming from a variety of factors such as exposure to pesticides, allergenic plants (e.g., poison ivy, ragweed, and sumac) and allergenic crops (e.g., asparagus, barley, celery, lettuce, and mustard), the effects of dermatitis are intensified by the sun, sweat, chapped or abraded skin, lack of protective clothing, and the absence of handwashing facilities at the worksite. Ninety percent of occupational dermatitis occurs on the hands,¹⁵ which may temporarily prevent migrant and seasonal farm laborers from working, and ultimately reduce the farmworker family's earning power. When handwashing facilities are not available at the worksite, primary irritants can contaminate parts of the body that are even more sensitive than the hands such as the genitalia and eyelids.

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Maternal And Child Health Hazards

Agriculture is the second most dangerous occupation in the nation. Occupational hazards can adversely affect the reproductive system. Some workplace hazards are more dangerous during pregnancy, not only because of the presence of the fetus, but also because of the physiological changes inherent in pregnancy. Because pregnant farmworkers still often work in the fields, occupational hazards pose serious threats not only to the health of these women, but to their unborn children.

Migrant and seasonal farmworker women, even those who are pregnant or nursing, must often work in the fields to augment family income. As these pregnant women experience a progressive decline in exercise tolerance and cardiac reserve, strenuous field work has a distinctly negative impact on their health. Fatigued muscles are more likely to be injured, and fatigue sets in more easily during pregnancy, particularly in heavy field labor. A woman's center of gravity shifts backward during pregnancy, placing pregnant farmworkers at greater risk of musculoskeletal injury and falls.

Women must urinate more frequently during pregnancy, but due to the lack of toilets in the fields, urine retention is common, especially among migrant and seasonal farmworker women. This promotes chronic urinary tract infections, which have been linked to an increased rate of high blood pressure, hypertension, toxemia, and anemia, ultimately affecting both maternal health and fetal survival.¹⁶

Although chemical compounds used in pesticides endanger everyone, the pregnant farmworker and the child she carries are the most cruelly affected. Because of changes in a pregnant woman's lung function, she is more susceptible to pesticide poisoning. Exposure to pesticides during pregnancy has been linked both to higher than normal rates of fetal limb defects and Down's Syndrome.¹⁷ Since some chemicals are secreted in human milk,¹⁸ the infant continues to be affected when the mother nurses her baby. Pesticides also may decrease the amount of milk a woman can produce.¹⁹

Occupational health hazards also threaten children; this is especially true since agriculture is the only industry where children below the age of 16 are legally allowed to work. (The federal minimum age for agricultural workers is 12.) There is as yet no research on the chronic effects of hard physical labor on young children's joints and growing bones.

Sanitation-related diseases, such as infant diarrhea, can be fatal. Because of their immature immune systems and more rapid metabolism, children are particularly vulnerable to communicable diseases and pesticide poisoning.

Widespread health problems among migrant and seasonal farmworker children include high infant mortality, below average height, upper respiratory tract infections, parasitic conditions, skin infections, chronic diarrhea, and vitamin A deficiency. Poor nutrition coupled with water deprivation increases the toxic effects of pesticides.²⁰

Even those children not working in the fields are exposed to pesticide drift and accidents while playing in or near contaminated unsafe fields. Several studies have linked pesticide exposure in childhood to increased rates of leukemia and brain cancer.²¹ There is a critical need for research that focuses on the chronic health effects of pesticide exposure on children's immunological and reproductive systems.



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Photo by Michael Greenhalgh, BOCES Genesee Migrant Center

Respiratory Diseases

Migrant and seasonal farmworkers are exposed to a variety of substances at the workplace which can have detrimental long-term effects on lung function and ultimately limit the farmworkers' ability to work.

Fungi, grain dusts, and fertilizers, as well as some dermatitis-causing agents, expose farmworkers to a host of respiratory ailments such as hay fever, asthma, chronic bronchitis, farmer's lung, or mushroom worker's lung. Constant exposure to dust can cause permanent lung damage, and quartz and other mineral particles in aerosols may lead to serious fibrotic changes in lung tissue, increasing an individual's susceptibility to tuberculosis, which already is more prevalent among migrant and seasonal farmworkers than among the general population.

Parasitic infections also pose a threat to the respiratory system; worms rupture cells of the lung, making the lung a fertile breeding ground for infectious agents such as bacteria and viruses. Finally, overcrowded living conditions and poor sanitation contribute to the spread of colds and other upper respiratory infections.

Steps to prevent respiratory problems include technological improvements that eliminate or reduce farmworker exposure to harmful substances, the use of protective clothing and equipment, development and enforcement of re-entry intervals for field worker exposure to pesticides, and worker training about these hazards.

Musculoskeletal Problems

Few formal studies of musculoskeletal problems have targeted agricultural populations, and none have specifically examined migrant and seasonal farmworkers. Yet, farmworkers occupationally are exposed to many of the risk factors associated with musculoskeletal injury, such as heavy lifting and carrying, prolonged kneeling or otherwise difficult work positions, and an excessively fast work pace. The long-term effects of farm labor on the musculoskeletal system of children should be studied.

A common complaint among migrant and seasonal farmworkers, occupational musculoskeletal problems are classified into three categories: traumatic injuries, tissue irritation around joints, and accelerated joint degeneration.

Actions involving repetitive motion or excessive effort are strongly associated with musculoskeletal problems. Previous back injury, heavy lifting and carrying, prolonged kneeling or stooping, an excessively fast work pace, and damp or hot/humid climates all predispose workers to injury. Paying farmworkers a piece rate contributes to the risk of back injury because they maintain an unnatural posture for prolonged periods in order to earn more money.

Migrant and seasonal farmworkers must carry heavy bushels of produce and lift them up to trucks for emptying. Orchard workers must hoist canvas bags on their shoulders, climbing up and down ladders, while filling them. The short-handled hoe, which has been banned in California, Arizona, Texas, Washington, and most recently New Mexico, forces workers to assume a doubled-over stooping position for extended periods. All of these factors predispose farmworkers to back strain, arthritis, hernia, stomach, heart, and bladder ailments (from unnatural pressure), and respiratory problems (from raking up pesticide residues).²² Back injuries or broken bones also result from falls from ladders.

Back injuries are prevalent among farmworkers. A national study in 1974 of disabled migrant and seasonal farmworkers found that 37% of the respondents had severe back or spinal pain and 27% reported pain or swelling in other parts of the body.²³ Similarly, the leading health condition affecting nearly 25% of the migrant patients in an upstate New York study was musculoskeletal ailments.²⁴

Degenerative musculoskeletal problems are of particular concern with children because the effects of physical stress on a rapidly growing musculoskeletal system are unknown.

Methods of avoiding the risks of musculoskeletal injury must be researched and implemented. Phase-out of the use of the short-handled hoe in California, for example, resulted in a 34% decrease in sprain or strain injuries among agricultural workers.²⁵

Accidents

Agricultural work is the second most dangerous occupation in the U.S. Migrant and seasonal farmworkers face numerous accident hazards at the worksite because of the many tasks they perform while harvesting a wide range of crops. Documentation of the number of workers injured on the job has been poor.

In 1983, there were an estimated 1800 work-related deaths and 180,000 disabling injuries among agricultural workers age 14 and older.²⁶

There are many types of accidents, including pesticide poisoning, fractures in falls from ladders, strains from prolonged stooping or heavy lifting, eye injuries from chemicals and debris ejected by machinery, and drownings in irrigation ditches. Other frequently occurring accidents result from knives and machetes, which are used to harvest such crops as sugar cane, faulty farm equipment, or motor vehicles, particularly during the long-distance travelling to secure employment.

Brought on by working long hours without rest in the heat, prolonged stooping, lack of potable water, job monotony, and for some, noisy machinery, farmworker fatigue contributes to the accident injury rate. The remoteness of the fields where migrant and seasonal farm laborers work also hampers their receiving treatment for an injury.

The number of migrant farmworkers injured on the job has been poorly documented, in part, because a uniform definition of "recordable injury" has not been used by medical officials and government statisticians. At this time, accident statistics cannot be broken down specifically for injuries of migrant or seasonal farmworkers. In those states where workers' compensation does not cover agricultural workers, this work-related accident data is not compiled at all.

The vast majority of migrant and seasonal farmworkers have no insurance safety net. If they injure themselves on the job, farmworkers lose not only their health, but also their livelihood, and jeopardize the survival of the entire family unit. Most of these migrant and seasonal farmworkers cannot afford private health insurance. In 20 states, farmworkers are not covered by workers' compensation, and even in states where they are covered, they often do not know — and are not told — that they can collect compensation for work-related injuries or ailments.

When farmworkers retire or are disabled they may find that, though they have worked a lifetime, they are denied Social Security benefits. Employers may violate federal or state laws that require them to report income for each worker rather than paying all income to the head of household.

Preventing occupational accidents will require more careful monitoring of the workplace for hazards, providing worker-safety training, protective clothing, and building better engineering controls on machinery.



Photo by Bill Cronin. BOCES Geneseo Migrant Center.

The Challenge

Although a number of limited health resources do exist and medical treatment is provided to many migrant and seasonal farmworkers, many more go without adequate health care, which is particularly unfortunate because the occupational hazards they face are not only treatable, but also preventable. Priority must be placed on preventive services, including health education, hearing and vision screening, dental care, accident prevention, and removal of workplace hazards. These educational and preventive measures ultimately will be more cost-effective than programs that solely treat existing illnesses or conditions.

More research is necessary to determine the most effective means of promoting health and preventing disease. Collaboration and communication at the federal, state, and local levels is essential to avoid duplication of effort and to promote systematic study and solution of migrant and seasonal farmworkers' health problems.

Of highest priority should be the following preventive measures:

- Projects that attack the causes of poor sanitation, such as housing and water quality improvement, sewage control, and provision, maintenance, and use of field sanitation facilities;
- Programs that eliminate overcrowded living conditions;
- Elimination of workplace hazards;
- Health education, including worker health and safety training; and
- Provision of preventive health services, such as dental, hearing, hypertension, and diabetes screening, family planning, and pre- and postnatal care.

Until we confront and remove the root causes of farmworkers' diseases and workplace hazards, we will not see significant improvement in the health and well-being of migrant and seasonal farmworkers.

While occupational medicine is not a new field, little research has focused on the health of agricultural workers, and even less work has been done to investigate migrant and seasonal farmworkers' health. This must change.

Migrant and seasonal farmworkers are vital to the prosperity of those agricultural communities growing labor-intensive crops such as fruits and vegetables. They bring money into communities. For example, a study in upstate New York revealed that over \$4 million had been pumped into the area economy during the 1983 migrant season.²⁴

For all this, what do they receive in return? Migrant and seasonal farmworkers suffer from the effects of poor sanitation and poor nutrition; live in substandard, overcrowded housing (if they have housing at all); perform backbreaking, often dangerous work using poorly designed, sometimes defective, equipment, for which they are meagerly paid; and are exposed to pesticide contamination and parasitic infections at rates comparable to Third World countries.

Few migrant and seasonal farmworkers and their families can afford health insurance; despite the fact that they work in the second most dangerous occupation in the country, many are either not protected by workers' compensation or do not know about their coverage.

Furthermore, agricultural workers are the only U.S. occupational group denied the basic rights of the average working man or woman. The few regulations that protect them are enforced haphazardly, if at all. Finally, because of poverty, language problems, and an enforced migratory way of life, among many other factors, migrant and seasonal farmworkers are a group without power, aided by budget-slashed, shrinking support programs. Those who tend and harvest the bounty of our nation's fields deserve better.

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Pastures Of Plenty

It's a mighty hard road that my poor hands have hoed
My poor feet have traveled a hot dusty road
Out of your dust bowl and westward we rode
Your deserts were hot and your mountains were cold

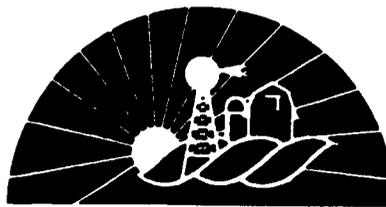
I wandered all over this green, growing land
Wherever your crops are I've lent you my hand
On the edge of the city you'll see us and then
We come with the dust and we go with the wind

California, Arizona, I pick all your crops
Well it's on up to Oregon to gather your hops
Dig the beets from the ground, pick the grape from the vine
To set on your table your light, sparkling wine

Green pastures of plenty from dry desert ground
From the Grand Coulee Dam where the waters run down
Every state in this union us migrants have been
We'll work in this fight and we'll fight till we win

It's always we ramble that river and I
We'll roam your green valleys, I'll work till I die
This land I'll defend from corporate greed
For your pastures of plenty must always be free.

words and music by Woody Guthrie
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