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National Institute for Occupational Safety and Health

NIOSH Honors 1992 FFA Poster Presentation Award Winner

On June 28, 1992, the Platte Valley FFA Chapter of Colorado won the second annual NIOSH FFA Poster Presentation Award. The winning poster, *Hazardous Chemical Spill*, demonstrated an integrated safety evacuation plan for the school and the community.

NIOSH initiated the FFA Poster Presentation Award in 1991 at the Surgeon General's Conference on Agricultural Safety and Health and continued the award in 1992 to emphasize the vital part youth play in the prevention of agriculture-related diseases and injuries. The 1992 competition was held at the Center for Agricultural Disease and Injury Research, Education, and Prevention Regional Conference in Iowa City, Iowa, June 28-30.

Conference participants judged the presentations based on community assessment for a safety program, prevention activities, outreach efforts, demonstrated application, and scope of the program. Seven finalists were selected from 56 winners of the FFA National Chapter Safety Awards to compete for the year's best community safety program. Other Chapter finalists included: Newton County FFA, Covington, Georgia; Lake Placid Senior FFA, Lake Placid, Florida; Rolette FFA, Rolette, North Dakota; Verdigrée FFA, Verdigrée, Nebraska; Cascade FFA, Cascade, Iowa; and New Auburn FFA, New Auburn, Wisconsin.



Finalists shown (L-R): Keith Mitchum, Scott Carey, GA; Stephanie Moore, Deborah Moore, FL; Serena Jouppi, Brenda Scheil, WI; Jason Heinz, Cliff Orgaard, ND; James Pavlik, Kevin Randa, NE; Stason Ikenouye, John Stahley, CO. Not Shown: Mike Hawkins, Milt Luckstead, Jr., IA.

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health



A Message From the Director



J. Donald Millar, M.D.

Who Shall Save the Children?

Having grandchildren has changed my perspective on the hazards children face. I cannot look at the world in which we live and rest easy about the children. The vulnerabilities of these little ones become all too obvious.

Children are of eternal and inestimable value. The youth of today is the future of the world. The transcendent truth is that children are worthy of our very best efforts, both as professionals and as a Nation. All children share the common risks associated with youth, yet children on farms must face the many additional hazards of the farming environment. Each and every day, farm children risk traumatic injury and death. Most of these tragic injuries are clearly preventable. These children depend on us for their survival. We must succeed in our mission of preventing injuries among children in farm families.

This mission will prove a formidable challenge. However, in dealing with agriculture, we have a distinct advantage. Farming is an occupation, indeed a way of life, that seems inherently uplifting because of the emphasis on the family and the value and nourishment of human life. Working the soil to provide sustenance for our Nation is both fulfilling and spiritually rewarding. Thomas Jefferson, the consummate agriculturalist, advocated that the farmer was the depository of virtue and believed that through the farmer, the "sacred fire" of life would prosper on this earth. Few would refute that today, the American farm family provides the focus for the "sacred fire" of traditional family values. This is a great strength for our Nation, and it is a great strength for us who practice prevention.

In agriculture, there is the great tradition of mutual sharing and cooperation for mutual benefit such that we can expect the ready and rapid spread of a sensible idea in the farming community. Most farmers are strongly motivated to "do the right thing." Most place the highest value on family and are preoccupied with assisting their children

toward productive and responsible adulthood. They have already formed organizations like FFA, FHA, and 4-H, specifically for the purpose of facilitating the responsible maturation of youth. These are great strengths to farmers, to the Nation, and to those of us who would prevent childhood injuries. Prevention is not a new idea to the farming community. It is a notion that is intimately tied to the land. Farmers, as we who are involved in occupational safety and health, have always believed in the concept of preventing losses.

Further advancing our mission is the cohesiveness of the farm family. In relating to the farm family, one is relating to a unit. Usually, in occupational health, our biggest obstacle is the need to get the "warring factions" - management, labor, government, the community, commercial interests, environmental interests, etc. - to agree on any particular course of preventive action. In agriculture, management, labor, owner, stockholder, investor, environmentalist are often the same people - namely the farm family! If the need is clear and the message is appropriate, we can expect the farm family to respond enthusiastically and together.

Thus, the truth we must tell is straightforward, clear, and compelling: (1) there are serious risks to children on the farm; (2) however, these risks can be prevented; (3) effective prevention efforts have a high probability for success on the farm and represent a sound investment; and (4) therefore, a responsible society ought to adequately support such efforts.

"Who shall save the children?" Certainly, it starts with you and me as professionals in this field. However, we must continue to tell the truth to our national leaders that this society has an obligation to support the safety of its children.

*J. Donald Millar, M.D., D.T.P.H. (Lond.)
Assistant Surgeon General
Director, NIOSH*

News From the States

Centers for Occupational Safety and Health in Agriculture

The Centers are designed to address the unique safety and health problems posed by agricultural workplaces through research, education, and intervention. For more information, contact Stephen A. Olenchok, Ph.D., NIOSH, 944 Chestnut Ridge Road, Mail Stop 224, Morgantown, WV 26505. Check the Directory on page 7 for the 6 state contacts.

Wisconsin

In April 1992, the National Farm Medicine Center (NFMC) in Marshfield, Wisconsin held the first *Childhood Agricultural Injury Prevention Symposium*. The following excerpt, summarizing the results of the conference, is from an article submitted by Brenda L. Johnson, Manager of Media Relations for the Marshfield Clinic. According to Ms. Johnson, the proceedings will be available within the next month. To request a copy, write NFMC, 1000 North Oak Avenue, Marshfield, WI 54449-5777.

Experts Endorse Farm Life and Recommend Modifications to Reduce Childhood Age Injuries

Nearly 150 national experts and area farmers endorsed the benefits of growing up on farms and recommended modifications to existing farming systems as a way to reduce the incidence of childhood injury and death on American farms.

"We felt the discipline, work ethic and other benefits of growing up on farms should be balanced with the risks of children living and working in the farm environment," said Barbara Lee, RN, MSN, Assistant Director of the National Farm Medicine Center (NFMC) in Marshfield. "We won't insist that kids not participate in farming."

The group's recommendations reflected the active participation of Central Wisconsin farmers in the symposium, organizers said. Twenty-one area farmers hosted conference participants at dinners where the farmers offered feedback on topics discussed at workshops.

"Our recommendations reflect a dramatically different direction from that taken in some Scandinavian countries," said Paul Gunderson, Ph.D., NFMC Agricultural Safety Specialist. Sweden, for example has enacted laws to restrict the participation of children in the operation of family farms.

Protective gear modifications, tax/insurance incentives and suggested research and education directions are among recommendations from nine working groups.

Eye goggles, respirator face masks and steel-toed boots that fit farm youth were recommended, as well as the use of tax and insurance rebates to encourage adoption of reasonable farm safety standards.

Participants also recommended expanded research into such topics as actual childhood farm injury experience; age-appropriate farm chores; authoritarian versus permissive parenting styles; injuries tracking from all U.S. geographic regions and types of agriculture; social and psychological influences on farm families; and determining which information source is most effective in influencing farmers' behaviors.

Specific education recommendations included utilizing such existing systems as FFA, 4-H and Farm Bureau to reach young audiences; developing stress management programs for farm parents; and offering ethnically appropriate farm safety materials.

"We felt the discipline, work ethic and other benefits of growing up on farms should be balanced with the risks of children living and working in the farm environment."

— Barbara Lee, RN, MSN

OHNAC Program

The NIOSH Occupational Health Nurses in Agricultural Communities (OHNAAC) program supports the placement of public health and occupational health nurses in agricultural communities in 10 states. To date, the program has placed 30 nurses who are actively working to develop coalitions with community leaders and existing agricultural health and safety groups. For more information on the OHNAAC Program contact: Eugene Freund, M.D., NIOSH, 4676 Columbia Parkway, Mail Stop R-21, Cincinnati, OH 45226. For more information about specific state activities, see the Directory on page 7 for contact persons.

California

The California project has begun developing public service announcements (PSA's) to broadly disseminate prevention information gathered during their investigations of serious injuries and fatalities. The PSA's recount the incident investigated and examine how it could have been prevented. To date, they have developed a PSA on the prevention of heat stroke among cantaloupe pickers and are currently producing two other announcements. The upcoming PSA's will deal with the importance of using seat belts during tractor operation and the importance of team work when two or more workers are working with machinery. All PSA's will be developed with both English and Spanish narrations.

The California project has also produced 20 written reports which detail investigations of serious preventable occurrences and suggest preventive measures. A complete list of available reports is available from Carol Conroy, Ph.D., M.P.H., at the California Department of Health Services.

Ohio

Each of Ohio's nurses is based in a hospital which serves farming communities and reports farm-related injuries and illnesses. Through this system, the nurses detected four finger amputations occurring in Wooster, Ohio from July through September 1992. Each occurred on a farm, and all four involved Amish males, 1-54 years of age.

Each incident involved the use of a gasoline or diesel powered engine that was used on the farms to power other equipment. In each case, the victim's finger was either completely or partially amputated after being caught in an exposed rotating belt. All four victims sought medical treatment.

To follow up these incidents, the nurses conducted patient interviews, visited the farms, and observed the work processes. Because the rotating belt was unshielded in all four incidents, they stressed the need for shielding all belts (an engineering control) during the follow-up visits. In addition, the Ohio Department of Health is exploring appropriate methods to disseminate engineering controls and safety and health information to Amish communities.

Agricultural Health Promotion Systems

The NIOSH Agricultural Health Promotion System (AHPS) expands the occupational safety and health programs at land grant universities to better serve the agricultural worker. These programs provide information and educational opportunities to farm workers to help prevent injuries and disease. For more information about AHPS, contact David Hard, Ph.D., NIOSH, 944 Chestnut Ridge Road, Mail Stop 1174, Morgantown, WV 26505. Check the Directory on page 7 for the 18 state contacts.

Missouri

David Baker, Director of the Missouri program, reports that Missouri has formed a statewide Agricultural Health Advisory Committee which includes the Missouri State Health Department. The committee will set agricultural health priorities within the state of Missouri, inventory the available health education resources, and develop a Missouri health hazard educational resource notebook. Missouri also plans to develop one day in-service programs for USDA Extension Service field staff and county health nurses to support a county based health educational and technical assistance program.

One specific activity, *Farm Women Safety Workshops*, focuses on the activities of farm women that can place them at risk. To date, Missouri has held 11 workshops, reaching over 216 people. Furthermore, they have developed a *Farm Women's Safety and Health Resource Notebook* which they provided to all workshop attendees. Farm families can use the information in the notebook to develop individual safety and health programs and to train employees. Missouri has scheduled 18 additional workshops and is planning a pilot program aimed at educating farm youth about potential dangers.

Single copies of the *Notebook* are available from the University of Missouri-Columbia. See page 7 for the address.



FARM WOMEN'S SAFETY WORKSHOP

University Extension
UNIVERSITY OF MISSOURI SYSTEM
LINCOLN UNIVERSITY

Cancer Control Demonstration Projects

The NIOSH Cancer Control Demonstration Projects for Farmers are designed to demonstrate the effectiveness of strategies to reduce cancer morbidity and mortality among farm populations. Issues like access to cancer risk information, early detection, timely treatment, and effective follow-up are the bases for the demonstrations. For more information, contact Paul Schulte, Ph.D., or Barbara Connally, NIOSH, 4676 Columbia Parkway, Mail Stop R-42, Cincinnati, OH 45226. The Directory on page 7 lists the contact persons for the five NIOSH sponsored cancer control demonstration projects, which are listed below.

Iowa

The Mercy Hospital System of Central Iowa has developed a project to address the *office ecology* of health practitioners: how the physician's services are set up, scheduled, and conducted. This is an effort to help physicians incorporate more prevention information into their practices. It is based on the belief that lack of knowledge about cancer risks, early detection practices, and treatment is not necessarily the primary barrier to physicians' advising patients about cancer risks, issuing timely referrals for screening, and providing follow-up treatment. This intervention addresses ways that cancer-related services can become part of the regular ecology of the physician's office - part of the regular routine.

Nebraska

The Nebraska Department of Health has designed the *Harvest for a Lifetime!* cancer control project for farm families. In the first phase of the three-year project, the department completed a telephone survey of rural and urban Nebraska residents. This survey assessed cancer knowledge, attitudes about the disease, and risk behaviors. Its purpose was to identify differences, if any, between farm and non-farm residents and to provide a research base for the *Harvest for a Lifetime!* educational activities.

The Farm Family Health and Hazard Survey

The Farm Family Health and Hazard Survey (FFHHS) is designed to document the health status of agricultural workers and their families. Additionally, this surveillance program will identify work-related risk factors and conditions of exposure to potentially hazardous agents. Six surveys are now in the pre-testing phase, and will begin full-scale data collection in 1993. This NIOSH-sponsored survey will be conducted in six states: California, Colorado, Iowa, Kentucky, New York, and Ohio. For more information, contact Nina Lalic, NIOSH, 4676 Columbia Parkway, Mail Stop R-18, Cincinnati, OH 45226. For state specific information, see the Directory on page 7 for contact persons.

Colorado

Colorado was the first state to receive approval from the Office of Management and Budget (OMB) to proceed with the survey. The survey will include an estimated 1,000 farms and will last approximately four years. The health and hazard data will be collected through a combination of telephone and face-to-face interviews, medical screening tests (e.g., lung function and hearing tests), observational walk-through surveys of the farm, quantitative measurements for noise and pesticides, and biological monitoring for pesticide exposures. The survey will emphasize several health conditions including musculoskeletal disorders, hearing loss, mental health, injuries, and respiratory conditions. Additionally, the survey includes questions regarding access to medical care, the use of safety devices and safe work practices, and various behavioral risk factors.

Farming populations are more prone to skin and lip cancer, leukemias and lymphomas, and oral cancer.

—University of Nebraska

Cancer Control Demonstration Projects

Mercy Hospital Medical Center
Des Moines, Iowa

Michigan State
University
Lansing, Michigan

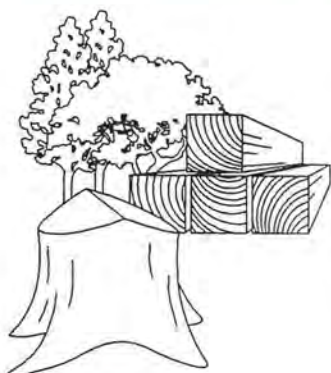
Nebraska Department of Health
Lincoln, Nebraska

University of Minnesota
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Marshfield Clinic
Marshfield, Wisconsin

Logging Fatalities in the U.S.

Logging is one of the most dangerous industries in the U.S., according to recent NIOSH research. The findings, presented at the Ninth International Symposium on Epidemiology in Cincinnati, Ohio, September 23-25, 1992, revealed grim statistics associated with the logging industry. During the years 1980-1988, the logging industry claimed an average annual work-related fatality rate of 162 deaths per 100,000 full-time workers. This rate is approximately 22.5-times higher than the general work-related fatality rate for all U.S. workers for the same time period.



The analysis of death certificates for this period revealed "struck by falling objects" as the leading cause of death. In fact, this cause was cited in nearly 50 percent of all logging deaths examined. Victims hit by a falling tree accounted for 68 percent of this type of fatality. Other common causes of death among logging workers included: motor vehicle incidents (14 percent), machinery incidents (14 percent), and being caught in, under, or between objects (9 percent).

The research also identified regional differences between logging work-related fatality rates. Fatality rates were higher in those parts of the U.S. where hardwood, saw-timber logging is most common and lower in regions which were largely involved with pulpwood timber production.

Additional information on work-related logging fatalities may be obtained from John Myers, NIOSH, 944 Chestnut Ridge Road, Mail Stop 1174, Morgantown, WV 26505.

Bedding Chopping Operations

Recent NIOSH research suggests water application may be effective in controlling dust exposures during chopping of bedding material for livestock. In response to a request for technical assistance from the New York Center For Agricultural Medicine and Health, NIOSH researchers evaluated the effectiveness of water application as a control method for dust and bioaerosol concentrations. At eight dairy barns in Cooperstown, NY, researchers took measurements both with and without the addition of one quart of water to the cut side of bedding hay/straw prior to chopping. Investigators measured airborne concentrations of total dust, inhalable dust, endotoxins, histamine, viable bacteria, and viable fungi. Additionally, researchers assessed airborne particle size distributions and analyzed bulk samples of hay for viable fungi, viable bacteria, and moisture content.

Wet chopping significantly reduced concentrations of airborne dusts, endotoxins, viable fungi, mesophyllic bacteria, and gram-negative bacteria in the dairy barns surveyed. This control practice could potentially reduce farm exposures during bedding chopping operations. However, researchers detected significant bioaerosol concentrations in some barns during wet chopping. This suggests additional controls may be needed to prevent exposures. For more information contact Stephen A. Olenchok, Ph.D., NIOSH, 944 Chestnut Ridge Road, Mail Stop 224, Morgantown, WV 26505.

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