

## **MUSCULOSKETAL INJURIES IN AGRICULTURE—AN ERGONOMICS PERSPECTIVE**

*By Thomas G. Bobick, John R. Myers, Roger C. Jensen, John E. Parker, M.D.*  
NIOSH, Morgantown, West Virginia



The National Institute for Occupational Safety and Health has begun a major research initiative addressing mortality and morbidity in the agricultural workforce. Review of data from the Supplementary Data System (SDS), maintained by the Bureau of Labor Statistics, indicates that upper extremity sprains and strains, including back injuries, account for more than 30 percent of the agriculture-related workers' compensation claims. SDS data were examined for 1985 from 25 states that provided records. A total of 9,970 sprain/strain injury claims were filed. Of these, 3,138 (31.5 percent) occurred in landscaping/horticultural services and horticultural specialties. Also, 2,268 (22.7 percent) sprain/strain injuries occurred in the production of fruits, nuts, vegetables and melons. Typical work activities from these two agricultural sectors will be observed and recorded on videotape for study using a motion measurement system to identify biomechanical stresses in this workforce. The ultimate goal of this study is to identify potential intervention strategies (work place modifications or development of specialized mechanical-assist devices) to reduce musculoskeletal injuries in these agricultural industry sectors.

---

PAPERS AND PROCEEDINGS  
of the  
SURGEON GENERAL'S CONFERENCE ON  
AGRICULTURAL SAFETY AND HEALTH

---

Edited by:

Melvin L. Myers, M.P.A.

Robert F. Herrick, Sc.D.

Stephen A. Olenchok, Ph.D.

John R. Myers, M.S.F.

John E. Parker, M.D.

David L. Hard, Ph.D.

Katherine Wilson, M.P.H.

---

Public Law 101-517

April 30 - May 3, 1991  
Des Moines, Iowa

Convened by

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

September 1992

## ***DISCLAIMER***

Sponsorship of this Conference and these *Papers and Proceedings* by the National Institute for Occupational Safety and Health (NIOSH) does not constitute endorsement of the views expressed or recommendations for use of any commercial product, commodity, or service mentioned. The opinions and conclusions expressed in the papers and abstracts are those of the authors and not necessarily those of NIOSH.

Recommendations are not to be considered as final statements of NIOSH policy or of any agency or individual who was involved. They are intended to be used in advancing the knowledge needed for improving worker safety and health.

This document is in the Public Domain and may be freely copied or reprinted. Copies of this and other NIOSH documents are available from:

Publication Dissemination, DSDTT  
National Institute for Occupational Safety and Health  
4676 Columbia Parkway  
Cincinnati, Ohio 45226  
**FAX (513) 533-8573**

U.S. Department of Commerce  
National Technical Information Services  
Springfield, VA 22161  
**NTIS PB 93-114890/\$77.00 or A/06**

Superintendent of Documents  
U.S. Government Printing Office  
Washington, DC 20402  
**GPO 017-033-00463-3**

**DHHS (NIOSH) PUBLICATION NUMBER 92-105**

**For information on other occupational safety and health problems, call:  
1-800-35-NIOSH**