

Smart Moves for Safe, Efficient Work:

Ergonomics is the science of designing the job, equipment, and workplace to fit the worker. By applying ergonomic principles in the workplace, we reduce the likelihood that workers of all ages will experience a musculoskeletal disorder and help ensure that workers of all ages stay safe, comfortable, and productive.

Work-related musculoskeletal disorders can occur when tasks are repetitive, require awkward postures to accomplish, or require excessive force. A work-related musculoskeletal disorder can range from mild muscle aches and pains to long-term disabling health problems, including carpal tunnel syndrome, tendinitis, rotator cuff syndrome, and chronic back injuries, among others. A third of injuries that cause those who farm to miss work are sprains and strains; and a quarter of them are back injuries. Work practices, which cause such musculoskeletal disorders, not only hurt workers' health, but also affect workers' earnings and growers' profits.

The resources listed below include tools and other simple solutions to improve safety and reduce musculoskeletal disorders while maintaining or improving work efficiency. The first two resources include various two-page tip sheets offering ergonomic solutions for specific problems. Many of these ideas can be adapted for many types of crops and for different size farm operations. Some include cost analyses and explain how to adapt existing equipment for new uses, as well as resources for purchasing equipment. Most of these ideas have come from the collaborative effort between growers, farm workers, and university researchers. Educators have used them to introduce their agricultural engineering students to ergonomics and as a guide for projects. You can too!

The Healthy Farmers / Healthy Profits project (University of Wisconsin) has produced a wide range of work efficiency tip sheets for nursery, vegetable, berry, and dairy operations. <http://bse.wisc.edu>

Simple Solutions: Ergonomics for Farm Workers (NIOSH Publication No. 2001-111) includes an overview of ergonomics, a series of tip sheets, and an example of how one woman implemented changes in her company that significantly reduced workers' compensation costs. Among the interventions are the use of smaller bins for grape harvesting. The National Institute for Occupational Safety and Health (NIOSH) has filled requests for over 80,000 copies in both English and Spanish. Go to <http://www.cdc.gov/niosh/topics/agriculture>. Scroll down to *NIOSH Publications on Agriculture - Ergonomics*.

Easy Ergonomics: A Guide to Selecting Non-Powered Hand Tools (NIOSH Publication No. 2004-164) presents an easy to use guideline for selecting or purchasing the best available ergonomically designed non-powered hand tools. Go to <http://www.cdc.gov/niosh/topics/ergonomics>. Scroll down to *Ergonomic Programs and Interventions*.

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