

Farm Safety, Mechanization and Ergonomics

November 2016

21ST CENTURY MANAGEMENT: *Enhancing Educational Programs for Women Farmers & Ranchers*

Team Focus

This team has been charged with reviewing the three overarching areas of farm safety, mechanization, and ergonomics. The first task of our Farm Safety, Mechanization, and Ergonomics team is to review existing programs and curricula that may benefit beginning farm and ranch women (BFRW) with the purpose of identifying gaps and best practices.

During the new materials developmental stage we will ensure farm safety, mechanization, and ergonomic enhancements will be readily available and accessible to educators and beginning women farmers and ranchers. Once completed, we will assist with the development of resource materials for BFRW programs created through this BFRDP project.

What the Team Has Learned So Far

The team leader attended the Prevention Strategies to Protect Women Working in Agriculture webinar hosted by AgriSafe Network and shared information and resources with the team. Team members continue to collect farm safety, mechanization, and ergonomic literature available for women in agriculture, including risk assessment tools that are relevant to the needs of BFRW in this content area.

Gaps

Key gap areas -- in terms of knowledge and applicable resources -- relevant to BFRW are:

- muscular skeletal disorder injuries;
- the higher percentage of women experiencing repetitive motion injuries;
- farm tools and mechanized equipment are typically designed for men (size and body type);
- the majority of farm equipment/farm tools are too heavy for women's size and body type; and
- safety switches on farm equipment often are not suited for women (size or body type).

Our early research also found that some women encounter an unreasonable amount of fear using new and emerging technologies and mechanized farm equipment and tools.

Generally, these challenges are not broadly recognized. As such, our team is working both to generate new resource materials that will help farm and ranch women access ergonomic programs designed to improve the farm safety and mechanization of their farming or ranching operation.

Helpful Resources

Key farm safety, mechanization, and ergonomics information clearing house can be found at the National Ag Safety Database (NASD).

Team Leader & Contact

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Opportunities to Contribute

If you know of programs of interest, please share those with us.



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Farm Safety, Mechanization & Ergonomics Team

Karen Funkenbusch serves as the Farm Safety, Mechanization, and Ergonomics team leader. She is the PI / Director for the “Missouri AgrAbility Project” and “Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers and Veteran Farmers and Ranchers” - “2501 Program.” Since 1994, Karen has provided leadership on key outreach and research elements for several federally funded health and safety projects. Her grant funded areas include: Hispanic / Latino farmworkers; underserved, socially disadvantaged minority farmers / ranchers; veteran farmers / ranchers; women farmers; farming and ranching with arthritis. Funkenbusch led project efforts related to student agricultural safety, health, disability, and ergonomic education programs. She is the liaison with the MU Medical School and School of Health Related Professions, and statewide Veteran’s and Women’s Group activities.

Ann Adams, RN, MSN & **Liz Brensinger**, MPH, are co-owners of Green Heron Tools, the first company dedicated to scientifically designing agricultural tools & equipment for women. Former small-scale farmers & avid organic gardeners, they apply backgrounds in nursing and public health to helping farmers stay healthy and to choose and use tools wisely. As the recipients of four Small Business Innovation Research grants from USDA, Ann and Liz have researched tool and equipment-related needs and health and safety issues facing women farmers throughout the US. Ann and Liz’s most recent grant focuses on the design of equipment to assist in the lifting and carrying of heavy materials such as feed bags, water pails & hay bales -- risk behaviors implicated in injuries and the development of musculoskeletal disorders (MSDs) among women farmers. They bring to the team expertise in ergonomics, tools use and design, body mechanics and education, as well as data from surveys, focus groups & interviews of women farmers and ag safety experts throughout the U.S.

Nadia Navarrete-Tindall, State Extension Specialist – Native Plants, earned a Ph.D. in botany/plant biology and a Master’s degree in forestry from Southern Illinois University-Carbondale and a Bachelor’s degree in Agronomy in her native El Salvador. She coordinates

the Native Plants Program (NPP) for Lincoln University Cooperative Extension (LUCE). The NPP provides education on how to identify, grow and market native edible plants and promotes those important to pollinators and other wildlife. Navarrete-Tindall’s present research includes the evaluation of native edible plants as specialty crops. In 2008 she received Missouri’s highest conservation honor when she was inducted into the Conservation Hall of Fame as a Master Conservationist.

Susan Jaster began a career in dairy farming in the early eighties in Arizona on a large commercial dairy. She continued dairy farming in Missouri on the 150 cow dairy that she co-owned with her husband Art and three children. Since 2010, Storm Rider Farm has been raising American Black Belly Sheep, a hair breed, thriving under low input conditions, great grazers with high quality lean meat. Since 2009, Susan has been a Farm Outreach Worker for Lincoln University Cooperative Extension’s Innovative Small Farmers Outreach Program (ISFOP). Being interested in small-scale-agriculture she has used many kinds of equipment, hand tools and physical labor.

Carey Portell is a mother of four who is a survivor of a drunk driver. She has severe lower body damage that has left her with partial disabilities and end stage traumatic arthritis. Being unable to work outside of the home, she is now the primary owner/operator of the family’s cattle farms. Her goal is to learn and show more creative ways to continue farming as successful woman with disabilities in a safe and efficient manner.

Danielle Skouby is a graduate student at the University of Missouri. She is working on her master’s in Food Science with an emphasis in precision agriculture. She spent 7 years working on her family’s row-crop farm which included corn, soybeans, wheat and a cow-calf operation. Danielle and her husband live near the family farm with their 8 year old son and 3 year old daughter in Hartsburg, MO. Danielle still works part-time on the family operation and is using her practical knowledge of production agriculture to help the team develop relevant content for women in agriculture. By being a part of this team Danielle is able to combine the agriculture production that she grew up around with the mechanization and farm safety that today’s farming operations rely on.