



“I’m Not As Young As I Used To Be!”

Farming & Gardening





Ohio AgrAbility Program

The Ohio State University has partnered with Easter Seals to serve Ohio's agricultural residents impacted by a disability, by providing training, technical assistance, and become a primary source of information directly to the farmer.



**THE OHIO STATE
UNIVERSITY**

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES





- Working with farmers to continue life on the farm.
 - Help to maintain productivity on the farm
 - Wide range of disabilities (Paralysis to Arthritis)
 - Information and resources
 - Technical assistance / on-site assessment
 - Secondary injury prevention
 - Assistive Technology and adaptive tools / equipment
 - Universal Design concepts

Injuries Faced by Farmers

- Head injury
- Paralysis
- Amputation
- Cut / caught in
- Blunt trauma
- Sprain / strain
- Secondary Injuries



Health Issues Faced by Famers

- Arthritis
- Hip and knee replacement
- Cardiac health
- Stroke
- Diabetes
- Cancer
- Respiratory issues



Safety Concerns for Aging Farmers

- Reduced reaction time
- Reduced balance
- Loss of Strength
- Overexertion
- Fatigue quickly
- Reduced vision
- Hearing impairment



OSU Cares about Farming Arthritis Program

Educate farmers about arthritis
History questionnaire / Screening tool
Determine level of risk
Make referrals
Provide resources on prevention and treatment

Over 800 farmer participants in the first two years.



OSU Cares about Farming Arthritis Program

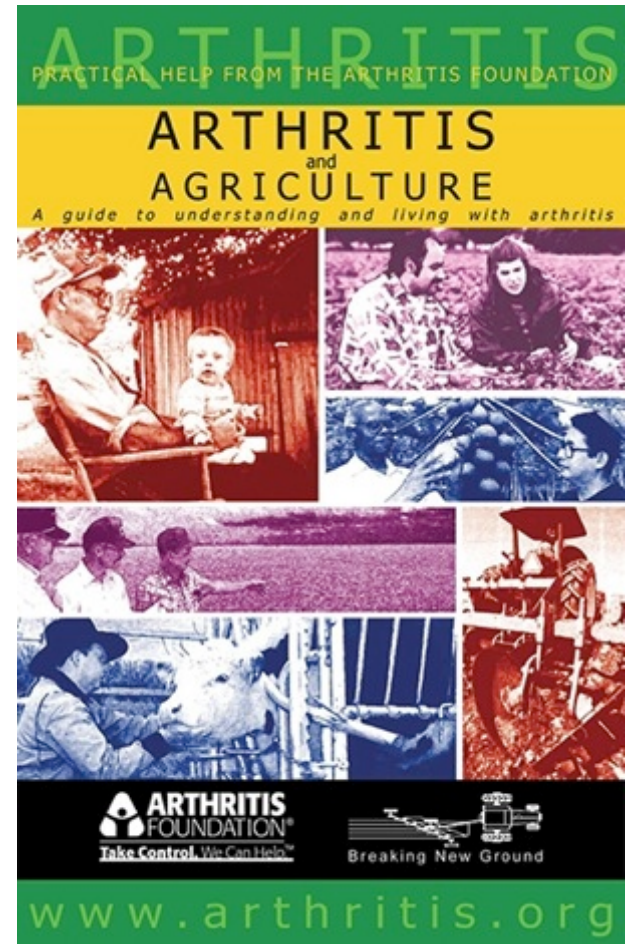
- “I’m not as young as I used to be!”
 - Most farmers believe that it is part of normal aging and little can be done to help them
- 66% of Ohio farmers think they have arthritis, and have not consulted health care provider
- 80% of farmers we interviewed had or at high risk of developing arthritis
- 73 % of farmwives interviewed were at the at high risk of developing arthritis

OSU Cares about Farming Arthritis Program

- 50% reported moderate to severe joint pain in the past month
 - Nationally among adults with arthritis,
 - 25.7% report severe pain
- 75% reported that they were at least ten lbs overweight

Arthritis and Agriculture

- Primary or secondary disability
- Effects multiple joints
- Exercise vs. Physical Activity
- Coping with stress
- Sleep, rest, & pace
- Protecting the joints
- Doctor visit? / medications
- Unproven arthritis remedies



Health and Safety: Farm or Garden

Your body is your most important and valuable tool.

- **Stretch and warm up** before physical activities.
- **Respect pain.**
 - Pain is the body's warning sign. When gardening causes pain, **STOP**.
- **Poor posture** can lead to pain, fatigue, and strains.
 - Avoid sitting slouched over while working
 - Avoid resting your weight on one leg or one arm while you work.



Health and Safety: Farm or Garden

- **Repetitive tasks can lead to injury;**
 - trying to hoe just one more row or pull just a few more weeds can cause inflammation, tenderness, and pain in joints.
- Use the **strongest** and **largest joints** and **muscles** for the job.
 - Use the legs, not your back, when lifting.
 - Use the forearm and elbow, not your wrist or fingers.
 - Use the palms to push levers or tools, not your fingers.

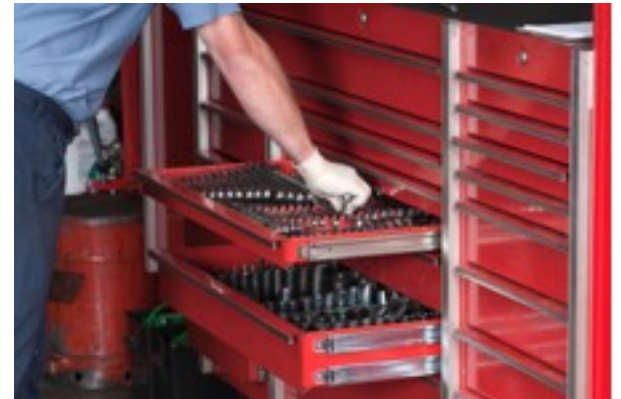
Health and Safety: Farm or Garden

- Use proper lifting technique.
- Avoid twisting motions when carry something.
- **Bend, stretch, and move around** often to avoid stiffness.
- **Switch tasks often**, going from bending jobs to reaching jobs.



Health and Safety: Farm or Garden

- Organize the day and plan ahead to increase the efficiency of processes
- Whenever possible, sit while working to take the weight off the joints.
 - keep a chair, or stool nearby when working in the same spot for long periods of time.
- Arrange tools so they are easy to reach and store.



Health and Safety: Farm or Garden

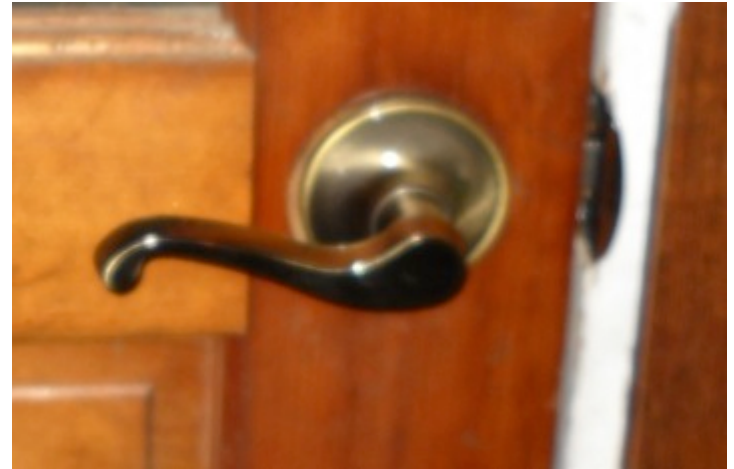
- Simplify work tasks
- Avoid jumping off of equipment
 - Use three points of contact during dismounting equipment
- Don't stay in the same or awkward position for long periods of time.
 - Take short breaks, walks or stretching
- Ask for help during cumbersome or awkward tasks



Health and Safety: Farm or Garden

Grasping or Gripping

- Avoid grasping tightly for long periods of time.
- Build up handles or levers
- Reduce vibration
- Use gloves with dexterity
- Use items to create leverage
- Use technology of assistive technology



Health and Safety: Farm or Garden

Slips and Falls: Contributing Factors

- Poor housekeeping and lots of clutter
- Poor lighting in walkways and work areas
- Carrying oversized object that obstruct vision
- Wearing the wrong footwear
- Walking too fast or running
- Distractions
- Not paying attention



Health and Safety: Farm or Garden

Preventing Slips and Falls

- Keep floors dry and clean
- Remove clutter
- Clean livestock pens regularly
- Remove dirt, mud and debris from surfaces
- Mark permanent isles or travel paths
- Inspect the farm regularly for fall hazards



Health and Safety: Farm or Garden

Preventing Slips and Falls

- Face the equipment when dismounting
- Use three points of contact when mounting or dismounting
- Ensure steps, hand holds, and railing are in good condition



Health and Safety: Farm or Garden

Preventing Slips and Falls

- Check for uneven ground when dismounting from last step
- Never jump off of steps
- Avoid trying to carry objects when mounting or dismounting



Creating a productive and safe work environment

Assistive technology / Adaptive Equipment

Extending Universal Design to the farmstead

– Home \Rightarrow Garage, Farm shop, Barn

Entrances / Accessibility

Equipment & Workplace modifications

Job Accommodations

Tools / Equipment

Livestock handling



Assistive Technology

Any kind of device, modification, or service that will help a person with a disability work and live more independently.

- low tech or high tech
- expensive or inexpensive

Ultimately helps to make it possible for someone to complete a job that might otherwise be difficult.

Create a productive and safe work environment



Universal Design

Universal Design is the creation of products and environments meant to be usable by all people, to the greatest extent possible, without need for adaptation or specialization.

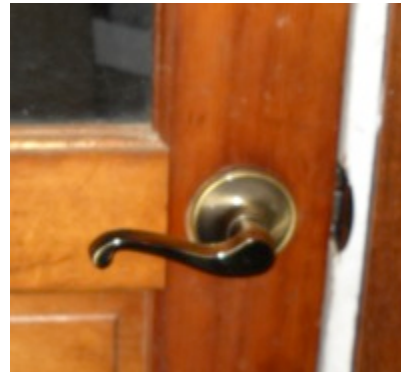
Extending Universal Design to the farmstead

– Home \Rightarrow Garage, Farm shop, Barn



Creating a productive and safe work environment

- Entrances / Accessibility
 - Doors & Gates
 - Handles
 - Stairway vs. Ladder



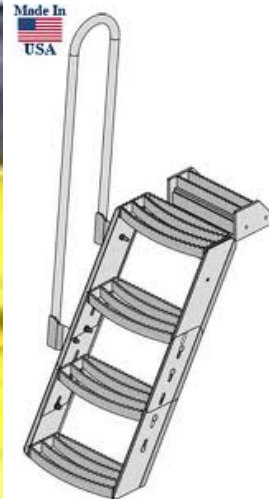
Creating a productive and safe work environment

- Mobility
 - Standing Wheel Chair
 - Mobility Scooter
 - ATV / UTV



Creating a productive and safe work environment

- Equipment modification
 - Steps
 - Hand controls
 - Steering



Creating a productive and safe work environment

- Equipment modification
 - Quick – Attach
 - Hitching Devices
 - Ag Cams
 - Seating



Creating a productive and safe work environment

- Equipment modification
 - Lifts



Creating a productive and safe work environment

- Job Accommodations
 - Anti - Fatigue mats
 - Stools / Utility Carts
 - Task lighting



Creating a productive and safe work environment

- Job Accommodations
 - Tool / parts storage
 - Hoist / lifting devices
 - Wash areas



Creating a productive and safe work environment

Storage: Indoor or Outside

- Keep most used items 18" – 54" from floor
- Reduce travel with storage items to the job location or garden



Creating a productive and safe work environment

- Tools / Equipment
 - Pneumatic powered
 - Battery powered



Creating a productive and safe work environment

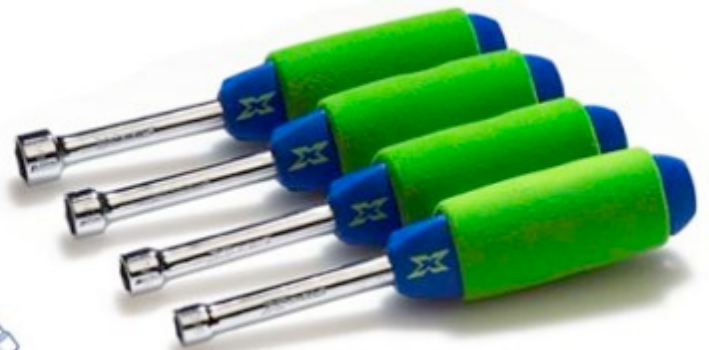
- Tools / Equipment
 - Cushioned, thicker handles
 - Specialty tools
 - Material handling



Creating a productive and safe work environment

Universal design tools

- Larger handles
- Cushioned handles
- Ergonomic grips
- Easy to use on / off switches
- Large digital display or dials
- Color coded
- Larger knobs



Creating a productive and safe work environment

- Job Accommodations: Livestock
 - Feed / Water processes
 - Efficient daily chores



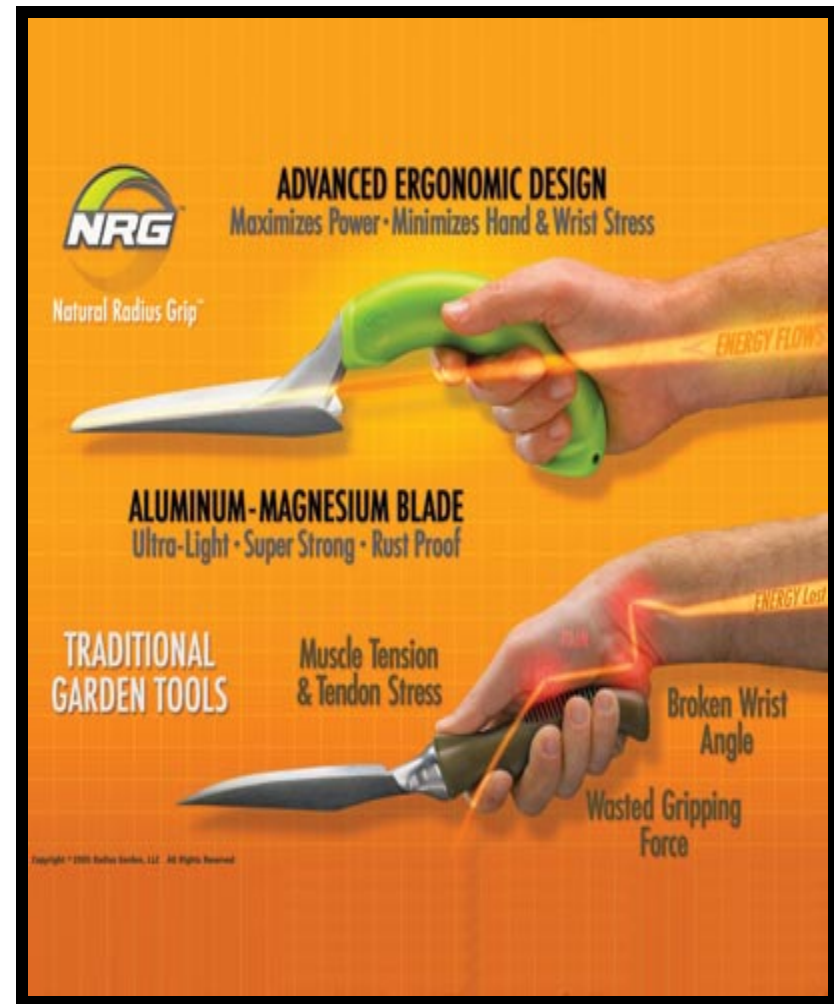
Creating a productive and safe work environment

- Job Accommodations: Livestock
 - Modify handling processes
 - Livestock handling equipment
 - Corral systems



Ergonomic Tools

- Tools should have handles that fit your hand
 - Handle should be big enough that your thumb barely overlaps your fingers
 - Handle should be small enough that you can hold it comfortably



Extended Grip



- Provides leverage
- Commercial styles
- Adaptations with PVC pipe

Modified Garden Tools

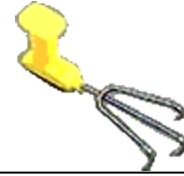


Adapted Garden Tools have been adapted or modified to “fit” your specific gardening needs. These tools are usually more appropriate if they are:

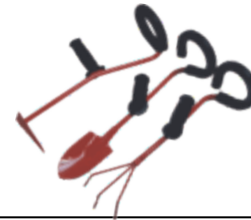
- **Small and lightweight,**
- **Have long, large and/or foam-padded handles which are easier to manipulate.**

Specialized Garden Tools

Pistol Grip Tools



Sure Grip Tools



Telescopic Tools



Braces



Long Handle Tools

Ergonomic Considerations



- Two handed grip is better
- Light weight
- Enlarged, foam, or soft handle
- Telescoping handle
 - Shorter length to accommodate task at hand

D - Grip



- **D-grip:** Tool Accessory for rakes, shovels, hoes, pitch forks, and brooms.
- Mounts mid-way down the garden tool handle to give lifting leverage to the forward hand.

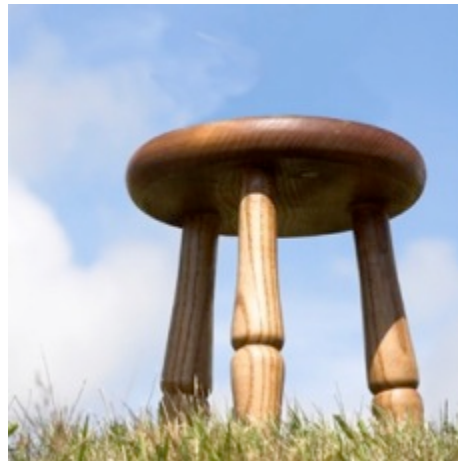
Assistive Technology for the Garden

- Tools / Equipment
 - Material handling



Assistive technology for the garden

Job accommodations and work area



Assistive Technology for the Garden

- Job Accommodations
 - Protective Equipment
 - Gloves, Knee Pad(s), Braces
 - Planting / Harvesting devices
 - Utility carts



Assistive Technology for the Garden

- Job accommodation
 - Specialty tools



Assistive Technology for the Garden

- Tools / Equipment
 - Pneumatic or Battery powered



Assistive technology for the garden

Motorized Equipment

- Labor Saving
- Vibration / Noise / Bulk
- Think about safety
- Read Mfg owner manual



Gardening: Raised Beds & Containers

Types of Raised Beds

- Raised ground beds
- Deep raised beds
- Elevated beds
- Terracing and retaining walls



Types of Container Gardens

- Miniature gardens
- Window Boxes
- Planting bags
- Hanging baskets
- Containers




Where can I find more information?

www.agrability.osu.edu




Ohio AgrAbility



Providing on-site assessment to help farmers & agricultural workers remain productive.

Welcome to Ohio AgrAbility! Ohio AgrAbility promotes success in agriculture for Ohio's farmers and farm families coping with a disability or long term health condition.



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Recent News

National Farm Safety and Health Week, Sept. 15-21, 2013
"When we think about who gets injured on farms, the answer is everybody," she said. "The farm industry has workers both young and old and often has injuries to people that aren't typically included in other workforces." The education and communication efforts of Farm...

Safety Tips for Senior Farmers
As fall approaches, many of our farmers are preparing for a long demanding harvest season. This includes our senior age farmers. For older farmers, a physically and mentally demanding harvest season can present a variety of health and safety issues, including a higher risk of injury...



Ohio AgrAbility Recognized with Arthritis Foundation Partnership Award
Ohio AgrAbility was recognized with a Partnership in Health Promotion Award by the Northeastern Ohio Arthritis Foundation. The award was presented at the Northeastern Ohio Annual Meeting on Tuesday July 16th, 2013. Over the last three years, Ohio AgrAbility has worked with several ...

Current Newsletter

September

Upcoming Events

Disabilities Job Summit
Tue, 10/08/2013 (All day) - Wed, 10/09/2013 (All day)

[see all >>](#)

Where can I find more information?

www.ohioline.osu.edu

*Assistive Technology for the Farm,
Extending Universal Design Principles onto the Farmstead,
Secondary Injury Prevention: Walking and Working Surfaces,
Secondary Injury Caused by Lifting,
Secondary Injury Prevention: Caught-in or between Objects,
Secondary Injury Prevention: Ergonomics for the Farm,
Secondary Injury Prevention: Farming with a Pacemaker,
Secondary Injury Prevention: Heat Stress
Secondary Injury Prevention: Safety for Senior Farmers,
Secondary Injury Prevention: Understanding Concussions,
Secondary Injury Prevention: Repetitive Motion,
Overexertion Causing Secondary Injury
Farming with Lower Extremity Amputation,
Farming with Upper Extremity Limitation/Amputation,
Injury Prevention: Types of Cold Stress,
Injury Prevention: Working in Cold Weather
Managing Arthritis When Farming,
Farming After a Stroke,
Managing Stress for a Healthy Heart,
Preventing Heart Disease,
Farming with Parkinson's Disease,
Farming with Diabetes
Initial Farm Injury Emergency Response
Primary Caregiver for a Farm Family Member,*



AEX-982.1-11

Ohio AgrAbility Fact Sheet Series

Managing Arthritis When Farming

S. Dee Jepson, Assistant Professor, State Safety Leader, Agricultural Safety and Health, Food, Agricultural and Biological Engineering, The Ohio State University

Kent McGuire, Ohio AgrAbility Program Coordinator, Agricultural Safety and Health, Food, Agricultural and Biological Engineering, The Ohio State University

Danielle Poland, Student Intern, Agricultural Safety and Health, Food, Agricultural and Biological Engineering, The Ohio State University

Arthritis tends to affect most farmers in their hands, knees, and hips because these are the joints that take the most pressure. Seven strategies minimize pressure on these points, reducing pain and stiffness.

1. Maintain a healthy weight. The Arthritis Foundation suggests that every 10 pounds lost relieves 40 pounds of pressure on the knees.
2. Look for ways to simplify body movements.
 - Adding a drop-down step with non-slip material and attaching an extra handle to farm machinery.
 - Installing suspension seats or seat cushions with lumbar support and adjustable armrests in tractors will absorb shock, protecting joints.
 - Adding mirrors inside and outside of the tractor cab decreases twisting.
 - Using a wheelbarrow or utility vehicle to move heavy objects minimizes pressure on the knees and back.
 - Adding padding to gears and handles. Building up tractor knobs, levers, small tools, or handles with foam and duct tape can make them easier to grasp, especially if hand strength is limited. Adding an extender to a handle can also change the leverage and make it easier to use.
3. Maintain a healthy lifestyle—which includes a healthy diet.
4. Don't smoke. Research by the Arthritis Foundation

has found a correlation between smoking and arthritis.

5. Utilize treatments. Many of the traditional treatment methods for arthritis can improve mobility. Hot and cold packs on the affected joints, anti-inflammatory medication, or wearing a brace that helps prevent inflammation around joints are helpful treatments.
6. Consult an occupational therapist. Consider visiting with an occupational therapist to learn more about ways to protect the joints.

A purposeful exercise program

Have a purposeful exercise plan. Farmers do get exercise in the physical work they do every day, but a "purposeful" exercise plan includes stretching and warming up, strength and endurance exercises, and low-impact weight bearing activity that can benefit the joints—such as walking or swimming. A purposeful exercise will protect, strengthen, or maintain function in joints. Exercises should include:

- Range of motion exercises to extend joints through their limits of movement. These help maintain normal joint movement, relieve stiffness, and restore flexibility that's been lost.
- Strengthening exercises to help retain or increase muscle tone. Strong muscles help keep joints stable and more comfortable.

Where can I find more information?

www.agsafety.osu.edu

www.agrability.osu.edu

www.agrability.org

OSU Ag Safety & Health



Your local OSU Extension office.



How can I contact the Ohio AgrAbility program?



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Questions?

EEET forms

Farmer Quality of Life Survey