



Resources for Agricultural Workers with Disabilities and other Functional Limitations

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Canadian Agricultural Safety Association
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Session Overview

- AgrAbility mission, history, and structure
- International outreach
- Resources available to professionals and workers in any country
- Canada-specific resources

AgrAbility Mission

The vision of AgrAbility is to enhance quality of life for farmers, ranchers, and other agricultural workers with disabilities.

- gainful employment
- access to appropriate assistive technology
- information related to the treatment and rehabilitation of disabling conditions
- support for family caregivers of AgrAbility clients



AgrAbility History

- AgrAbility began in 1991 as part of the USDA Cooperative State Research, Education, and Extension Service (now NIFA)
- Breaking New Ground at Purdue University started in 1979 and was a model for AgrAbility, along with several similar projects
- In 1991, there were 8 funded state and regional AgrAbility projects (SRAPS); as of 2019, there are 20 SRAPs and several previously-funded affiliate projects
- One National AgrAbility Project (NAP) supports the SRAPs and provides limited services to those with no access to AgrAbility projects.

What Disabilities or Functional Limitations does AgrAbility Address?

AgrAbility addresses a wide variety of disabling conditions in agriculture, including, but not limited to:

- Amputation
- Arthritis
- Back impairment
- Deafness/hearing impairment
- Developmental disabilities, such as cerebral palsy or autism
- Disabling diseases, such as cancer or heart disease
- Mental/behavioral health problems
- Respiratory diseases
- Spinal cord injuries
- Stroke
- Traumatic brain injury
- Visual impairments

What Agricultural Operations does AgrAbility Serve?

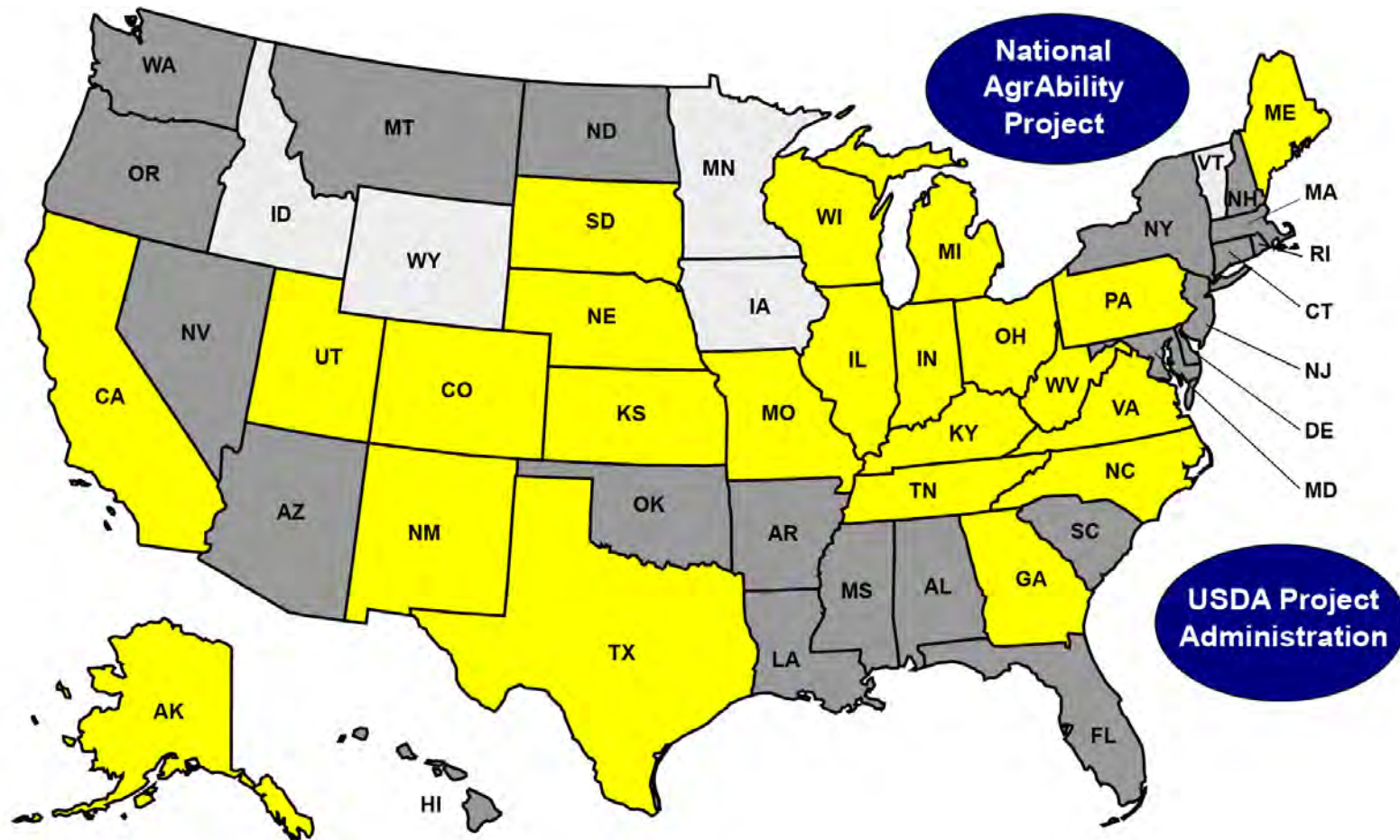
Just as disability is a wide continuum, agriculture is also:

- Row crops: corn, soy, wheat, cotton, etc.
- Ranching
- Sheep and goats
- Dairy
- Produce, including organic
- Orchards
- Agritourism
- Niche markets, like llamas, herbs, etc.
- Floriculture
- Aquaculture
- Hydroponics
- Aquaponics

Disability within the Agricultural Community

- Causes of disability
 - Traumatic injury (agriculture is one of the most hazardous occupations). Many injuries also come from off-farm incidents.
 - Disease (Arthritis impacts many farmers)
 - Aging (Average age of U.S. farmers is 58+)
 - Vision
 - Hearing
 - Mobility

U.S. AgrAbility Projects 2019



Key	National Project/Federal Gov	State/Regional Project	Affiliate Project	No Project

AgrAbility Services/Priorities

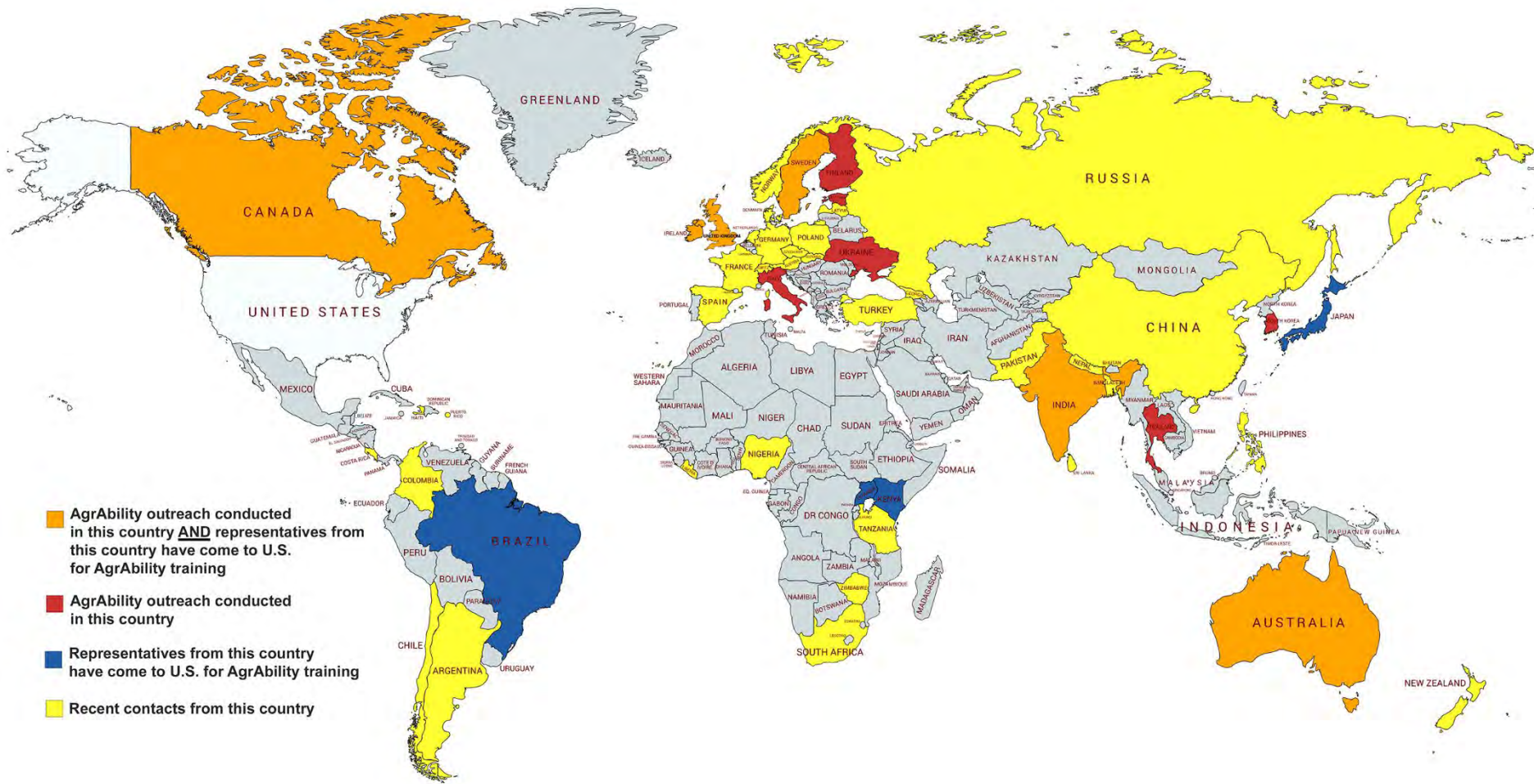
- Education
 - Workshops; resource development; online education
- Networking
 - Leveraging efforts with other groups; peer support
- Direct Assistance
 - Site visits; consultations; business planning
- Marketing
 - Public awareness activities and materials



What Does AgrAbility Not Provide?

- Funding
- Equipment (though some Tech Act Project partners provide certain AT)
 - Most funding for assistive technology comes through state vocational rehabilitation systems
 - How about Canada?
 - Other sources of grants and loans are available www.agrability.org/funding-assistance

International Impact



International Website Use

- www.agrability statistics: 2018/06/01 – 2019/05/31
 - Web visitors from at least 118 countries
 - Most frequent visitors:
 1. United States
 2. China
 3. Unknown
 4. Ukraine
 5. Russian Federation
 6. India
 7. France
 8. Brazil
 9. United Kingdom
 10. Canada
 11. Germany
 12. Turkey
 13. Republic of Korea
 14. Denmark
 15. Philippines
 16. Netherlands
 17. Indonesia
 18. Italy
 19. Thailand
 20. Romania

International Participants - NTW

- The AgrAbility National Training Workshop (NTW) is the foremost educational event addressing issues related to disability in agriculture.
- Recent international attendees from
 - Uganda
 - Sweden
 - Canada
 - Brazil



Next AgrAbility National Training Workshop (NTW)

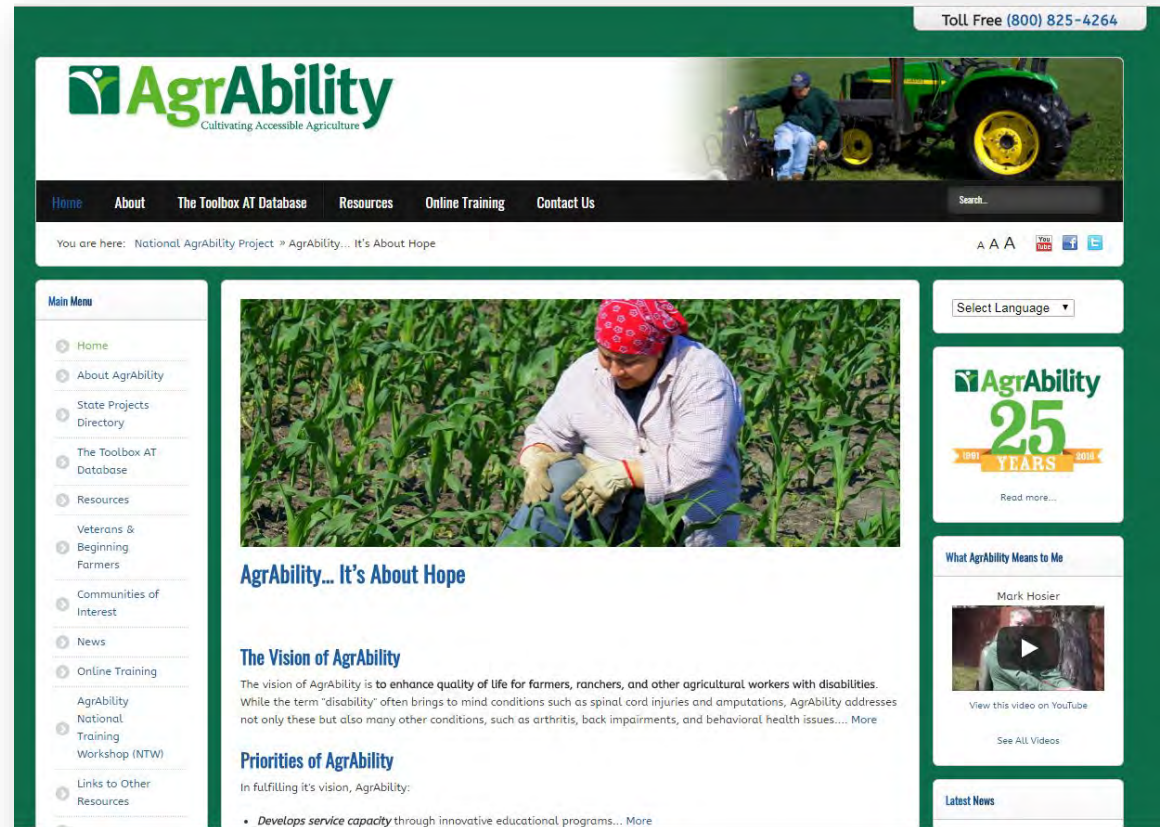
- March 23-26, 2020
- Madison, Wisconsin USA
- Visit www.agrability.org/ntw
 - Call for presentations and posters
 - Hotel and registration information coming soon
 - Archives from past NTWs



Educational Resources:

www.agrability.org

- Project information and contacts
- Downloadable resources
- Online training
- News and upcoming events



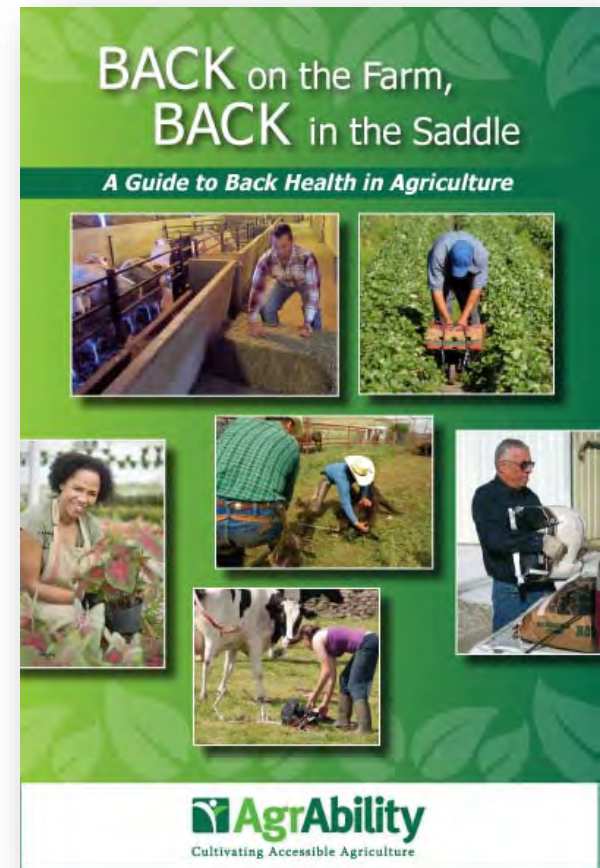
The screenshot shows the AgrAbility website homepage. At the top right, there is a toll-free number: Toll Free (800) 825-4264. The main header features the AgrAbility logo with the tagline "Cultivating Accessible Agriculture" and a photograph of a person operating a green tractor. Below the header is a navigation menu with links for Home, About, The Toolbox AT Database, Resources, Online Training, and Contact Us. A search bar is located on the right side of the navigation menu. Below the navigation menu, there is a breadcrumb trail: "You are here: National AgrAbility Project > AgrAbility... It's About Hope". On the left side, there is a "Main Menu" with a list of links: Home, About AgrAbility, State Projects Directory, The Toolbox AT Database, Resources, Veterans & Beginning Farmers, Communities of Interest, News, and Online Training. The main content area features a large photograph of a person wearing a red bandana and gloves, working in a field. Below the photograph is the heading "AgrAbility... It's About Hope" and a section titled "The Vision of AgrAbility" with a brief description of the organization's mission. Below that is a section titled "Priorities of AgrAbility" with a list of bullet points, including "Develops service capacity through innovative educational programs... More". On the right side, there is a "Select Language" dropdown menu, a "25 YEARS" anniversary banner (1991-2016), a "What AgrAbility Means to Me" section featuring a video by Mark Hosier, and a "Latest News" section.

Examples of Assistive Technology in Agriculture



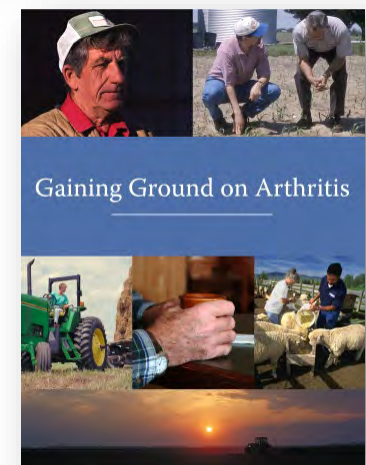
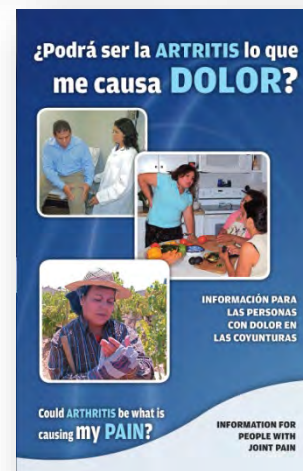
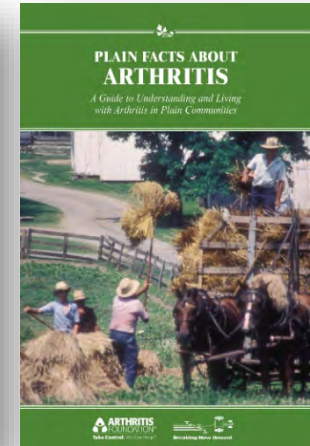
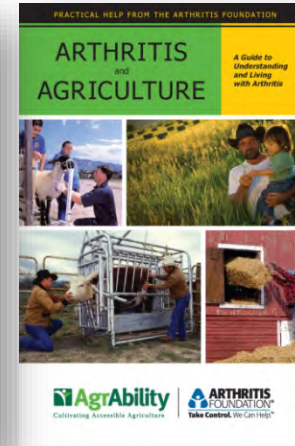
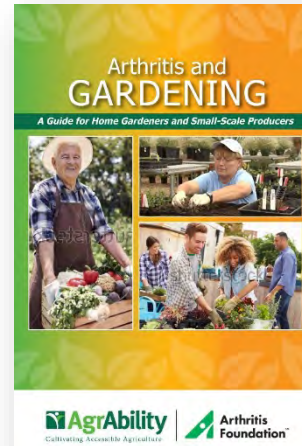
BACK on the Farm, BACK in the Saddle

- Back problems = most common disabling conditions reported by AgrAbility clients.
- 21-page booklet discusses many aspects of back problems in ag settings
- www.agrability.org/resources/back



Arthritis Resources

- *Arthritis and Gardening*
- *Arthritis and Agriculture*
- *Plain Facts about Arthritis*
- *¿Podrá ser la Artritis lo que me causa Dolor?*
(Could Arthritis be the cause of my Pain?)
- *Gaining Ground on Arthritis DVD*



Recent Publications

- *AgrAbility 1991-2016: 25 Years, 25 Stories*
 - A summary of AgrAbility's 1st 25 years with focus on client success stories
- *AgrAbility: A USDA Program with Demonstrated Impact*
 - A concise view of AgrAbility with impact data and client success story



Plowshares

- 30+ technical reports on specific topics, such as farming with a spinal cord injury
- Several new topics and updates underway

AGRABILITY PLOWSHARES TECHNICAL REPORT

AgrAbility
Cultivating Accessible Agriculture

Agricultural Machinery Access Lifts: Design, Utilization, and Safety Issues

Revised June 2018:
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Original Publication 2000: (Plowshares 8)
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INTRODUCTION

Each year, an estimated 250-300 farmers and ranchers in the U.S. experience permanent spinal cord injury (Field, 1992) and hundreds more suffer strokes, loss of limbs, and other conditions that severely limit their mobility. Many of these agricultural producers are faced with the challenge of accessing the operator stations of the machinery that they use regularly to till, plant, spray, harvest, or complete many other farming/ranching tasks.

This paper discusses accessibility-related issues, including potential assistive technology options, selection criteria and safety related to mechanical lift technologies for accessing tractors, combines, or other pieces of equipment utilizing mechanical-lift technology. Having the appropriate information, the right mindset, encouragement from others, and professional advice/assistance, many producers with mobility impairments regain access to equipment that is so essential to their livelihood. Although the homemade and commercially produced access solutions discussed here apply specifically to agricultural machinery, the concepts demonstrated are relevant to various pieces of off-highway heavy equipment used in many industries.

Early Equipment-Accessibility Research

Over the years, some of the most frequent requests received by the Breaking New Ground (BNG) Resource Center at Purdue University have been related to accessing agricultural tractors and machinery by farmers/ranchers with restricted mobility. During the early 1980s, with support from Deere & Company and the National Institute of Handicapped Research (now the National Institute on Disability, Independent Living, and Rehabilitation Research) BNG began to explore various solutions that could assist these individuals in accessing their equipment following a spinal cord or other disabling injury or condition. From this early research came a set of design criteria to guide development of "person-access lifts", criteria that subsequent experience has proven useful.

BNG's first priority was to document and evaluate the designs of those access lifts that had been homemade or fabricated locally by welding or machine shops, often with the input of professional engineers. These early access lifts generally fell into three categories: sling lift, platform lift, and chair lift.

Several less conventional concepts were also studied, among them: (1) operator carried up to the machine's operator station by a second person, (2) operator elevated to the operator station via front-end loader bucket or forklift, and (3) various ramp configurations whereby operator could be wheeled, walked, or otherwise helped up to the level of the operator station. While each of these methods "worked", they presented safety concerns and/or relied heavily on a second person, thus were, not endorsed or encouraged by BNG.

¹ Dr. Ehlers is an Assistive Technology Professional (ATP) and serves as the Technology Outreach Coordinator for the National AgrAbility Project.

² Dr. Field is Director of the National AgrAbility Project, headquartered at Purdue University, and a faculty member of the Department of Agricultural and Biological Engineering.

³ Dr. Yoder is an Assistant Professor in the Department of Environmental, Agricultural and Occupational Health College of Public Health at University of Nebraska Medical Center.

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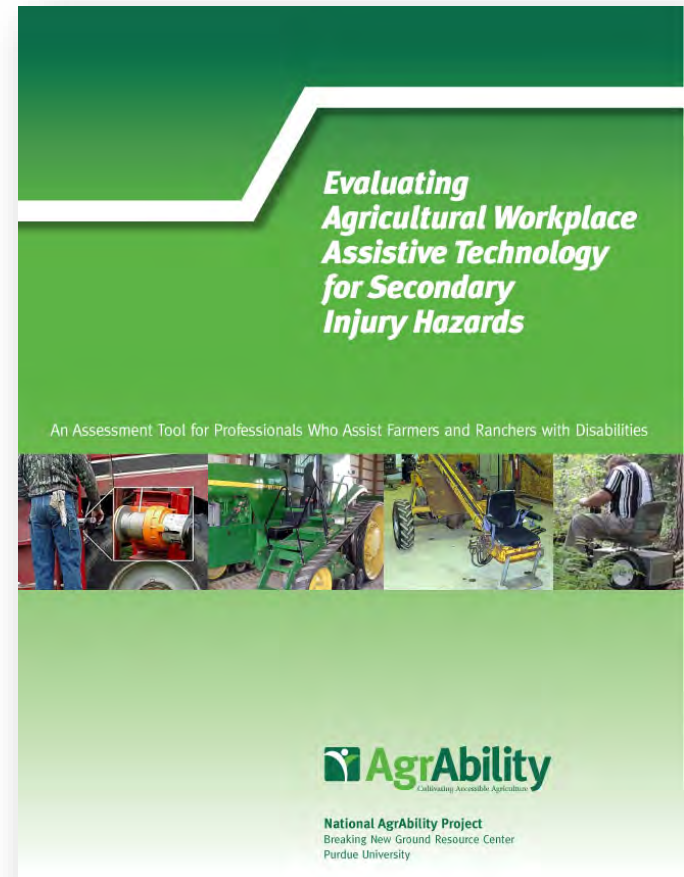
Conducting Agricultural Worksite Assessments

- Step-by-step guide for evaluating farms and ranches
- Reproducible assessment form
- Working on revisions and new electronic data entry forms



AT Secondary Injury Evaluation

- Step-by-step guide for evaluating AT for secondary injury hazards
- Reproducible assessment forms



Canada-specific Resources

- CASA – Back to Ag Program (AT \$)
 - www.casa-acsa.ca/en/grants/back-to-ag-program
- Canadian Farmers with Disability Registry (CFWDR) - National Disabled Farmers Entrepreneurship and Leadership Network
 - www.cfwdr.com/fr
- Manitoba Farmers with Disabilities (+ Assistive Tools Kit)
 - www.mfwd.ca
- Saskatchewan Abilities Council
 - www.abilitiescouncil.sk.ca

Thank you for participating!

Questions and Discussion

Action Trackchair



Journeyman Scooter



Lend-A-Hand Forearm Assistive Device



Plastic-Mulch Lifter



Quick-Cut Greens Harvester



Hand-Saver Hay-Bale Handles



Hitch-Mounted Calf Carrier



ATV/UTV-Mounted Calf Catcher



Kaycee Cutter Hay Knife



EasyLine Milker Unit Carrier



Bobman FL Cleaner/Spreader



Assistive Technology in Agriculture: Lower Tech Examples

