



Promoting Success in Agriculture for People with Disabilities and Their Families

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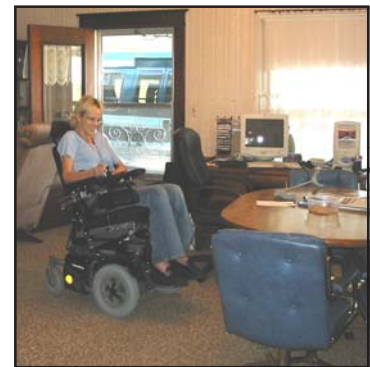
Easter Seals, Inc.

An On-the-job Fall Changed Jyl Waters' Life

Both Jyl Turner and Don Waters grew up on Iowa farms. In 1988 they married and began farming on their own southwestern Iowa grain operation. They currently farm 2,000 acres of corn and soybeans and are a DeKalb and Asgrow dealership.

On May 5, 2002, while loading seed soybeans into a customer's seed tender, Jyl blacked out and fell off the forklift. She fell three feet onto a cement floor. Her son, Jacob (10), and daughter, Tara (7), were in the shed with her at the time. Jacob immediately called 911.

Jyl was life flighted to a hospital in Omaha, Nebraska where she remained for five weeks. The cause of her blackout could not be determined. She was then transferred to the Madonna Rehabilitation Hospital in Lincoln, Nebraska where she underwent ten weeks of rehabilitation therapy. On September 6, 2002, she returned home.



Jyl Waters in her home.

Jyl sustained injuries to her 6th and 7th cervical vertebrae, which resulted in paraplegia. She can still move her arms quite well but has limited finger and hand dexterity. With continued rehabilitation she hopes to regain hand strength and the dexterity soon. Currently she uses an electric wheelchair to get around her home and the farm.

Prior to Jyl's injury, she was highly involved in the operation, doing much of the fieldwork along side Don. While Jyl was in the hospital and the rehabilitation facility, Don heard about AgrAbility from the staff at rehab facility. At the same time, a county extension education director who lives in the Waters' county heard about Jyl's incident and contacted Mary Yearns, Program Coordinator for the Iowa AgrAbility Project at Iowa State University. Mary called Don to introduce him to and offer AgrAbility Project services. She and Chuck Larson, Rural Rehabilitation Specialist, Easter Seals Rural Solutions (Iowa AgrAbility Partner) went to visit Don.

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Client Feature

Mary and Chuck provided recommendations for making the home more accessible to Jyl. One recommendation both Don and Jyl especially liked was to create a no-step entrance by raising the driveway up even with the front door of the house. This eliminated the need to construct a ramp for Jyl to use. Jyl says, “Moving the driveway was a perfect idea. It doesn’t change the look of the house



Before renovations

and no one knows a person with a wheelchair lives here.” In addition to the driveway, AgrAbility staff provided ideas for bathroom, bedroom, and kitchen modifications. So far, the Waters have re-done the bathroom, widened doorways and removed a wall between the kitchen and dining room to increase Jyl’s ease of mobility. They are going to wait

on updating the kitchen until they have a better sense of how much hand and finger dexterity Jyl will regain.

Prior to the incident, Don and Jyl handled most of the farm work themselves, except during harvest when they hired a man to assist. Since then, the hired man has been working more. Jyl has a personnel assistant who comes to the house twice a day to aid her in the mornings and evenings. In addition, the Waters have hired a woman to assist with housework and cooking several days a week.



After renovations

By next year, Jyl wants to be back working on the farm. After Jyl returned home, she and Don met with Chuck to discuss ideas for farm modifications. Jyl said “I feel hopeful because there are a lot of options out there [according to Chuck] for people with injuries like mine.” This winter they are planning to re-vamp the lawn mower so it is ready for Jyl next spring. They are also considering purchasing a golf cart or John Deere Gator. Jyl hopes to add a lift to the tractor so she can continue with fieldwork as well. At this point, Don handles most of the record keeping for their business. He uses a computer system to do so. In the future, however, the Waters anticipate Jyl becoming more involved in this area.

Overall, Jyl says, “I’m just taking one day at a time” and hopes to be back on the tractor again by summer 2003! ❖

The Crazy Kowboy

Singer-songwriter Brooke Turner found he couldn’t do much to help his sister, Jyl Waters, while she was in the hospital recovering from a fall that left her with paraplegia. So he did what any good songwriter would do, he wrote a song for her. Turner then recorded the song, “Ridin’ for the Brand,” and took it on the road to raise money for spinal cord research. On August 11, 2002, he saddled up his horses and started a 730-mile ride from Clarinda, Iowa to Nashville, Tennessee giving concerts all along the way. He finished the trip on September 18, 2002.

All the money raised from donations and CD sales during that ride, and all future funds raised through CD sales will go directly to spinal cord research. During his trip, several county cattlemen associations joined Turner’s effort by donating time and energy arranging for and serving meals to the concertgoers. The net proceeds of the meals also went to the cause.

If you would like to learn more about this dedicated brother, details about his trip, and/or how to make a donation to his efforts, check out his website at <http://www.krazykowboy.com>

Preventing Slips and Falls For Farmers/ Ranchers with Mobility Impairments

Falls, whether caused by a slip, loss of balance, or poor vision, are the leading cause of injury, disability, placement in nursing homes, and premature death in elderly Americans.¹ Recently, the American Geriatrics Society developed guidelines to help older people prevent falls.² While developing these guidelines, the authors recognized that falls are generally the result of an interaction of multiple and/or diverse risk factors and situations, many of which could be corrected. Furthermore, this interaction could be modified by the person's age and disease (or lack thereof), and by the environmental hazards present.

“According to the National Safety Council 27.7% of slips and falls occur either at work or while working in the house/yard.”

Across the country, the average age of the farmer/rancher continues to increase. Combining that fact with the fact that farmers and ranchers with a disability work in dangerous environments, the probability of slips and falls would seem to be inevitable.

In fact, secondary injuries due to slips and falls are all too common for farmers/ranchers affected by disabilities. Back injuries, strokes, leg amputations, neuromuscular impairments, and other mobility impairments can impact stability when walking on slippery or uneven surfaces.

“According to the National Safety Council 27.7% of slips and falls occur either at work or while working in the house/yard.”³ The risk of secondary injuries due to a slip or fall increases for farmers/ranchers with mobility impairments.

A mobility impairment can increase the risk of a slip or fall injury due to lack of sensation in the foot causing

an inability to feel the shoe slipping, or inability to react quickly when the foot does slip. Overall stability and balance can also be affected by the mobility impairment, further increasing the risk of a fall. The next section focuses on various assistive technology solutions that can help to reduce slips or falls that can cause a secondary injury. ❖

1. Hoyert, D. L., K. D. Kochanek, and S. L. Murphy. 1999. Deaths: Final Data for 1997. National vital statistics reports. Publication 47-19. Hyattsville, Md: National Center for Health Statistics.
2. American Geriatrics Society, British Geriatrics Society, & American Academy of Orthopedic Surgeons Panel on Falls Prevention. 2001. Guidelines for prevention of falls in older persons. *Journal of American Geriatric Society*. 49:664-672.
3. National Safety Council, 2001. Injury Facts. 22.

Preventing Slips and Falls For Farmers/Ranchers with Mobility Impairments

Surfaces

Surfaces around a farmstead vary from a vinyl floor in the house, to a concrete floor in the machine shed or shop, to uneven terrain around the farm. Some present problems or hazards for people with disabilities. A variety of products and procedures can help reduce those hazards.

In the home: Walking indoors on a vinyl floor with wet shoes can be hazardous. A throw rug with an anti-slip backing should be used in such high-traffic areas. Lok-Lift® Rug Gripper Tape or a coating of Plasti Dip Super Grip® can be used to modify rugs without anti-slip backing. Non-skid Safety Tape can be used to prevent slips in the bathtub or on indoor stairways.



Non-skid adhesives when applied to rugs prevent slips and falls.

In farm buildings: Non-slip paint coatings can be applied to shop floors. It can be as inexpensive and easy as mixing silica sand with regular floor paints. Chemical “etching” can also be applied to create non-slip surfaces. Note, anti-slip solutions, such as tread tapes and silica sand in paint, will not be effective in oily or icy conditions. This is due to inadequate surface profile needed to make contact with the footwear. For these solutions to work, all spilled oil should be cleaned up immediately and icy surfaces treated frequently. Keeping a floor, such as in a milking parlor, dry may not always be possible. Therefore, anti-slip mats should be used. When choosing a mat, look for good drainage features.

Outside: Uneven terrain surfaces should be well drained and maintained. Crushed limestone mix versus loose gravel reduces foot slippage. In climates with freezing temperatures, make sure that plenty of ice-melting material is supplied in various “strategic” locations around the farm. Quick and frequent application of such materials to slippery surfaces is essential.

Footwear and Mobility Aids

A good pair of boots can make a big difference in slip/fall prevention. Replace worn boots with new boots that have a good anti-slip tread pattern. Look for a tread pattern that would provide good traction in wet, muddy conditions. Boots with a heel notch provide better grip when walking downhill. In addition, many companies make ice gripper attachments for boots/shoes. These attachments can be easily secured to most shoes and boots.

A cane or walking stick can also provide a farmer/rancher stability when he/she is walking on uneven surfaces. Broader-based tips and ice grip attachments

such as Five Cleat Ice Pick for Canes can provide further stability on slippery surfaces. A broader-based cane tip increases the surface area that the cane tip can grip.



Five Cleat Ice Pick for Canes: This plated steel attachment has five points to prevent a cane or crutch from slipping on snow-covered, slushy, or icy surfaces. It clamps onto canes from 5/8" - 1" diameter.

Even with the best footwear and cane tips, slips and falls can still occur. Many farmers have reported using a variety of motorized mobility aids to reduce the

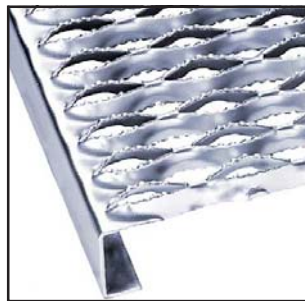
Assistive Technology Notes

Slips and Falls

risk of a fall as well as fatigue when walking long distances. Examples of these aids include a modified riding lawn mower, a golf cart, a powered scooter, and various all-terrain vehicles. Regardless of what motorized vehicle is used, a farmer/rancher with a mobility impairment should always carry a communication device (e.g., a cell phone or two-way radio) to call for help if the vehicle gets stuck or breaks down.

Steps and Handrails

Climbing up and down steps, ladders, and stairs can be hazardous for farmers/ranchers with mobility impairments. The use of modified steps and handrails can help prevent a potential fall. Steps on equipment



Grip Strut® can be used steps on equipment or machinery.

or machinery should be constructed of a non-slip material, such as Grip Strut® safety grating material. This material has a high-load capacity and low maintenance costs. In addition, these steps should be maintained to prevent a build-up of mud, which will counteract the anti-slip properties of the step. Wider and deeper steps provide for increased surface area to support the entire foot or both feet rather than providing just enough space for a portion of a foot. Expanded metal can also be applied to existing steps to reduce foot slippage. Handrails applied alongside the steps should be used to provide greater stability when mounting and dismounting from the tractor and prevent a potential fall.

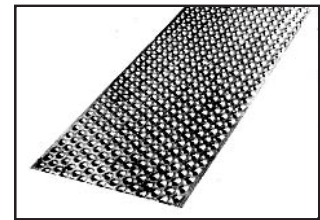


Tread-Grip® Ladder Rung Covers

Ladders can be modified with a non-slip ladder rung material called Tread-Grip®, Traction-Tread, or Safety-Tread, or

anti-slip ladder rung covers. These materials can provide a high-traction anti-slip surface to prevent foot slippage.

An anti-slip surface can also be easily applied to stairs using a material called Skid Guard Safety Tape, which can be found at most hardware stores. Stairways should have handrails mounted on both sides of the stairs to provide support and stability for anyone ascending and descending.



Traction-Tread

Note, while anti-slip materials (e.g., tread tapes, Grip Strut®, ladder rung covers, non-skid mats) reduce potential slips and falls, these same materials can become a catch hazard and result in a fall for farmers/ranchers with mobility impairments who lack sensation in lower extremities. The material can grip a person’s foot so well that he/she may forget to or have difficulty lifting his/her foot up and off of the material, thus resulting in a potential fall.

Summary

Slips and falls will continue to be a number one concern for farmers/ranchers with mobility impairments. The above suggestions are only a few of the many solutions that can be tried to reduce these risks. However, the most valuable recommendation shared by many farmers/ranchers is “Slow down.” Moving too fast increases everyone’s risk of a slip or fall. ❖

Innovations That Work for Home and Farm!

The Iowa AgrAbility Project is a joint effort of Iowa State University Extension and the Rural Solutions Program of Easter Seals Iowa.

Since 1991, Iowa AgrAbility has been helping farmers and farm families who are affected by disabilities. Their disabilities may be the result of farm or non-farm accidents, or health-related conditions such as stroke, heart attack, arthritis, or cancer. Often these families have been encouraged to pursue another occupation rather than continue farming.

People with disabilities often must overcome significant barriers to remain in farming or farm-related occupations. They may not have access to rehabilitation technology or may not even know if it is available. If they are aware of the technology, they may lack the financial resources to pay for it.

Iowa AgrAbility staff knows that people with disabilities, however, do not have to quit farming. Technology and support services are available and affordable now to help people with disabilities remain in farming and continue living in their own homes. The Iowa AgrAbility Project is one of the resources available to help. A few of the services Iowa AgrAbility offers are listed below:

Neighbor-to-Neighbor

The Neighbor-to-Neighbor Program is a recently “re-vamped” one-on-one mentoring program. This program pairs a veteran client of the Iowa AgrAbility Project with a new client. Most times, the veteran client is a disabled farmer who previously worked with Iowa AgrAbility, but it can also be a family member of a disabled farmer.

In addition, the Iowa AgrAbility Project is working with the Colorado AgrAbility Project to create training materials for this program. These training materials are used to help the veteran consumer become a better mentor. For example, one of the training modules works with improving communications skills.

On-site Assistance

Iowa AgrAbility offers on-site assistance in adapting home and farm operations to solve a disability-related problem.

Modest Home Makeovers

Upon request, Iowa AgrAbility staff will work with individuals and families to make their home accessible. Staff will use existing furnishings and equipment to accommodate specific disabilities at little or no cost. After the changes are made, their homes will still look and feel like “home.”

Home Planning Workshops

Iowa AgrAbility staff organizes monthly Home Planning Workshops on the Iowa State University campus for people who are building new homes or doing major remodeling.

Housing Exhibits

Five interactive housing exhibits show innovative ways to make homes attractive and accessible, whether they are being built new or remodeled. The exhibits are scheduled for fairs, expos, and other community events throughout Iowa. The “Home for All Ages” includes furnishings and equipment in an actual living room, kitchen, and bathroom. Two bathroom exhibits demonstrate bathing options for persons who use wheelchairs. The Welcoming Home exhibit is a no-step entrance into a home featuring a number of devices for ease of access. The Control Center displays how persons with limited mobility can create a nest from which to control their environment.

Ingenuity Network

This network is made up of volunteers who have experience in designing or fabricating devices or modifications to accommodate disabilities.

AgrAbility Friends and Family

AgrAbility Friends and Family is a program of support for Iowa farm families with disabilities. If you or your family has experienced a serious illness or injury, AgrAbility Friends and Family are here to help you. ❖

Iowa AgrAbility Project Staff



Mary Yearns, Ph.D., has served as the Program Coordinator for Iowa AgrAbility since the program's inception in 1991. Yearns is an Extension Housing Specialist and Associate Professor in the Dept. of Human Development and Family Studies at Iowa State University. Her interests focus on the housing needs of an aging population and persons with disabilities. She is co-designer of "The Home for All Ages," a three-room exhibit that has been shown in Iowa and across the nation. The 40' long, interactive display demonstrates universal design ideas and assistive devices to make homes more convenient, comfortable, and safe for people of all ages and all abilities.



Marcy Thomas has served as Program Specialist for Iowa AgrAbility at Iowa State University since August 2002. Thomas has been involved in Extension through graduate research and teaching assistantships for over three years. She received her Masters of Science degree in Family and Consumer Science with an emphasis in Human Development and Family Studies in May 2002 and worked in the Universal Design Lab on the ISU campus. In addition to her education and experience, Thomas, her husband, and her mother-in-law, have a cow-calf and feedlot operation and raise corn, soybeans, and alfalfa.



Brooke Lovelace has been the Director of Employment and Vocational Services for Easter Seals Iowa for the past seven years. She began working with the Iowa AgrAbility project in September 2002. Lovelace received a Bachelor of Science degree from Iowa State University and her Masters of Science degree in Rehabilitative Administration from Drake. She is a huge ISU Cyclone fan!



Chuck Larson serves as Rural Rehabilitation Specialist with Easter Seals Rural Solutions and has been with the Iowa AgrAbility project since 1991. Larson received his Bachelor of Science degree from Iowa State University in Animal Science and his Masters degree in Educational Psychology from the University of Missouri. Prior to coming to Easter Seals Rural Solutions, he owned and operated a farm near Wasola, Missouri for 10 years.



Tony Wernimont is a Rural Rehabilitation Specialist for Easter Seals and has been with the Iowa AgrAbility project since June 2002. He has a Bachelor of Technology degree in Agricultural Business from Northwest Missouri State. He grew up on a farm west of Sac City, Iowa and is still actively involved in the operation today. On November 16, 1997, Wernimont was involved in a farming incident that resulted in the amputation of his left hand below the wrist.

Check it out on the Web!

A Home for All Ages: <http://www.extension.iastate.edu/housing/elderly/hfaa.html>

The Welcoming Home: <http://www.extension.iastate.edu/housing/home-all-ages/display.html>

Control Center: <http://www.extension.iastate.edu/housing/housing-info/control-center.html>

Assistive Technology Notes

Resources

Grip Strut® & Tread-Grip® Ladder Rungs
 McNichols
 5505 West Gray St.
 Tampa, FL 33609-1007
 Phone: 800-237-3820, 813-282-3828
 Fax: 813-243-1888
 Email: sales@mcnichols.com
 Website: <http://www.mcnichols.com>

Non-skid Safety Tape
 Preferred Tape, Inc.
 6708 East 13th St.
 Tulsa, OK 74112
 Phone: 800-607-TAPE, 918-934-TAPE
 Fax: 918-835-TAPE
 Email: purchahse@preferredtape.com
 Website: <http://www.preferredtape.com>

Five Cleat Ice Pick for Canes
 The Wright Stuff
 301 Alden Cove Dr.
 Smyrna, TN 37167
 Phone: 877-750-0376, 615-459-9115
 Fax: 615-459-9116
 Email: info@thewright-stuff.com
 Website: <http://www.thewright-stuff.com>

Plasti Dip Super Grip® Non-skid
 Spray-on Coating
 Global Novelties
 6046 East Riverdale St.
 Mesa, AZ 85215
 Phone: 480-215-7956
 Email: info@globalnovelties.com
 Website: <http://www.globalnovelties.com>

Ice Grippers
 D & B Safety Company, Inc.
 2669 North Lakeview Dr.
 Warsaw, IN 46582
 Phone: 574-858-2404

Traction Tread Flooring
 Metals, Inc.
 185 Oakleaf Oval
 Cleveland, OH 44146
 Phone: 800-492-7304, 440-439-4799
 Fax: 440-439-0577
 Email: metalsinc@worldnet.att.net
 Website: <http://www.metals-inc.com>

Lok-Lift® Rug Gripper Tape
 Available from many local stores including:
 Linens-N-Things, <http://www.lnt.com>
 Walmart, <http://www.walmart.com>
 Home Depot, <http://www.homedepot.com>

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The **AgrAbility Project** promotes success in agriculture for individuals with disabilities and their families through on-site assistance and educational resources. For additional information on the **National AgrAbility Project** or for a current list of state project sites, addresses and telephone numbers contact:

University of Wisconsin - Cooperative Extension
460 Henry Mall
Madison, WI 53706
866-259-6280 or 608-262-5166

Easter Seals, Inc.
700 Thirteenth St., NW, Suite 200
Washington, DC 20005
800-914-4424 or 202-347-3066

<http://www.agrabilityproject.org>

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