

AgrAbility Harvest

*An ingathering of
helpful information
on disability in
agriculture*

2024

Volume 15, Number 1

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Hats may not seem like a very inspirational theme. To many people, they're just an unsung accessory, often neglected or overlooked. However, hats have stories to tell.

Dr. Bill Field, National AgrAbility's project director, has built a collection of farm hats over the years. While he owns many from large equipment manufacturers and organizations like FFA and Farm Bureau, his two favorites came from more obscure sources. One was owned by a Ukrainian wheat farmer and the other came from a Vermont dairy farmer who had lost both arms in an equipment entanglement. In each case, the farmer traded his tattered, sweat-stained hat for a newer one that Field supplied.

Why do these unsightly caps appeal to Dr. Field? He says that both clearly show the wear and tear of two hard-working farmers who refused to allow their hardships and limitations push them to the sidelines. He also sees the hats as tangible symbols of AgrAbility's mission: helping farmers and ranchers remain productive despite barriers caused by disability.

Dr. Field continued to grow his hat collection at the 2024 AgrAbility National Training Workshop (NTW) in Atlanta by offering to trade anyone his or her old hat for a new one with the AgrAbility logo on it, and he got many takers. The 2024 NTW was the largest on record with 260 attendees, including some from Guam and South Korea.

Another aspect of hats is that farmers must wear many different ones: engineer, accountant, entrepreneur, veterinarian, agronomist, and many others. The success of their enterprises often depends on their ability to shift "hats" and to collaborate with others in their networks. The same principle applies to AgrAbility staff members. None of them can be experts in every aspect of agriculture, rehabilitation, public awareness, program management, social media, or other areas of need. So, to successfully meet the needs of their clientele, AgrAbility project teams must leverage the unique skillsets of their staff members and collaborate with other organizations. It's this process that keeps AgrAbility moving forward.



A Closer Look

Finding a Way Forward

Limited sight doesn't limit determination

by Cheryl Tevis¹

Jason Barber grew up in Middle Tennessee with farming in his DNA. "I was my grandfather's shadow when I was a kid," he says.

Eight generations of his family have farmed this land southeast of Nashville. Barber absorbed many stories passed down from his father and grandfather, and he knew the challenges they had faced. But as he grew older, he confronted a totally new challenge.

Barber, 53 years old, has lived within one mile of his family's farm for his entire life. He helped his parents with the crops and livestock as he was growing up and worked as a firefighter from 1991 to 1999. In 1998 he began to experience symptoms that included tunnel vision and night blindness. He was diagnosed with retinitis pigmentosa (RP), a degenerative disease with no cure.

The disease gradually progressed, and in 2009 he was declared legally blind. He no longer was able to drive a fire truck but worked as a 911 dispatcher from 2000 to 2007.

Barber was unaware of resources for the visually impaired, so he continued adapting on his own. "I had no clue what was available," he says.

As his vision diminished, limiting him only to peripheral sight, he became conscious of the need for safety updates when working around cattle. His dad's health also was deteriorating. In 2016, he purchased a sweep tub system that could be operated from outside the fences to safely guide cattle from the corrals into the squeeze chute or loading area.



Jason Barber

Adapting to Change

Then in 2018, a family friend met Eileen Legault, an AgrAbility specialist with the University of Tennessee Extension in Knoxville. AgrAbility connected him to the Tennessee Department of Human Services Division of Vocational Rehabilitation (DVR) and the Tennessee Technology Access Program, as well as the STAR Center in Jackson, Tennessee, one of AgrAbility's partners in providing services to individuals with disabilities.

An AgrAbility team including Legault, Finis Stribling with Tennessee State University Extension, and John Teague, Bedford County Agriculture Extension county director, visited Jason in 2018 and assessed his farm and needs for assistive technology.

After his father, Gale, died in 2020, Barber took over the 80 acres of hay and 60 head of beef cattle. "When Dad passed away, I needed more help," he says. "Dad was my eyesight."

DVR funded an iPad for him. "I needed help updating my records," he says. "My dad did the records." He began using ZoomText to magnify his records and read them on his computer screen.

Barber downsized the Black Angus cow/calf herd to 25. "I had to find the right assistive technology to identify my cows," he says.

¹ Cheryl Tevis was senior risk management editor with *Successful Farming* magazine for many years. She is currently a freelance writer and editor with AgPerspectives, Inc. and president of Iowa Women in Agriculture.

With help from AgrAbility, he has tried several types of assistive technologies to fit his needs and is always experimenting. One example is a digital wand called a Tru-Test Stick Reader that tags and identifies his cattle. It uses Bluetooth and a smart app to share this information to smart devices.

DVR also purchased an OrCam MyEye 2, an assistive technology device that clips onto eyeglasses, converting visual information and text into audio information. “The camera is great for static images, but it doesn’t do as good a job of recognizing my cattle tags because the cattle move around,” he says.

Legault says, “Jason always wants to give back when he can and to talk with other farmers or people with vision loss. He’s very personable and tries to network or share ideas with companies to improve their technology.” Jason has also started a YouTube channel, “Farming Blind with Duck,” to share his ideas with others. Access it through agrability.info/barber.

iPhone is Assistive Technology

Barber’s iPhone, purchased from a TN Telecommunication Devices Program (TDAP) grant, is invaluable. “I didn’t know how big of an asset it could be – it’s my primary assistive technology asset,” he says. “The VoiceOver feature is a big thing – I use it to read my mail.” The Seeing AI free app helps read cattle tags.

“I’m in the process of incorporating the WayAround (smart tag) system into my operation,” Barber adds. “I can organize all the information for a certain cow, such as date of birth, weight, and vaccination history in the WayTag and then stick it to the back of the cow’s ear tag. All I have to do after that is use my phone for a low frequency scan of the tag, and I’ll immediately have access to all that information.” He also uses WayAround to read dosage information on his cattle’s medication bottles. Barber feels that sighted farmers could benefit from WayAround because so much detailed information can be attached directly to an animal.

Where there's a will, finding a way

At AgrAbility’s National Training Workshop in Madison, WI, in 2022, Barber met Ned Stoller, an assistive technology professional with Michigan AgrAbility, and they discussed possible adaptations. He also met other farmers and shared information about apps. Barber says AgrAbility has become his extended family and a wonderful network.



Jason scanning ear tags with Tru-Test Stick Reader

“I’m so thankful to AgrAbility, Voc Rehab, STAR, and Extension,” he says. “I hit the motherlode. I’m still learning and adapting to do what I need. Technology provides me with a lot of my independence and is always changing.”

Barber credits a close-knit community as another valuable source of assistance. “I’m blessed to have good friends, and they help me keep an eye out,” he says.

He says he’s in the process of shifting to fall calving from year-round. His wife, Melissa, helps him whenever possible. She uses a wheelchair due to complications of spina bifida. “I don’t question that he’s studied what he can do and what he can’t,” she says. “Once Jason puts his mind to it, he does it.”

He adapted their house with wider doorways. In the future, they may consider an outdoor mobility Trackchair. “There’s a limit to where she can go now on the farm,” he says. “We are a great team!”

Barber also continues to bale and sell square hay bales. “With help from a retired gentleman, we harvested 9,300 square bales this past summer,” he says. “I also round-bale some hay for my own cattle.”

“Jason makes the best of the situation,” Legault says. “He combines a positive attitude with his faith and the latest available research, and that’s why he’s so successful.”

Barber agrees, “I learned from my grandfather not to be bothered by things that can’t be helped.”



Jason, second from right; his wife, Melissa, far right; Eileen Legault, second from left; and other members of the TN contingent at the 2022 NTW

AT Corner

A COLLECTION OF ASSISTIVE TECHNOLOGY PRODUCTS IN AGRICULTURE

Skid-Steer Loaders and Accessories

Few tools are as versatile on agricultural operations as the skid-steer loader. These workhorses can be used for a multitude of tasks, including dozing, grading, digging, lifting, post driving, transporting materials, scooping manure, and moving hay. Here are just a few of the myriad of loader options, attachments, and accessories. Visit agrability.info/skid-steer for much more information.

JCB Skid-Steer Track Loaders

Buckets on these loaders have a support arm on only one side. This not only allows cab access via its side door instead of over the bucket, but also improves visibility vs. traditional skid steer designs. A hydraulic quick-hitch allows the operator to change attachments without having to exit the cab. (Visit agrability.info/jcb)



Skid-Steer Walk-Thru Pallet Forks

These forks are designed to make cab entry/exit easier; improve visibility when picking up/transporting/placing materials; and help protect/secure the load. Depending on make/model, their frames allow between-forks adjusting, accommodate forks of varying lengths/widths, and provide lifting capacities of at least 4,000 pounds. (Visit agrability.info/pallet-forks)



Magnet-Mounted Rear-View Mirrors

With a pair of these mirrors properly placed outside the cab, one can see along the machine's tires/tracks on each side as well as its corners without having to twist back or neck. These mirrors affix via strong magnets, so one can locate and adjust them according to conditions unique to the machine, the task, or person. (Visit agrability.info/skid-mirrors)



Mini Skid-Steer Loaders

There are various types to choose from (e.g., stand-on vs. walk-behind, tracked vs. wheeled, telescoping- vs. fixed-arms). But all will accommodate a multitude of attachments (e.g., buckets, backfill blades, augers, plows, rakes, trenchers). Being smaller and lighter than standard skid steers, they're more maneuverable and less expensive. (Visit agrability.info/mini-skid)



Skid-Steer Loader Bucket Steps

A couple of simple steel steps can make it much easier to climb over the bucket. The steps, both 6 by 12 inches, are welded or bolted to the bucket's outside back—one about halfway up, the other a few inches down from the top. They are metal slats welded to a rectangular frame, the tops serrated to prevent slipping. (Visit agrability.info/skid-steps)



Loader Bucket Add-On Grapple

This attachment, which operates off the machine's hydraulic system, allows one to lift and move rocks, debris, logs, materials, etc., while remaining in the cab. It's either bolted onto the bucket or affixed to a toolbar that runs a few inches above the bucket. (Visit agrability.info/skid-grapple)



* The authors assume no liability in connection with any use of the products discussed and make no warranty (express or implied) in that respect. References to products are not intended as endorsements to the exclusion of others that may be similar.

Resources for Success

Worksite assessment aids

A worksite assessment is one of the most valuable services AgrAbility provides. It helps both the producer and AgrAbility staff members better understand barriers to work and potential solutions for overcoming those obstacles. However, the assessment process entails many potential steps and variables and, therefore, may be challenging, especially for new staff members.



Michigan workshop assessment discussion

National AgrAbility recently conducted a regional workshop in Ann Arbor, MI, that included worksite assessment as a main topic. Staff members recorded both classroom presentations and an onsite sample worksite assessment on an AgrAbility client's farm. Some of the classroom topics included assessment models, assistive technology (AT) for agriculture, and writing agricultural AT reports. The onsite assessment video is divided into topics such as the initial meeting with the farmer, the farmer meeting with a VR counselor, and the inspection of different areas of the farm.

All these resources are available at www.agrability.org/assessment.

Veterans' services march on

National AgrAbility's veteran outreach coordinator, Joe Ricker, continues to provide services and expand AgrAbility's network to assist veterans with disabilities who are either engaged in or interested in agriculture.

One avenue of assistance is the Department of Defense (DOD) SkillBridge Program, which provides service members with training, internships, or apprenticeships during their last 180 days of active duty. Joe has already helped several veterans connect with agriculture-related SkillBridge internships in areas like livestock production, urban agriculture, and AgrAbility outreach. Prior to his current position, Joe himself served as a SkillBridge intern with AgrAbility.



Joe Ricker

Another helpful resource is the U.S. Small Business Administration's Boots to Business program that provides entrepreneurial education and training as part of DOD's Transition Assistance Program (TAP). USDA has partnered with DOD to provide Boots to Business specifically for veterans interested in agriculture.

Find out more about these opportunities and others by contacting Joe at ricker2@purdue.edu.

New technical report on farm shops

Coming Soon!



Shops are often the hub of activity on agricultural operations. Machinery storage, maintenance, fabrication, and office space are a few important aspects of these structures. The Accessible Farm Shop: Universal Design is the latest AgrAbility Plowshares Technical Report. This 20-page publication is designed to help make shops more accessible, functional, and productive for workers of all abilities. It covers topics like shop location, structure, organization, tool storage, and more. Look for a PDF of the report in December at www.agrability.org/resources/technical-reports-plowshares.

New video on drones, disability, and agriculture

Drones, also known as unmanned aerial vehicles (UAVs), have many applications from farm fields to battlefields. Missouri AgrAbility recently produced a video, "Taking Agriculture to New Heights with Drones," which highlights their benefits for farmers and ranchers with disabilities.

Given the issues that many AgrAbility clients face, like limited mobility, balance problems, and reduced temperature tolerance, the potential benefits of drones are many. They can be used for such activities as crop monitoring, boundary and topographical surveying, soil and irrigation monitoring, evaluating fertilization and pest control needs, monitoring livestock movement, and even remote collecting of soil and water samples. UAVs can also be used for monitoring the progress of harvesting, checking broiler house conditions, and inspecting roofs and fence lines. Recent advancements have also made some drones a viable option for spraying crops.

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Drones are regulated by the Federal Aviation Administration, so it's important for producers to check FAA rules and obtain any necessary certifications. To view the video, visit agrability.info/drone-video.



Partner Updates

AgrAbility Consultants

In addition to those people designated as National AgrAbility staff members, several individuals function as consultants to the program. Their backgrounds, areas of expertise, and time dedicated to NAP activities vary significantly, but all provide valuable services to AgrAbility’s staff and clients.

NED STOLLER began his assistive technology career with National AgrAbility and Indiana AgrAbility shortly after graduating from Purdue University in 1998. He is an agricultural engineer, a RESNA-certified Assistive Technology Professional, and a consultant for Michigan AgrAbility, National AgrAbility, Michigan Rehabilitation Services, and Fulfilling Life Ministries. Ned leads National AgrAbility’s efforts to develop low-tech AT appropriate for agricultural workers in the U.S. and around the world. He also helps with assistive technology inquiries from professionals and consumers around the country. Ned says his mission has been “to encourage people with disabilities that they are loved by God and have great value and can find dignity in work.”



STEVE ETHERIDGE was an Indiana Vocational Rehabilitation Services counselor for more than 20 years, during which time he worked with Indiana AgrAbility on multiple client cases. He is also a long-time member of the Indiana AgrAbility and National AgrAbility advisory teams. Steve serves as the NAP’s vocational rehabilitation specialist to assist the state projects with issues related to their VR systems and clients. He also helps consumers in states without AgrAbility projects in navigating the sometimes tricky waters of the vocational rehabilitation system.



DR. MARTIN (MARTY) FRICK is a retired agricultural educator who started his career as a high school agriculture teacher/FFA advisor in his home state of Missouri. He later worked with Dr. Bill Field at Purdue University in conducting research on secondary injuries to disabled farmers and ranchers. In 1994, Marty joined the faculty of Montana State University as an assistant professor and became a full professor in 2007. His current work with AgrAbility includes visiting farmers and ranchers with disabilities in Montana and assisting with public awareness/education activities in that state. Marty also served in the United States Coast Guard from 1972 to 1976.



Farm Credit

The Farm Credit System (FCS) is an important partner for both AgrAbility projects and their clients. Not only does Farm Credit provide more than 44% of the total market share of U.S. farm business debt, but its member institutions around the country have also provided hundreds of thousands of dollars to support AgrAbility initiatives.

FCS was established by Congress in 1916 to provide a reliable source of credit for farmers and ranchers. Although created by the federal government, it is not a government agency, nor does it function on government funds or tax dollars. Instead, to raise money for loans and operational expenses, Farm Credit sells debt securities on the nation’s money markets. FCS provides more than \$373 billion (as of 2022) in loans, leases, and related services to farmers, ranchers, rural homeowners, aquatic producers, timber harvesters, agribusinesses, and agricultural and rural utility cooperatives.

In addition to returning billions of dollars to its members through patronage dividends, Farm Credit has a strong community engagement emphasis. Some of its major initiatives focus on supporting agricultural education for youth, helping beginning farmers and farmer veterans, producing farm stress resources, assisting women and people of color in agriculture, providing disaster assistance, and encouraging entrepreneurs. Farm Credit’s support of AgrAbility has included providing funds for National Training Workshop farmer/rancher travel stipends and for assisting state projects that have lost USDA funding.

For more information about Farm Credit and to find a local lender, visit farmcredit.com.

Sources: https://en.wikipedia.org/wiki/Farm_Credit_System; <https://farmcredit.com/about>





patchwork

AN ASSORTMENT OF SUNDRY NEWS ITEMS

Breaking New Ground award winners

The Breaking New Ground Achievement Award is given to individuals who have shown outstanding commitment to serving farmers, ranchers, and other agricultural workers with disabilities. At this year's National Training Workshop in Atlanta, five AgrAbility staff members from all around the country received this special honor. They are pictured from left to right with NAP Director Bill Field at the far left:



- Eileen Legault, Tennessee AgrAbility
- Esmeralda Mandujano, California AgrAbility
- Kyle Haney, AgrAbility in Georgia
- Steve Swain, Indiana AgrAbility
- Jeff Kratochwill, AgrAbility Wisconsin

AgrAbility loses leader

The AgrAbility family was grieved by the loss of one of its long-time champions, Rebecca Brightwell, on October 9, 2023. Becky served as the co-director of AgrAbility in Georgia for many years and was associate director of the University of Georgia Institute on Human Development and Disability. She had a passion for assistive technology and conducted many AT-related trainings.

As her AgrAbility co-director, Glen Rains, said, "Becky's unwavering commitment to our mission and the agricultural community has left an indelible mark on us all." And many others who knew Becky would affirm these words from her obituary: "As someone who wished to make the most of life and help others do the same, Rebecca will be remembered for her dauntless spirit, her positivity, her generosity, her courage, and her persistence."



Rebecca Brightwell

Hayn's continued impact

The 2023 AgrAbility Harvest highlighted Indiana AgrAbility client Laurie Hayn in its cover story. She served as the keynote speaker for the 2023 National Training Workshop and was also featured in a 2022 NAP video, "AgrAbility: Renewing Hope, Restoring Productivity with Laurie Hayn." That video continues to be one of the most popular on the NAP YouTube channel, and it recently received a national award from the American Society of Agricultural and Biological Engineers. If you haven't yet heard Laurie's story, visit agrability.info/hayn.



Laurie Hayn



Chuck Baldwin in Uganda

AgrAbility beyond borders

Although funded by USDA to reach agricultural workers in the U.S., AgrAbility nonetheless continues to have global impact on agricultural workers with disabilities and the professionals who serve them. The agrability.org website is a prime catalyst for conveying program-related information to international audiences and receives visitors from more than 100 countries every quarter.

In addition, through non-USDA funds, AgrAbility staff members are sometimes able to travel to other countries to share the program's mission and resources. Consultant Ned Stoller (seen on the previous page) visited Ethiopia in 2022 to work with a team of rehabilitation specialists and to conduct outreach activities to farmers with disabilities. In 2023, AgrAbility Underserved Populations Outreach Coordinator Chuck Baldwin traveled to Uganda for the inaugural conference of the emerging AgrAbility for Africa group. He also was able to travel into the countryside to meet with individuals in need of services.

National AgrAbility is also exploring opportunities for expanding AgrAbility's outreach with a visit to Brazil and possibly even activities in Ukraine.

AgrAbility Harvest

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The National AgrAbility Project is supported by AgrAbility Project, USDA/NIFA Special Project 2021-41590-34813

The National AgrAbility Project is a partnership between:



Purdue University is an equal access/equal opportunity institution.

ON THE HORIZON

After a record attendance at the 2024 National Training Workshop in Atlanta, AgrAbility is scheduled to head west to **Las Cruces, New Mexico**, for the **2025 NTW on March 24-27**. While attendees will stay at the Hotel Encanto de Las Cruces and have a few sessions there, most of the conference activities will take place at the **New Mexico Farm and Ranch Heritage Museum**, an interactive venue that brings to life the



4,000-year history of farming and ranching in New Mexico. AgrAbility will transport attendees to the museum, which is constructing a special AgrAbility exhibit. Visit www.agrability.org/ntw for information.

AgrAbility is also scheduled to hold its **first workshop in a U.S. territory October 28-31 in Tumon, Guam**. Partnering organizations include University of Guam Cooperative Extension & Outreach and the Western Regional Agricultural Stress Assistance Program.



2024

October 23-26	National FFA Convention	Indianapolis, IN	convention.ffa.org
October 27-29	Farmer Veteran Coalition Conference	Kansas City, MO	conference.farmvetco.org
October 28-31	AgrAbility Guam Workshop	Tumon, Guam	www.agrability.org/training-events

2025

January 7-9	Keystone Farm Show	York, PA	keystonefarmshow.com
February 11-13	World Ag Expo	Tulare, CA	www.worldagexpo.com
February 12-15	National Farm Machinery Show	Louisville, KY	farmmachineryshow.org
April 3-5	AOTA INSPIRE 2025 Annual Conference	Philadelphia, PA	inspire.aota.org
March 24-27	AgrAbility National Training Workshop	Las Cruces, NM	www.agrability.org/ntw
May 12-16	RESNA Annual Conference	Chicago, IL	www.resna.org
June 4-5	World Pork Expo	Des Moines, IA	www.worldpork.org
June 23-26	International Society for Agricultural Safety & Health (ISASH) Annual Conference	Portland, ME	www.isash.org
July 13-16	ASABE Annual International Meeting	Toronto, Canada	www.asabemeetings.org
August 9-12	Disabled American Veterans National Convention	Las Vegas, NV	www.dav.org/events