



PROJECT NEWS SPRING 2022

AgrAbility is a project of the United States Department of Agriculture, designed to enhance quality of life for farmers, ranchers, and other agricultural workers who have been impacted by a disability, chronic health issue, or aging issue that is limiting their participation or success in production agriculture.

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ASSISTIVE TECHNOLOGY



Sonja Koukel, PhD NMAP
 Project Director New
 Mexico State University

PROJECT DIRECTOR'S MESSAGE

The arrival of the spring season moves us out of the dark winter and into warm, sunny days. For some, this is a time when thoughts turn to themes of renewal. The NM AgrAbility Project (NMAP) experienced some changes over the past few months and, in some respects, is starting anew.

After two long years, it appears as though we may be moving beyond the COVID-19 pandemic with the state and the nation adapting to a more “normal” existence. No doubt the virus will always be with us, but perhaps we’re learning to live with it. For NMAP, this means we can once again provide on-site farm/ranch visits to better serve disabled New Mexicans in agriculture.

The NMAP team is excited to welcome new members: Paul Ross, Julie LaJeunesse, Armando Buitrago, Mary Thelander Hill, and Dr. Patricia Siegel. Please read their introductions and background information available in this issue.

Sadly, we announce the departure of Dr. Carla Wilhite, Co-Project Director. It was through Carla’s vast experience with AgrAbility that the national project found a home in New Mexico. The team is grateful for her leadership and wish her the best in her new adventures.

We were happy to send several members of our team to the 2022 AgrAbility National Training Workshop (NTW), in Madison, WI, March 14-17. NTW is the premier training event addressing issues of disability in agriculture. Professionals and disabled growers from all over the country participate in four days of plenary sessions, breakouts, tours, networking, and special events. Look for a reflection article from Paul Ross, who was in attendance.

On a final note, NMAP is in its final fourth year with funding expiring in August (2018-2022). A proposal for a new round of funding was submitted (2022-2026). If awarded, the New Mexico AgrAbility Project will continue building on the foundation we have worked hard to establish. Hopefully, our Fall 2022 newsletter will update you with good news about this funding opportunity! ◇



By leveraging 3D printing technology through a partnership with the CNM Ingenuity program, the AgrAbility Apprenticeship Program can provide customized assistive tools to farmers with disabilities.

INNOVATION IN AGRICULTURE

Paul Ross, AgrAbility Coordinator at Mandy's Farm, was able to attend the recent AgrAbility National Training Workshop in Madison, Wisconsin, where experts in adaptive agriculture convened from across the country.

While a wealth of information was shared throughout the conference, a workshop focused on leveraging 3D printing technology to support farmers with disabilities was of particular interest.



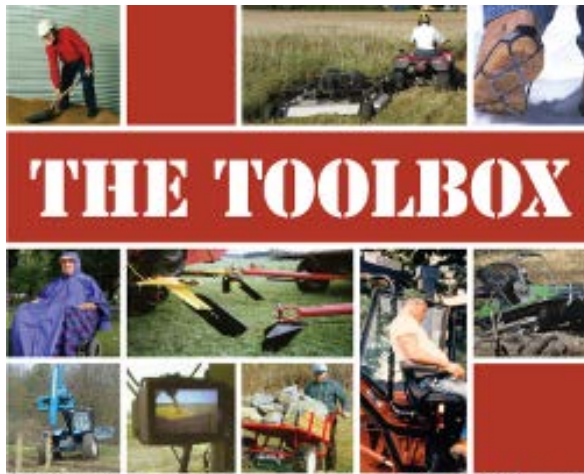
With the growing season already underway, AgrAbility apprentices are already hard at work. Gideon installs oyster mushroom plugs in elm trees growing at the edge of the AgrAbility field (pictured above), while Guthrie assists with building an air pruning bed (see below).



Brie Weisman, an Occupational Therapist from the Maine AgrAbility program, presented on the use of 3D printing to produce simple and cost-effective assistive devices for farmers with disabilities. Samples included custom handles for tools, doorknob adapters, and even a prototype hand that could make a simple gripping movement when worn on one's wrist.

Through a new partnership with the Central New Mexico Community College (CNM) Ingenuity program, the AgrAbility Apprenticeship Program at Mandy's Farm is excited to have the opportunity to work with students who are learning practical applications for advanced technology. CNM students are able to solve real-world problems using coding, 3D printing, and other skills and resources while supporting apprentice farmers. Students are already designing and installing an automatic watering system for the greenhouse and there is already a great deal of interest in exploring 3D printing to create specialized gears and funnels to support composting and seed handling.

These specialized tools and technologies allow the AgrAbility Apprenticeship Program to increase accessibility, efficiency, and resources for farmers with disabilities. ◇



The AgrAbility Toolbox can be accessed by visiting <http://agrability.org/toolbox>.

RESOURCES: THE TOOLBOX

Looking for assistive technology resources? The National AgrAbility Project offers an extensive online database that provides a wealth of assistive technology solutions, technical articles, and other resources for farmers, ranchers, and other agricultural workers with disabilities. The Toolbox Assistive Technology Database covers the following areas of focus:

- Crop and Materials Handling/ Storage
- Gardening
- Lawn Care
- Livestock Handling and Housing
- Orchards, Nurseries, and Vineyards
- Outdoor Mobility
- Outdoor Recreation
- Safety and Health
- Shops and Shop Tools
- Skid-Steer Loaders and Other Self-Propelled Equipment
- Specialty Enterprises
- Tractors and Combines
- Trucks
- Utility Vehicles, ATVs, and other Off-Road Vehicles
- Vegetable, Small Fruit and Flower Production
- Woodlots and Forestry ◇

A FOND FAREWELL

NMAP is saddened to bid farewell to Dr. Carla Wilhite as she transitions to a new role as the Director of the Occupational Therapy Program at Colorado Mesa University.

Dr. Wilhite has been instrumental in bringing attention to the needs of food-producers in the state of New Mexico through her research, as well as her collaboration with the New Mexico AgrAbility Project. Dr. Wilhite has led projects focused on health promotion for farmers dealing with illness, as well as multiple studies on tractor seating for farmers with disabilities.

We are grateful for Dr. Wilhite's willingness to leverage the work of NMAP to prepare Occupational Therapy students to support the needs of injured or disabled farmers.

Dr. Wilhite has led many educational seminars, both live and via digital media, equipping rehabilitation professionals, community service providers, and farmers to adapt and modify their work to increase success, longevity, and safety. Dr. Wilhite contributed an endless source of knowledge and enthusiasm throughout her time in the New Mexico AgrAbility Project.

We wish you all the best on your future endeavors, and hope our paths cross again in future opportunities for collaboration. Don't take any wooden nickels. ◇



Dr. Carla Wilhite
Director of Occupational Therapy
Colorado Mesa University



A flock of chickens enjoy a morning snack.

NEW FACES AT NMAP

J. Armando Garcia Buitrago,

a native from Venezuela, is an Ag Research Scientist in the Extension Animal Sciences and Natural Resources Department of ACES at New Mexico State University. He obtained his Animal Production Engineer degree at the Universidad Nacional Experimental del Táchira (UNET) in 1989, and his Master of Science degree in Dairy Production from the Universidad Centroccidental Lisandro Alvarado (UCLA) in 2000. Before joining NMSU in 2014, Mr. Garcia was a tenured professor at the Universidad Nacional Experimental del Táchira in Venezuela. During his tenure, he held various academic and administrative positions, published several peer-reviewed articles, and consulted extensively on dairy-related projects in his country. After his retirement in July of 2014, Mr. Garcia joined NMSU's Dairy Extension Program in Clovis, New Mexico. His role within NMAP will be to collaborate and support programs and activities developed within NMAP, including the preparation of Spanish-language materials.



Dr. Patricia (Trish) Siegel

is an Occupational Therapist and a Certified Hand Therapist. Trish currently works as an Assistant Professor in the University of New Mexico



OT graduate program. Trish grew up in rural New Mexico on the Navajo reservation, where most of what she ate was grown by her father or neighbors. Trish's primary role is to provide educational materials to occupational therapists and food growers about the risks of musculoskeletal injuries and amputation and how to prevent them in agricultural spaces.



Mary Thelander Hill,

MOT OTR/L ATP, is an occupational therapist with 10 years in adult rehabilitation with a focus on wheeled mobility and assistive technology for people with spinal cord injury, multiple sclerosis, and cardiac

rehabilitation. Mary has specialized training and experience in wheelchair evaluations, high- and low-tech assistive technology, and neuro-rehabilitation principles. Mary is a lecturer with the UNM Occupational Therapy (OT) Graduate program. Mary is excited to work with NMAP to honor the work that it takes to produce the food that we eat. Mary will train OT students in providing direct care to farmers with disabilities and support the occupational therapists who do direct evaluations with farmers across the state.

Paul Ross has a Master's Degree in Landscape Architecture and has worked in adaptive recreation, wilderness guiding, small scale organic agriculture, and ecological restoration. Paul facilitates the AgrAbility



Apprenticeship Program at Mandy's Farm, where prospective farmers with disabilities can access education in agriculture through experiential learning. Paul believes that food lies at the intersection of culture and land use. How we grow our food in part determines how we care for the land we live in, on, and near, as well as how we care for one another. Like most food producers, Paul wears many hats (small engine mechanic, botanist, soil scientist, adobe maker, administrator, carpenter, educator) and shares his wide array of skills with the apprentices he mentors and teaches.



TECHNOLOGY CORNER: POWER ASSIST

Power Assist technology comes in many forms. But at its core, its purpose is to motorize manual wheelchairs for moments when users could benefit from physical relief or assistance navigating challenging surfaces such as hills, rough earth, or even thick carpet.

One of the most popular Power Assist tools on the market is the **Permobil Smart Drive MX2+**, which is compatible with the Apple Smart Watch or Permobil's PushTracker E2 smart watch. The Smart Drive attaches to the back of a wheelchair's camber bar and the battery is positioned under the user's seat. Permobil boasts Smart Drive is the lightest rear power assist in the world at 13.2 pounds, with the ability to climb at 10-degree inclines. The maximum operating speed is 5.5 miles per hour, and the driving range is up to 12.3 miles. This technology is not intended for use over significantly rough terrain, extreme slopes, or loose ground.



Permobil Smart Drive MX2+ in action, courtesy of the permobil.ca website.

Another Power Assist tool comes in the form of **Batec Electric Handbikes**. Batec offers four versions of "add-ons" that connect to the front of a manual wheelchair, turning the chair into an electric handbike powered by a lithium battery. Battery runtimes range from 17 to 32 miles depending on the model and battery size. Other features include a USB charging port for your smart device, LED lights, an LCD screen with gauge readings, and brake levers with a parking brake and a signal cut-off sensor. Depending on the model, speeds range from 12.4 to 18 miles per

hour and wheel sizes range from 12 to 19 inches, with the option to purchase off-road wheels to replace a wheelchair's existing wheels. It is worth noting that Batec Handbikes are awaiting FDA approval for use in the United States as of 2022.



Batec Electric Handbikes in use, courtesy of the batecmobility.com website.

The **Freedom Trax FT 1 Pro** track attachment for manual wheelchairs is made in the United States and comes with a 24 volt lithium battery, two 24 volt motors, and a handheld joystick and charger. The track attachment can be adjusted for wheel-widths between 18 and 26 inches, making it a great long-term choice for users who anticipate updating their wheelchairs. The track itself is roughly eighty pounds and can handle sand, snow, hiking trails, and more. The lithium battery lasts up to eight miles on soft soil with backup batteries available for purchase.



The Freedom Trax FT 1 Pro on the slopes, courtesy of the livingspinal.com website.

The New Mexico AgrAbility Project (NMAP) is a partnership between New Mexico State University, the University of New Mexico, the New Mexico Technology Assistance Program, and Mandy's Farm.

Contact Us

<https://agrability.nmsu.edu>

Sonja Koukel, Director

Professor/ Extension Health Specialist
NMSU Cooperative Extension Service
575-646-3006
sdkoukel@nmsu.edu

Robert Hagevoort, Co-Director

Associate Professor/ Extension Dairy Specialist
NMSU Cooperative Extension Service
<https://aces.nmsu.edu/ces/dairy/>
575-985-2292 ext. 106
dairydoc@nmsu.edu

Mary Thelander-Hill, MOT, OTR/L, ATP

Lecturer in Occupational Therapy
UNM Occupational Therapy Graduate Program
505-272-1753
mthelanderhill@salud.unm.edu

Julie LaJeunesse

AT Specialist
New Mexico Technology Assistance Program
<http://www.tap.gcd.state.nm.us/>
505-841-4464
julianne.lajeunesse@state.nm.us

Paul Ross

AgrAbility Manager
Mandy's Farm
<http://www.mandysfarm.org>
505-503-1141

ext.

706

paul@mandysfarm.org

Accessing assistive technology can be difficult. Here are resources in the state of New Mexico that can promote access to those technologies.



New Mexico Technology Assistance Program

NMTAP offers free services to New Mexicans with disabilities to help them get the assistive technology (AT) services they need. It is a statewide program designed to increase knowledge of, access to, and acquisition of assistive or adaptive technology for anyone with any disability, anywhere in the state, of any age.



NMTAP

New Mexico Technology Assistance Program

NM Technology Assistance Program

625 Silver Ave. SW Ste. 100 B

Albuquerque, NM 87102

Office: 505-841-4464

Toll-free: 1-877-696-1470

The New Mexico Ramp Project

The New Mexico Ramp Project is a 501(c)(3) charitable nonprofit that provides free ramps for older adults and people with mobility issues. Volunteer labor is used to build the ramps. Their vision is that no New Mexico resident shall lack safe access because of financial limitations.



E-mail: info@nmramp.org

Web: <https://nmramp.org/>

USDA Rural Development: offers qualifying individuals and families the opportunity to purchase or build a new single family home with no money down, to repair their existing home, or to refinance their current mortgage under certain qualifying circumstances. There are also programs to assist non-profit entities in their efforts to provide new homes or home repair to qualifying individuals and families.



Rural Development

U.S. DEPARTMENT OF AGRICULTURE

100 Sun Avenue NE, Suite 130

Albuquerque, NM 87109

(505) 761-4950

<https://www.rd.usda.gov/programs-services/single-family-housing-programs>

The ALS Association: New Mexico Chapter

The chapter has a loan closet for use by people with ALS with items such as wheelchairs, speech devices, walkers and other equipment.



**New Mexico
Chapter**

The ALS Association New Mexico Chapter

2309 Renard Place SE - Suite 105 -

Albuquerque, NM 87106

(505) 323-6348

<http://webnm.alsa.org>

Accessing assistive technology can be difficult. Here are resources in the state of New Mexico that can promote access to those technologies.



Adelante Back In Use

Back in Use recycles assistive devices and gives them away to people with disabilities and seniors in need of wheelchairs, walkers, hospital beds and more. All durable medical equipment is inspected, cleaned, and sanitized before it is distributed. Back in Use is funded by the NM Technology Assistance Program (NMTAP)



(505) 341-7171

<https://goadelante.org/disability-services/assistive-equipment-biu/>

Access Loan New Mexico Program

Access Loan New Mexico is a statewide, low interest loan program that allows New Mexicans with disabilities to purchase assistive technology or make home modifications so that the individual can live more independently or productively. NMTAP partners with San Juan Center for Independence (SJCI) and Four Corners Community Bank (FCCB) to help New Mexicans with disabilities obtain needed accessibility in life when no other options are available.

Access Loan New Mexico

Larry McCabe; 1204 San Juan Blvd;
Farmington, NM 87401

Ph: (505) 566-5831

<http://www.tap.gcd.state.nm.us/financial-loans/access-loan-new-mexico/>

New Mexico Division of Vocational Rehabilitation

NM DVR is committed to ensuring that every New Mexican with a disability achieves their employment goals and thrives in their communities.



Administration Office
2935 Rodeo Park Drive East
Santa Fe, NM 87505

Phone: 505-954-8500

Toll-free: 800-224-7005

Offices throughout New Mexico

Find yours at: <https://www.dvr.state.nm.us/>