THE UNIVERSITY OF MAINE Cooperative Extension

AgrAbility

Cultivating Accessible Agriculture

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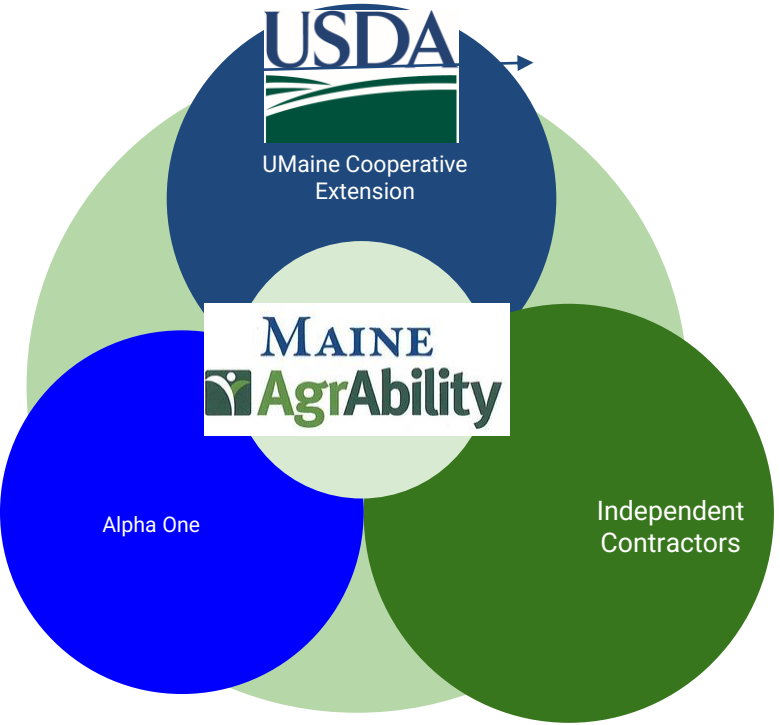
AgrAbility Mission

Helping Maine farmers, fishermen and forest workers with chronic health conditions and disabilities gain more control over their lives, continue to work successfully, and live independently.



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Program Structure

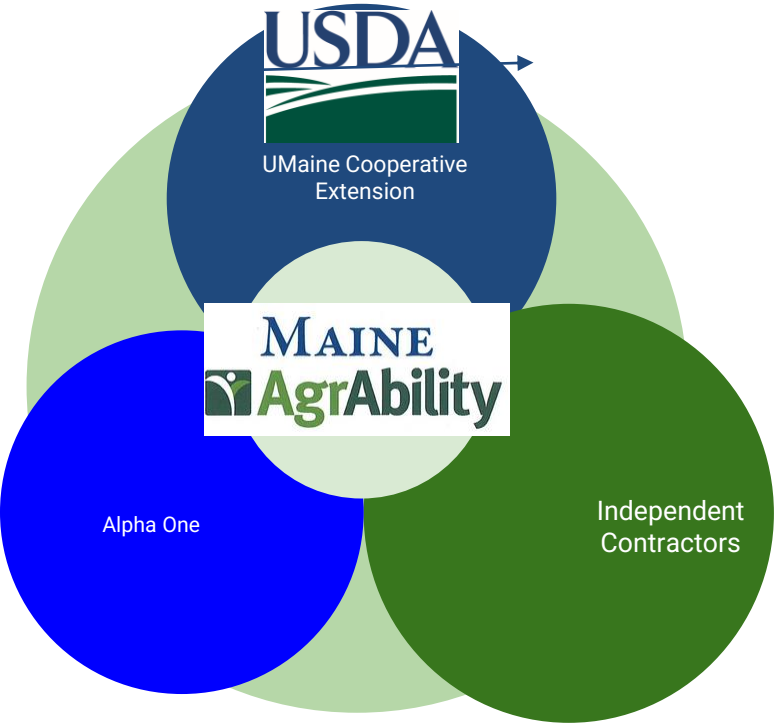


Education connects those in agriculture to disability & health resources.

- Workshops
- Resource Development

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Collaboration



We identify disability resources for farmers to access, as well as educate those resource providers about the work & culture of farming in Maine.

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Direct Assistance

- A client must work in production ag, and have a disability
- Our team discusses farm goals, current limitations, tasks, equipment, farm layout
- Recommendations are provided
- Provide specific connections to available resources. Farmer moves forward as desired



Limitations

- AgrAbility cannot directly provide funding or equipment to clients due to mandates from funder.
- We CAN provide connections to resources for these items. We work with clients to help them develop relationships to acquire funding or assistive equipment

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Realities of Agriculture

- Deep sense of purpose and identity.
- Farmers are experts on their production system, and are very devoted. Everything to equipment, animal behavior, weather. Very dialed in.

- Consistently the “in-charge” person or leader
  - Asking for help can be difficult.
- Problem solvers that are self-reliant. Resilient

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Additional Realities

Numerous stresses in farming, beyond the production or harvest:

- Labor challenges
- Cash flow challenges, debt
- Weather-dependent schedule
- Limited infrastructure, access to markets
- Making sacrifices to keep business going.

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Defining AT in Agriculture

Equipment that matches a solution to reduce issues caused by a disability




Assistive technology (AT) is any item, piece of equipment, software program, product system that is used to increase maintain, or improve the functional capabilities of persons with disabilities




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AT in Agriculture

These devices may be labor saving and prevent secondary injuries or downstream issues

Range of helpful AT from additional visibility, to smart devices, to equipment modifications. Low to high tech.






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Mobility and Access Supports

- Modified steps and handholds
  - Increase stability and traction
  - Reduces barriers to entering equipment
- Transfer devices to move from wheelchair to equipment.
  - Lift in a separate vehicle or truck
  - Powered swivel or hoist lift

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Visibility Modifications

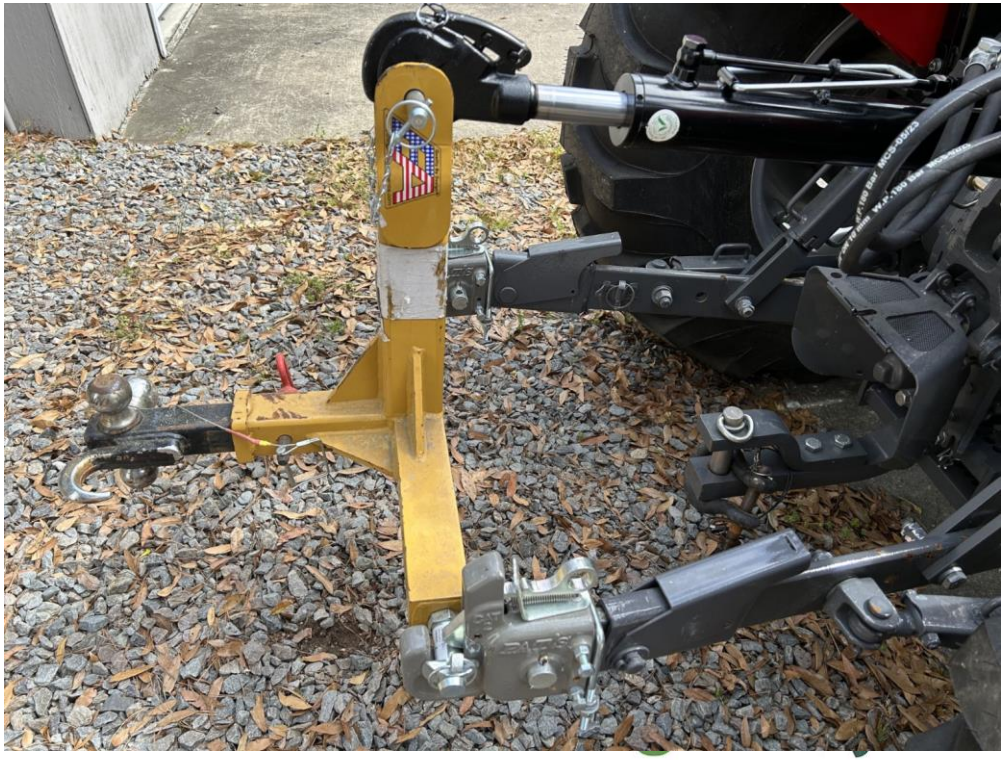
- Visibility modifications
  - Extra mirrors on tractors and equipment
  - Cameras and back up cameras. Hitching-specific visibility equipment

- Cab modifications
  - Seat modifications for back support and other musculoskeletal support

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Access Supports





Tractor Access





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Hand, Wrist, and Shoulders

- Small scale and low-tech AT particularly helpful for small Maine farms
  - Farmers use their bodies as primary tool operationally



- Hydraulic tools and lifts can move heavy equipment in storage

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Small-scale and low tech

- Harvest and cultivation tools
  - Modified grips help reduce pressure on joints
  - Longer-handled tools reduce bending and awkward positions
  - Specialized jobs on small farms have tools that can help reduce pain and discomfort on the body



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Livestock and Machinery

- Heating and watering systems
  - Sensors that refill
  - Alerts of flooding, controlling heat
- Modifications to barn/livestock stalls
- Cameras in livestock areas
- High-tech AT for moving about farm
  - Trak devices
  - Golf carts, ATV

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Repetitive Tasks

- Automation
  Lights, doors, gates

- Specialized tools for livestock handling
  - Giving medications, milking, hoof maintenance.

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Chronic Pain and Fatigue

- Smart devices can help with fatigue and energy conservation
  - Drones can help with surveillance of pastures, fields, and weather conditions on farm.
- Set up devices to help manage the mental load
  - Turn on lights outside or in the barn, give a weather update, or share calendar

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Energy Conservation

Farm layout

- Where are main work areas located
- Alternating standing, sitting, bending tasks, with opportunities for low-tech AT



Recovery Tools

- Heat applications, cool, theragun,

Structuring tasks

- Heaviest and most challenging tasks earlier in the day, or during cooler times of day

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Worksite and Style Changes

- Powered tools, like powered wheelbarrow to reduce physical strain.
- Mechanizing pieces of operation, with changes to workflows
  - Manure robots
  - Robotic components on operations

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Approaches to Work

- Worksite adjustments for height/comfort
  - Adjustable table heights, variety of workspaces
  - Mats for safety and for reducing fatigue
  - Alternative lighting options
  - Incorporating standing tasks with sitting

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Navigating Solutions

- Funding resources help farmer clients get the devices they made need
  - Commodity-specific groups
  - Industry-specific groups
  - State Vocational Rehabilitation program
  - Specialized services, AlphaOne
  - Low-interest loans

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Partnerships

- Specific aqua farmer client
  - Funding resources were divided
  - Support from Vocational Rehabilitation helped fund solutions

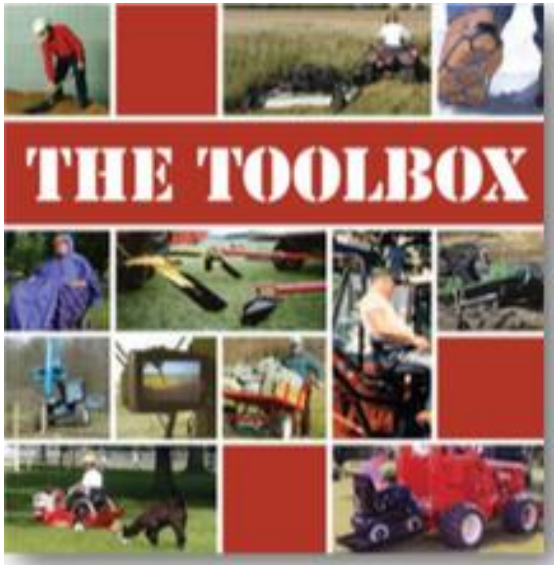
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AT Toolbox

The Toolbox Assistive Technology Database:

Assistive technology solutions for farmers, ranchers and other agricultural workers with disabilities.

Maine AgrAbility specific AT toolbox is in development



Questions?

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