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# Selecting a Suitable ATV/UTV for AgrAbility Clients

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Lincoln, Nebraska  
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## **National AgrAbility Project**

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# Outline

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- ❖ Overview of ATVs and UTVs
- ❖ Comparing options and application for AgrAbility client needs
- ❖ Common Farm/Ranch related tasks
- ❖ ATV & UTV accessories
- ❖ Accommodations for ATV/UTV users
- ❖ Safety Procedures



# Overview of ATVs and UTVs

- ❖ ATV - All Terrain Vehicle

*Also referred to as:*

- ❖ 4-wheeler
- ❖ 3-wheeler (no longer manufactured)
- ❖ Quad
- ❖ ROV - Recreational Off-highway Vehicle



- ❖ UTV - Utility Task Vehicle

*Also referred to as:*

- ❖ Side-by-side
- ❖ Utility Vehicle
- ❖ ROV - Recreational Off-highway Vehicle
- ❖ RTV – Rough Terrain Vehicle
- ❖ Or by brand/model names (Gator, Ranger, Mule...)





# Overview of ATVs and UTVs

## ❖ ATV

- ❖ Typically smaller
- ❖ One passenger (most models)
- ❖ Usually all-wheel suspension
- ❖ Straddle seating
- ❖ Operating controls similar to motorcycles



## ❖ UTV

- ❖ Larger and heavier than ATV
- ❖ Often has cargo box
- ❖ Bench seating and passenger accommodations
- ❖ ROPS and seatbelts
- ❖ Enclosed operator station (optional)
- ❖ Operating controls similar to a car





# Safety Procedures

- ❖ Read operators manual
- ❖ Never transport riders in cargo area
- ❖ Match speed to terrain
- ❖ Slow down for turns
- ❖ Do not overload
- ❖ Distribute loads evenly
- ❖ Avoid operation on public roads
- ❖ Keep all tires on ground
- ❖ Secure load

**Note: Local regulations may permit operation on public roads**





# Body Movement to Maintain Stability (ATV)

## Climbing hills

- ❖ Stand on pegs/running boards and lean forward

## Descending hills

- ❖ Slide back on seat and lean backwards

## Maneuvering over obstacles

- ❖ Stand on pegs/running board to absorb energy of bounce in your legs

## Turning corners

- ❖ Lean into the turn



Note: Added weight from cargo changes the dynamics of how the ATV will handle.



# Body Movement to Maintain Stability

Operators with mobility or stability impairments should consider UTVs or golf carts as an alternative to an ATV.

UTV and golf cart operators maintain a neutral posture in a more secure operator station.



Note: Added weight from cargo changes the dynamics of how the ATV will handle.



# Farm and Ranch Applications

- ❖ Increase mobility
- ❖ Tow/move implements
- ❖ Transport supplies
- ❖ Check fence lines
- ❖ Spray chemicals
- ❖ Feed animals
- ❖ Take soil samples
- ❖ Map fields
- ❖ Inspect crops
- ❖ Mark timber
- ❖ Mow grass
- ❖ Move dirt/plow snow





# Farm and Ranch Applications

## 3. Outdoor Mobility Cart

**PHYSICAL LIMITATION SERVED:**  
Lower Extremity

**DESCRIPTION:** An outdoor mobility cart will address the walking around the farm barrier to employment.

Mobility and lifting/carrying are most challenging physical issues with Sam's MS. If he cannot access his farm buildings and get from the house to his equipment, then he cannot farm. The mobility cart will provide farmstead mobility and carry loads so he will not need to walk on rough terrain.



A mobility cart snowplow, cab with poly windows and roof, and canvas doors are recommended to address the reduced strength/endurance barrier to employment caused by extreme temperatures. Sam uses his tractor daily for chores and stores it in the barn 150 yards from the house. The snowplow will clear a path from house to barn so he can access the tractor. Severe weather conditions reduce Sam's endurance and physical strength. The cab will provide shade in summer and heat in winter to preserve his energy while working.

Walking long distances around the farm property is necessary every day and the farm buildings and pastures are spread over ½ mile. This device will carry loads, such as tools and livestock feed that would otherwise be carried by gripping in the hands. A Polaris Ranger 500 Side-by-side utility cart would be ideal because it is easy to climb into without twisting the back and it can easily carry small loads. This will also improve safety for Sam. Instead of walking on the pasture, he will be able to drive and be protected from the livestock.

**ESTIMATED COST: \$13,000**

Extreme Power Sports  
2572 S. Otsego Ave.  
Gaylord, MI 49735  
989-732-4331

**BID: \$13,009**

County Wide Powersports, Inc.  
8535 M-119 Hwy.  
Harbor Springs, MI 49740  
231-347-8822

**BID: \$12,941 quote by Todd**



# Farm and Ranch Applications

## Increase mobility

- ❖ Added steps
- ❖ Passenger seat can be folded or removed to place walker/wheelchair
- ❖ Access is easier on UTVs or golf carts vs ATVs





# Farm and Ranch Applications





# Farm and Ranch Applications





# Farm and Ranch Applications

## Tow/move implements

- ❖ UTVs can weigh up to 4-5 times that of a ATV, allowing improved towing capability
- ❖ UTV towing capacity up to 2,500 lbs
- ❖ Avoid towing implements beyond the capability of the machine





# Farm and Ranch Applications

## Transport supplies

- ❖ Most UTVs feature a dump cargo bed
- ❖ This can be manual or assisted
- ❖ Cargo box capacity up to 1,000 lbs
- ❖ Front and rear racks on ATVs can be used to secure cargo or implements





# Farm and Ranch Applications

## Farm/ranch maintenance

- ❖ Accessories include
  - ❖ Sprayer
  - ❖ Seed/fertilizer spreader
  - ❖ Mounted attachments (soil sampler, mapping, plow, mower, disc, seeder, etc.)
- ❖ Used as a mobile workbench and tool transport









# Farm and Ranch Applications

## Livestock

- ❖ Calf catcher
- ❖ Feeding





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# Meeting Your Accessibility Needs

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## ATVs

- ❖ More difficult to mount/dismount as most models feature straddle seating
- ❖ Use caution when carrying heavy cargo as this can have significant affects on the stability / center of gravity
- ❖ Can be difficult to steer with limited upper body strength/support

## UTVs

- ❖ Car-like seating posture
- ❖ Optional enclosed operator station (some with heat and AC)
- ❖ Optional power steering (can add car-type hand controls)
- ❖ Standard seatbelts and ROPS assists with operator stability and safety



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# Meeting Your Accessibility Needs

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## 4. **ATV Steering Controls**

Impediment to Employment: Controlling an ATV with one arm

DESCRIPTION: Matt cannot control his Honda Fourtrax ATV, shown at right, with one arm. He drives it on rough terrain to check pasture fences, herd cattle, grade the driveway, and general mobility around the farm. It requires two-hand grip for steering and support while driving and use of the right hand to control the throttle. There are no control modification methods or vendors available to convert the existing ATV to enable Matt to drive it.

A John Deere XUV560E side-by-side utility vehicle is recommended because it has seat belts for stability while driving and a steering wheel that is easily operated with one hand. It is similar power and size to Matt's existing ATV and will drive in the necessary terrain. The XUV560E will enable Matt to continue doing his work checking pastures, cattle, mobility and other tasks on the farm with one arm.



# Meeting Your Accessibility Needs

- ❖ UTVs with added doors and hand controls allow for an operator experience similar to a highway vehicle
- ❖ Golf carts have also been successfully used to increase mobility on the farm and ranch...phed mobility





# Meeting Your Accessibility Needs

## ATV FOOT GUARD AND GEAR SHIFTER

**Problem:** Operating an ATV without one's legs slipping off the foot rests for operators with lower extremity impairments.

**Solution:** Foot guard and gear shift modifications.

**Idea from:** Charles Kuebler  
R.R. #1  
Shelton, NE 68876

### Description:

#### Foot Guard

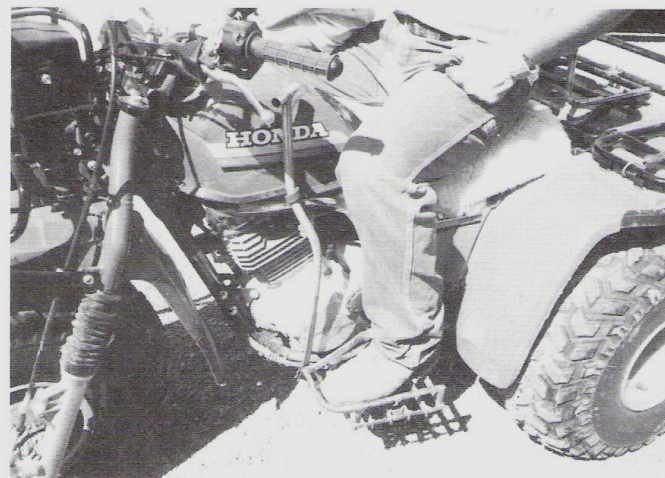
The foot guard is constructed of mild steel bar stock and flat steel, with one edge rough or toothed to prevent slipping. The foot guard is mounted directly over the existing foot rest, and no major modifications have been made to the ATV to accommodate the guard.

#### Gear Shifter

A piece of conduit with a "t"-handle has been bent to follow the contour of the ATV

engine and attached to the normally foot-activated shifter mechanism. The handle is held in place with a rubber tie-down.

**Editor's Note:** A simple bracket could be fabricated to replace the temporary tie-down used to hold the shifter handle extension in place. This would ensure that the handle would not be bounced or pulled free. Since the action of the shifter is up and down, the "t"-handle is essential to get a good grip.





# Accessibility All Seasons

- ❖ Factory installed and aftermarket cabs are available
- ❖ Some manufacturers offer heated and AC equipped models
- ❖ Front front and rear windshields are available. Many are hinged to tip-out for increased ventilation during summer months.





# ATV Operation

- ❖ Parking brake
- ❖ Hand brake
- ❖ Foot brake
- ❖ Hand/Thumb throttle
- ❖ Fuel-supply shut-off
- ❖ Ignition switch
- ❖ Clutch
- ❖ Shift lever
- ❖ Kill switch
- ❖ Winch equipped (optional)





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# UTV Operation

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- ❖ Parking brake
- ❖ Foot brake and throttle
- ❖ Ignition switch
- ❖ Shift lever
- ❖ Bed dump
- ❖ ROPS with seat belts
- ❖ Bench seating (multiple passengers)
- ❖ Doors
- ❖ Enclosed cabin (optional)
- ❖ Winch equipped (optional)





# Understand Your Local Regulations

- ❖ Many jurisdictions allow farmers to operate ATV/UTV/golf carts on public county roads
- ❖ Even areas with restrictions may still allow use of these vehicles with exemptions pertaining to **farm use** or **disability**.
- ❖ Some states now require all passengers under the age of 18 to wear a helmet (*even on private property*)





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# UTV Price Ranges

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- ❖ Kubota UTV- Cab, Heat, AC, gasoline engine ~\$22,000
- ❖ John Deere UTV- Cab, Heat, AC, gasoline engine ~ \$23,000
- ❖ Polaris Ranger 3 seat ~ \$15-18,000
- ❖ Polaris Ranger 6 seat ~ starting at \$17,000





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# UTV Price Ranges

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# UTV Price Ranges



2018 Polaris® Ranger XP® 900 EPS Solar Red

**Retail Price** \$13,299.00

**Our Price** [Click for Quote!](#)

Financing Available! Zero Down & Low Payments...Find out if you qualify! Apply On-Line.

**Condition:** New  
**Color:** SOLAR RED  
**Fuel Type :** Gas

**Stock:** 433527  
**Mileage:** 5



2018 John Deere XUV560E

**Retail Price** \$8,139.00

**Our Price** [Click for Quote!](#)

Zero Down Financing & Low Payments/Rates for qualified buyers. We take Trade in's!

**Condition:** New  
**Color:** Green  
**Fuel Type :** Gas

**Stock:** 010865  
**Mileage:** 5  
**Drive:** 4WD



2018 John Deere XUV835E

**Retail Price** \$12,999.00

**Our Price** [Click for Quote!](#)

Zero Down Financing & Low Payments/Rates for qualified buyers. We take Trade in's!

**Condition:** New  
**Color:** Green  
**Fuel Type :** Gas

**Stock:** 010434  
**Mileage:** 5  
**Drive:** 4WD





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# ATV Price Ranges

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- ❖ Honda ATV 4x4 – \$5-9,000
- ❖ Polaris ATV Sportsman - \$6-12,000





# Golf Cart Utility Vehicle Price Ranges

- ❖ Utility 4x2 ~\$7-10,000
- ❖ Utility 4x4 ~ \$12-17,000
- ❖ Street Legal ~ \$16,000





Questions