



# Migrant Farm Worker Assistive Technology

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# Joint Pain Screenings



Joint/pain Arthritis screening completed with migrant workers at their jobsite. This is done individually for each worker's privacy.

# Joint Pain Screenings



Screening consists of:

- ROM of each joint (limitations or pain)
- Educating the worker on Osteoarthritis, ergonomic tips, stretching, rest techniques, hot/cold Treatments.
- Each worker receives a gift.

# Joint Pain Screenings

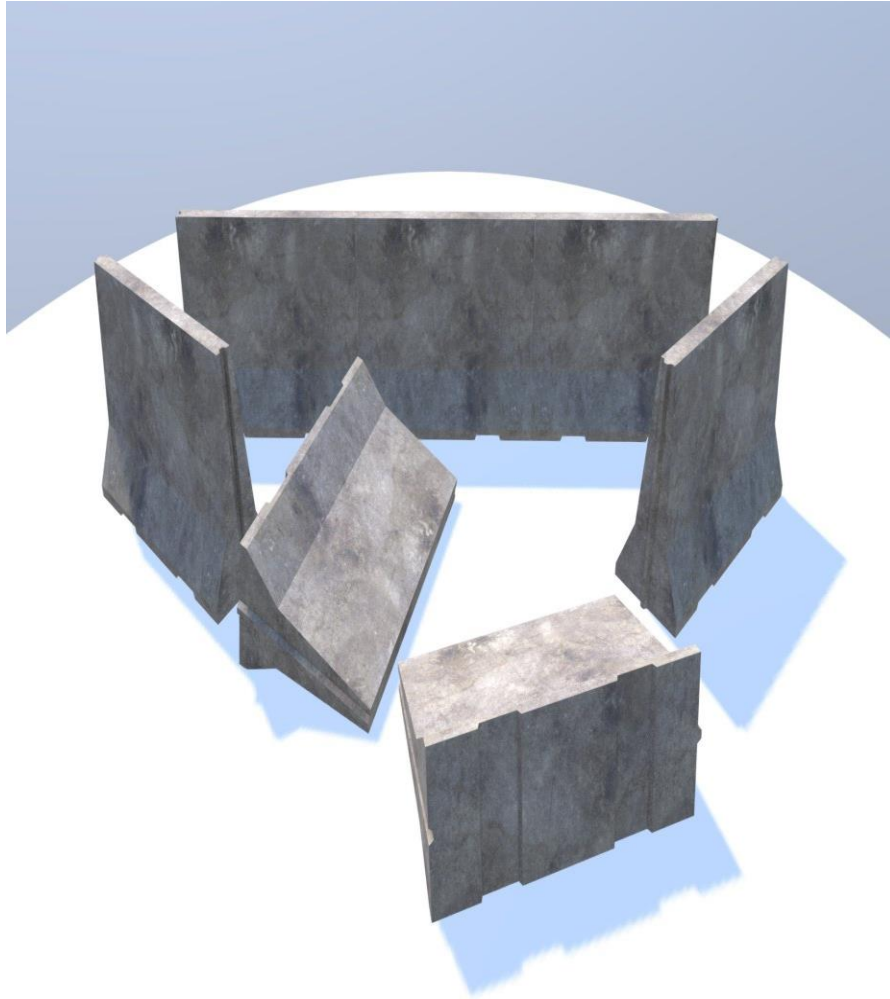


A more in-depth evaluation may be needed  
Further services:

- AT
- Recommendations of how tasks could be completed differently, positioning, and posture
- OT Treatment: manual therapy, kinesiotaping, stretching/exercises, strengthening, etc.



# Joint Pain Screenings



## BARRIERS

- Permission from farm owners to complete a joint pain/arthritis screening with their workers.
- Owner's may not want to pay for AT/adaptations to the farm

# AT: Torso Support



Springback torso support brace.





# AT: Bending/Pushing Power Broom



# Tractor Seat Heat



Heated tractor seat to relieve back pain.



# Feed Box and Auger

Hundreds of daily repetitions scooping grain to calves.



# Power brush for cleaning drinkers



# Fold-down steps for large trucks





# Half Steps



# Removing Silage Plastic



Grab the plastic at the top of the pile and pull it downhill so the tires tumble along down to the base. Maybe a rope can be fastened to the plastic and pulled with a tractor at the bottom of the pile and remove the plastic and tires all at once?



# Powered Pruners





# California AgrAbility

## Assistive Tools

California AgrAbility Program • Services • **Assistive Tools**



**NATADS**  
Public Access



### **Borrow/Try Tools: AT Device Lending Library**

The UC Davis California AgrAbility Program and Ability Tools have partnered to bring assistive technology and farming ergonomic resources to farmers, agricultural workers, ranchers, and gardeners across California.

# Bahco Pruning Shears

- The use: Cut branches up to  $\frac{3}{4}$  ,  $1 \frac{1}{4}$ , and  $\frac{1}{2}$  inch thick.
- How it helps: Angled head design reduces wrist and arm strain. The upper handle has soft cover for added comfort.
- Portability: Lightweight ergonomic design with left and right hand models.



# Ring Knives

- The use: Has a sharp underside to make jobs like opening cardboard boxes and cutting twine, ribbon, plastic strapping, pallet wrap, tape, or light gauge wire easy.
- How it helps: Decreases the chance of repetitive motion injuries such as carpal tunnel syndrome.
- Portability: 'Off and on' use as a utility knife for the finger. Blunt tip and topside with sharp 1-inch curved blade.

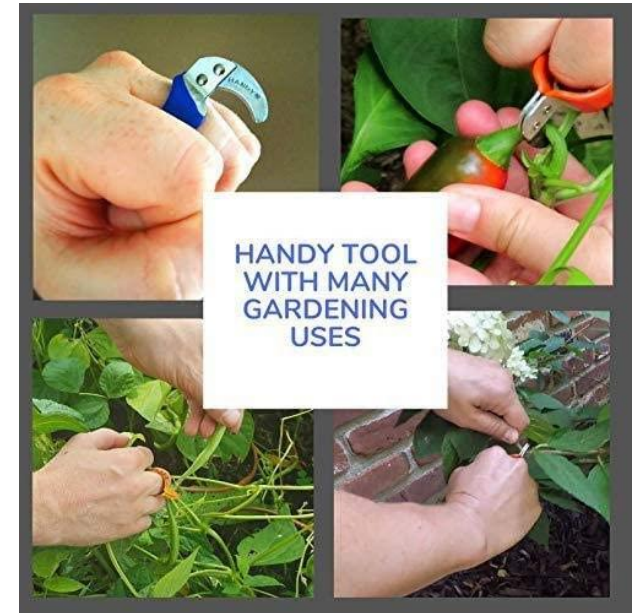


Image Source: Amazon



# Grip Handles

- The use: Attached to any wire bail or rope and twine.
- How it helps: Reduces hand fatigue by distributing the weight over the surface area of your fingers. This will reduce injuries with arm, back and shoulders.
- Portability: Can be removed and attached easily to be stored away.

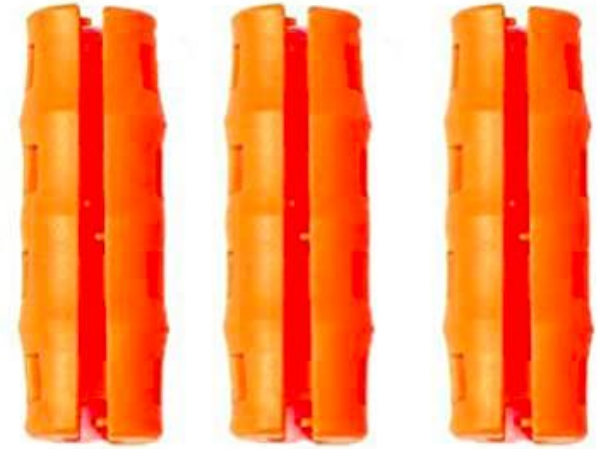


Image Source: Amazon

ACCESSORIES NOT INCLUDED

# Bionic Gloves

- The use: Provides protection when digging and absorbs vibration with power tools.
- How it helps: The Terrycloth mini-towel inside of the glove keeps hands cool and dry. A patented pad relief system helps the surface of the hand for secure grip.
- Portability: Can fit both women and men hand measurements.



# Air Seat Cushion

- The use: Seating on trucks, tractors.
- How it helps: Enhances posture and relieves pressure points, hips and tailbone, lower back and sciatica pain. Absorbs vibration.
- Portability: Can be moved from vehicle to vehicle.



Image Source: Amazon



# Motorized Utility Vehicle

- The use: Self-propelled utility vehicle.
- How it helps: Motorized wheelbarrow, eases moving and unloading.
- Portability: Can fit on back of truck. Can be stored in small spaces.



Image Source: Direct Mower

# Bag-A-Nut

- The use: Push as you walk under the trees and the Bag-A-Nut will pick up and inject nut into the basket.
- How it helps: Avoid bending over or kneeling and reduce the time you spend cleaning up nuts.
- Portability: Can be stored and rolled easily.



# Garden Nut Weasel

- The use: An easy to use rolling pick up tool for nuts, fruits, small balls, and more.
- How it helps: Comfortable grip handle with no need to bend over.
- Portability: Durable, super-strong steel design that can be easily stored.





# Safety and Seeing Glasses

- The use: Utilize for eye protection, seeing clearly
- How it helps: Protects eyes against debris, flying particles, smoke or dust. Seeing hazards.
- Portability: Can be folded to put away.



# Anti-Fatigue Mats for Feet

- The use: Worn over closed shoes, boots and safety shoes to provide relief of tired, sore, feet, and knees.
- How it helps: Improves circulation dramatically reducing pain and fatigue from walking and standing, insulating the worker from the negative effects of impact, vibration and cold.
- Portability: Patented strap system.



# Compression Socks

- The use: Provides support, comfort, and relief without compromising your mobility.
- How it helps: Promotes blood circulation and oxygen flow preventing fatigue and helps in muscle recovery.
- Portability: Can be reused.

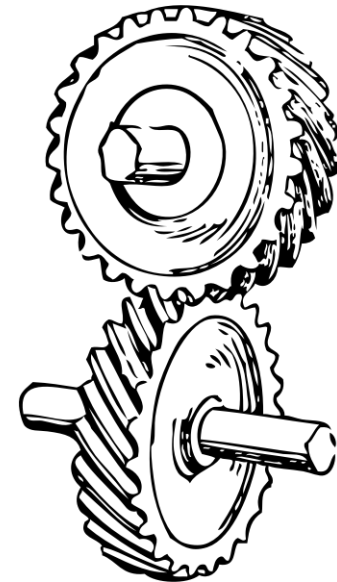


Image Source: Amazon



# Tips

- Job Rotation
  - different muscle groups activated
- Take frequent breaks, alternate sides
  - 5-10 minutes per hour
- Stay hydrated
- Eat different food groups for proper nutrition
- If tasks are repetitive, only use 15% of your maximum strength
  - otherwise can lead to injury or illness
- Change your posture
  - Try to alternate tasks between hands
- Wear proper fitted PPE
- Sun protection
  - sunscreen, long sleeve clothes
- Know your labor laws
  - Report all injuries
- Health education tools
- Speak up!



# Questions and Discussion

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