# Adaptive Beekeeping: for People with Disabilities and Veterans

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## AgrAbility

AgrAbility is a non-profit that helps farmers, loggers, and fishermen with serious medical conditions to keep working.

We are a USDA program partnering the land grant university Cooperative Extension Service and non-profit disability service organizations.



## **Assistive Technology**

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



## Physical Challenges

- Common beekeepers' medical conditions include arthritis, back injury, carpal tunnel syndrome, and musculoskeletal injury
- Impaired activities are mobility to the hives, bending over to inspect frames, lifting hive bodies, grasping frames, moving hives, gripping hand tools



## Whole Hive Moving



Hand-hold dollies such as this one from MannLakeLtd.com lift from the sides of the hive bodies. Item #MH-105.





### Individual Hive Body Lifts: 2-Person Carrier



The two-person hive carrier is a low-cost accommodation that divides the weight in half. It is item #935C at BrushyMountainBeeFarm.com.

# Individual Hive Body Lifts: Cranes

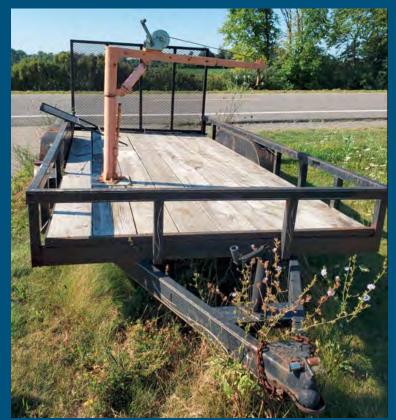








# Individual Hive Body Lifts: Cranes



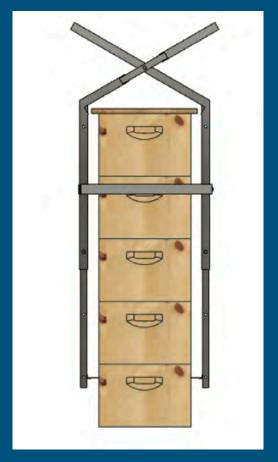


## Individual Hive Body Lifts

https://www.instructables.com/Hive-Lifter-Tongs/







# Individual Hive Body Lifts



## Individual Hive Body Lifts - Kaptar

https://www.countryfields.ca/products/kaptar-lift-electric





## Individual Hive Body Lifts: DIY

Based on the invention of Bardwell Farms https://youtu.be/318rE043rb8?si=LKDStVq9PAUsRarp





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#### Hand Tools



http://disabilityworktools.com/gripeezeheavy-duty-trade-glove/\$35





https://www.betterbee.com/beekeepers-tools-and-smokers/beekeeping-tools.asp \$12

## Hand Tools















## Bee Yard Mobility



Woody Glover's bee yard (Stephen Clay McGehee)

http://volusiabeekeepers.org ~\$250 http://www.greenhousemegastore.com/product/5902



http://burghbees.com/ ~\$800

# Bee Yard Mobility





~\$3000





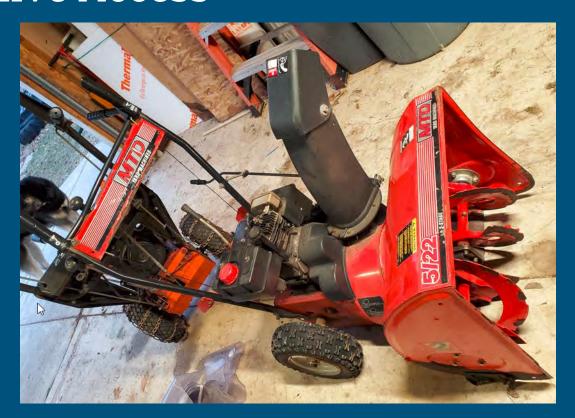








www.NorthernTool.com item# 143666 \$2200

















# Workshop





# Workshop







- Heat
- Seat
- Table
- Floor
- Ergonomics!















GlobalIndustrial.com sells an ergonomic workbench and tool balancer to support heavy tools. It is item #wg249497.



#### Honey Room







https://www.dadant.com

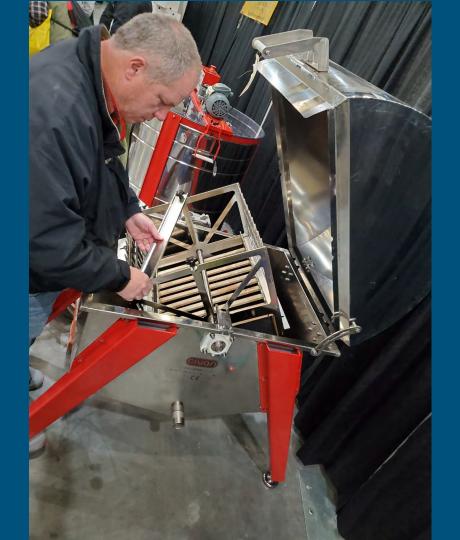
http://greatlakesgeneralstore.com/Speed-King-Electric-Uncapping-Knife\_p\_755.html

https://www.betterbee.com

### Honey Room



The double roller uncapper setup in a mesh-based tub









#### Conclusion

Assistive technology in the apiary will increase the likelihood of success for a beekeeper with medical impairments. Beekeeping is a very satisfying enterprise, and can be done by workers with medical impairments. Modified tools and equipment enable tasks that would otherwise be impossible or unhealthy for the worker.



#### Thank you!



www.AgrAbility.org