



GUAM ENABLED GARDENING: ADAPTIVE GARDENING SERIES

Adaptive Tools

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In the U.S. today, gardening is considered a favorite outdoor activity, right alongside golfing and jogging. Approximately 75% of U.S. households, whether novice or experienced, participate in some type of gardening activity.

However, gardening is not only a recreational hobby. It can also help one's physical and mental well-being, regardless of age. For instance, people affected by health conditions that limit mobility can benefit from increased physical activity. Furthermore, through the activity of nurturing plants to bear vegetables, fruits or flowers, one can experience the product of the effort. Also, decreased stress and an increased sense of well-being are reported as other benefits of gardening activities.

Nevertheless, there are barriers for those who experience physical and mental limitations. For example, people who experience arthritis may be challenged due to joint pain from bending or stooping to tend to the garden. An enabled garden allows an individual with specific challenges to participate. This series of fact sheets explain gardening methods, technique adaptations, and how to create enabled gardens specific to Guam.*

Individuals with specific challenges can participate in gardening activities with technique adaptations, such as adaptive tools. For example, individuals can modify tools to meet their specific needs and abilities. Always consult with your health care provider before engaging in new activities.

- **Limited mobility** (e.g., arm, hand, wrists, knee, leg, or back)
 - Place tools and other materials (e.g., heavy mulch) near workspace by using an apron, planting bags, baskets, luggage or garden cart, or reuse a bucket with added wheels. For individuals using a wheelchair or walker, planting bags and baskets can be attached for easier access.



Fig. 1 - Garden cart

- Adapt tools to be secured to hand or arm to use different muscles or joints.
- Wear gripping gloves for better grip.



Fig. 2 - Gripping gloves

- Attach foam sleeves on tool handles for easier grip.

* The references used for the Introduction of each fact sheet in the Guam Enabled Gardening: Adaptive Gardening Series is listed in the Bibliography of Site Selection.

- Modify garden hose by attaching a watering wand to make watering easier and have better flow control.



Fig. 3 - Watering wand

- Use knee pads or easy rise kneelers.



Fig. 4 - Garden kneelers

- Trigger grip tools made with finger rests and are lightweight.
- Pistol grip tools can be used to keep forearm and wrist properly aligned.



Fig. 5 - Cultivator with pistol grip



Fig. 6 - Trowel with pistol grip

- Long-handled tools can act as a lever for reaching capability



Fig. 7 - Easy-grip long-handed cultivator



Fig. 8 - Ergonomic spade with O-shaped handle grip

- **Joint pain** (e.g., arthritis)
 - Use stronger and larger joints, as well as muscles, for certain tasks.
 - Use the palm of hand, instead of fingers, to pull or push objects and tools.
 - Bend from hips and knees, instead of back, for digging or planting.
 - Lift objects with leg muscles.
 - Use wrist, elbow, or knee braces to help reduce stress on joints.
 - Limit tasks that cause too much pain.
 - Place stools near workspace or have rest areas in garden site.
- **Low stamina**
 - Can modify old skateboard and use it to roll along ground while working.
 - Practice correct posture and hold tools close to body to help avoid excessive twisting at waist, reaching, or bending for tools.
 - Alternate garden activities between easy and difficult tasks.
- **Use right tools for gardening activities and modify, if needed.**
 - Tools should be the proper size for task.
 - Can use saltshaker, extended syringe, or bulb planter for sowing seeds and plants.
 - For transplanting, create indentions for small seeds by using handle of wooden spoon.
 - In small spaces, such as containers, a fork can be used to weed.



Fig. 9 - A fork can be used for small spaces.

- Battery-powered tools can be used to plant or to cut to reduce muscle strain and allow for wide range of motion.
- Tools should be kept sharp and be in good condition.

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