Adaptive Gardening Series: Plant Care and Harvesting FS008-20

GUAM ENABLED GARDENING: ADAPTIVE GARDENING SERIES Plant Care and Harvesting

Lianna Santos, Undergraduate Student, University of Guam, BUILD EXITO Scholar Phoebe Wall, University of Guam, College of Natural & Applied Sciences, Cooperative Extension & Outreach

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.*

There are adaptive tools and devices to help care for plants with watering, weeding, and harvesting. Depending on one's limitations, some tasks may require a companion gardener.

* 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*.



Fig. 1 - Watering wand

Watering

- Different methods include hand watering, weeding, and mulching:
 - Hand watering
 - Easy-pour watering can minimizes hand and wrist strain.
 - Front trigger turret wand use for hardto-reach areas; lever helps ease muscle strain. (Fig. 1)
 - Add mulch to the surface of raised bed garden to reduce the frequency of watering.



Fig. 2 - Mulch

Fertilizing

• Use complete fertilizer containing nitrogen, phosphorus, and potassium. (e.g. 10-10-10, 16-4-8, and 12-4-8).

Weeding

- Scooter wagons: Can sit while removing weeds.
- Kneeling pads: Cushion provides protection when weeding raised beds. (Fig. 3)
- Short-handled and long-handled easy-grip gardening tools, such as trowels, forks, cultivators, and hoes help to reduce arm and hand strain. (Fig. 4-6)



Fig. 3 - Kneeling pad



Fig. 4 - Ergonomic trowel



Fig. 5 - Ergonomic weeder



Fig. 6 - Easy-grip long-handled cultivator

Add mulch to significantly reduce weeds. (Fig. 2)

• Pest Management

• Integrated Pest Management (IPM) used to manage pests (e.g., keeping them within tolerable limits) rather than completely eliminating them.

• Harvesting Fruits and Vegetables

- Modify pruning tools, such as scissors or shears, to reduce the amount of hand pressure to cut fruit.
- Wear gripping gloves to increase hand agility.



Fig. 7 - Gripping gloves

- If reaching from a long distance, use long-handled tools (e.g., T-grip or D-grip).
- Containers and bags can be used by individuals, which can also be attached to a wheelchair or walker, for harvesting produce.

Bibliography:

Bennett, A., & Grasswitz, T.R. (2017). *Integrated Pest Management for Home Gardeners (IPM)*. College of Agricultural, Consumer and Environmental Sciences, New Mexico State University. Cooperative Extension Service, Circular 655. https://aces.nmsu.edu/pubs/_circulars/CR655.pdf.

Crouse, D.A. (2018). *Soils and Plant Nutrients*, Chapter 1. In: K.A. Moore, and. L.K. Bradley (eds). North Carolina Extension Gardener Handbook. NC State Extension, Circular https://content.ces.ncsu.edu/extension-gardener-handbook/1-soils-and-plant-nutrients.

Kelt, J.E. (2014). *Mulches for Home Grounds*. Colorado State University Extension. Fact Sheet No. 7.214. https://extension.colostate.edu/docs/pubs/garden/07214.pdf

Turner, P., Fox, L., & Parkhurst, J.A. (2013). *Therapeutic Gardening*. Virginia Polytechnic Institute and State University, Virginia Cooperative Extension, HORT-66NP. https://vtechworks.lib.vt.edu/bitstream/handle/10919/48288/HORT-66-PDF.pdf?sequence=1&isAllowed=y.

Weigel, R., & Hampton, C.N. (2012). *Solutions for Living: Tools for the Enabled Garden*. Wyoming AgrAbility, University of Wyoming Extension, B-1238. http://www.wyomingextension.org/agpubs/pubs/B1238.pdf.