

## **The Enabling Garden**

Winter 2004, Article For *Special Living Magazine*

By Charles Schwab Architect AIA

### **Q&A**

**Q.** We operate several retirement communities around the country. We are considering adding outdoor ground and raised gardens to all of the properties. We have users with various disabilities, arthritis, visual impairments, semi-ambulatory and ambulatory people as well. What types of planters are possible and how do we build them. We would also appreciate ideas pertaining to health and safety in the garden. The communities are located around the country with existing ground cover that varies from sand to expansive soils. The average temperatures vary just as much. What materials should we use for our garden paths? At some of the locations we need to use the space for other activities as well. How can we make some of the gardens portable? Are there any health benefits to gardening?

**A.** Gardening is America's most popular outdoor leisure activity. 84% of households are involved in some form of gardening. The addition of gardens in your elderly housing complexes is a great idea and the occupants will enjoy memories of good healthy times in their own gardens of past years. The therapeutic benefits of gardening have been documented for years. Programs known as Horticultural Therapy recognize and use the physical, mental and spiritual benefits of gardening to help their patients. Gardening is an activity that can be designed and adapted for people with all sorts of special needs. With thoughtful consideration of users abilities and thoughtful garden design people with all kinds of disabilities, arthritis, limited vision etc. will enjoy the many benefits of gardening. The ironic fact is that people with health problems are the ones who can benefit the most from working leisurely in the garden.

Gardening is also an activity that both children and others of all ages and abilities can enjoy. Since raised beds are not higher than 3'-0", most kids old enough to understand, can reach the plants and partake in the events with those elders who may be seated. Gardening is an ideal way to cultivate shared interests and family participation. The gardens can be adjusted to the participants abilities without being demeaning or insulting. Watching things grow gives every gardener something to look forward to and being able to actually contribute fresh food to the table is a great booster of self worth.

These winter months are a good time to start planning your enabling garden, as they will all require some careful planning. One of the first things to consider is the size of each planter and the overall scale and design of the garden.

Take into account the gardeners preferences, motivation and skill level. Remember the idea is to make this a leisure activity. An overly aggressive program with elaborate planters and landscaping may make this hard work and drudgery.

There are several gardening styles that are popular alternatives to the traditional landscape or ground level planting. The various types include: Planting in planters, containers, window boxes, vertical gardens, raised permanent and raised rolling garden beds. These all have advantages in that they are equally adaptable to a small backyard, an Upper level patio or roof space as well as at the lower level common grounds. Seated users and those who use wheelchairs can easily cultivate each type. Bending over is not a requirement to cultivate the plants with any of these choices.

Some of the advantages of these types of gardens include the facts that seedlings can be started indoors and brought outside when appropriate, planters produce early crops and problems of poor soil or soil borne disease can be easily overcome. Planters also offer opportunities for innovative landscape ideas and creative plant structures.

Accessibility to the garden site is essential in order to reach the garden with a minimum amount of difficulty. If any sloping paths are required they should not be steeper than an 8% slope. If gates are provided they should be a minimum of 3'-0" wide and they should slide to the side and not swing. A 3'-0" wide pathway around the planters is the absolute minimum, 4'-6" is preferable, as a wheel chair could maneuver a turnaround within that space and most prefabricated path surfaces come in 4'-0" widths. A 6'-0" path is even better as it allows 2 people to stroll (which means both walking and rolling) side by side. This is essential if some of the elderly people prefer to walk with a friend or caregiver.

A water source needs to be nearby and the use of hoses can create obvious tripping hazards. If hoses must be used they should be light and easily used by everyone. A trickle irrigation system may be worth the investment. A good company that manufactures irrigation systems for automatic watering is " **Flower Framers**" [www.flowerframers.com](http://www.flowerframers.com) 800-315-1805 These units range from \$65.00 to \$350.00 and some have built in timers. These are actually designed for the home flower box. They can be used in raised gardens and other containers, eliminating the need to carry around watering buckets and pulling hoses. This also makes the old fashioned flower box below the windows a possibility for those with limited mobility and reach.

Shady areas that provide places to sit and take a break are essential in the Universal designed garden. People on medications can become overly exhausted if exposed to too much sun. The requirement for shade makes trellises, arbors and

fences attractive features that allow plants to grow up and on them. They can serve 2 purposes as a vertical garden and a source of shade.

Thanks to the ADA and the requirement that all recreation areas must be accessible there are all kinds of great products on the market that provide accessible and safe pathways. Grass alone is uneven and is difficult for a person using a wheelchair to navigate and a person using a walker may be thrown off balance with its uneven characteristics. One of the benefits of grass however is that it does not reflect heat and has a cool natural appeal. A good product called **presto**, “**Geo Runner**” [www.prestogeo.com](http://www.prestogeo.com) (800)-548-3424. This is a plastic open mesh, flexible access system for pedestrian and wheelchair use. The plastic units weigh 8LBS ea. They are sold in 2’x4’x1/2” units and are \$1.75/ sq. ft. These units have an 87% open area that allows the grass to grow in between but still provide a solid level strolling surface. Another product similar to this is **Eco-Trak**. They are also 2’x4’x2” panels that can be temporarily connected for portability. The Co. is Bike Track Inc. [www.biketrack.com](http://www.biketrack.com) (802)-457-3275 another that serves the same purpose that is very affordable is Privacy (Long Life Lattice) Lattice. It is plastic that allows a rolling surface with grass to grow through that costs only about \$20. Per 4’x8’ panel. They are also available at your local Lowe’s. There are recycled rubber mats that combine textured surfaces and provide cushioned comfort. A 4’x5’ panel is roughly \$55 [www.bigsunproducts.com](http://www.bigsunproducts.com) (800) 366-9645 A roll out path system which was originally designed for the beach. (This would work well for your housing units in arid parts of the country) They work on sand and a variety of other soft surfaces, made by P.A.T.H.S (Providing Access through hard situations) [www.paths.com](http://www.paths.com) (416) 816-7130

Another thing to consider is a path hard and stable enough to roll on that also provides a cushion if a person falls on it. A product that is used for accessible playgrounds solves both of these problems. It is called “**Fibar**”. It is a surface composed of 8-12” of specialty shredded wood fibers and an integral drainage system. The fibers lock together to form a solid surface resisting movement of material. [www.fibar.com](http://www.fibar.com) 800-342-2721. Another similar product used for the same playground surfaces is “**Wood Carpet**” another engineered wood like product designed for public playground accessibility. This is 6-8” for trails/paths of 8-!@” for playgrounds . [www.woodcarpet.com](http://www.woodcarpet.com) (800) 346-8524. Prices vary per quantities, but these are not inexpensive alternatives

A common hard material that is more affordable is called “**Brik-Trak**”. It is crushed brick and is often referred to as brick dust.. the cost is approx. \$48.00/ton..Crushed limestone and “**Bedford Plastic Timbers**” are good choices for wetland areas. [www.plasticlumber.com](http://www.plasticlumber.com) There are even stabilizers available that actually bind dirt and stone together, making them one solid surface. A great website to research various surfaces for all kind of outdoor recreation areas is **National Center on Accessibility (Recreation-Parks-Tourism)** [www.nca@Indiana.edu](http://www.nca@Indiana.edu).

Raised planters should not be wider than 4'-0" for a 2 sided planter and 2'-0" for a 1 sided planter. You should limit the length from 10-20 feet to prevent over exertion while circling the bed. It should be 28-30" high which will allow for a sitting surface as well. The plastic Timbers or Keystone Walls are good material choices as railroad Timbers may cause creosote stains and are not environmentally friendly. Remember mulching is a must with most raised planters as it slows evaporation of water from the bed and keeps the soil cool for the roots. A rolling raised planter can be built as well. The bottom of this should not be lower than 30" which will allow a wheelchair to roll underneath. These should be no longer than 6'-0". They should have pressure treated 4x4 posts at all 4 corners and 2 in the middle on both sides. This will provide (4) 3' wide sitting positions around the planter. It will also provide the reqd. support. Put casters on all 6 legs which will allow it to roll. Use pressure treated 2x 10s or 2x12s which will provide a deep enough planting area. Use pressure treated or marine grade plywood for the box/ ¾" thick. Provide a ¼" slope at the bottom, fill with 1/2 "deep washed gravel for drainage and provide drainage holes 2' on center, cover with a plastic geo mesh, so the gravel does not fall out. Line the box with a 6 mil. visqueen vapor barrier to protect the wood box and fill with topsoil.

The references I am providing will help you with plant selections in raised narrow beds. Remember planters are also an easy alternative and you can grow almost anything within. I hope you enjoy your accessible garden, Don't ever give up being a "Green Thumber" Charles Schwab AIA

A few good books are:

*Accessible Gardening for People with Physical Disabilities* By, Janeen R. Adil, Woodbine house, 1994

*Enabling Garden, Creating Barrier-Free Gardens* By, Gene Rothert, Taylor Publishing Company.

*Gardening hints for people with arthritis* EM8499. Available from OSU publications (503)737-2513

**Other resources:**

**American Horticultural Therapy Association**

Wightman Road, Suite 300, Gaithersburg, MD 20879

[www.gardenforever.com](http://www.gardenforever.com) [www.inthecountrygarden&gifts.com](http://www.inthecountrygarden&gifts.com)

[www.hort.vt.edu](http://www.hort.vt.edu) [www.davesgarden.com](http://www.davesgarden.com)