chicago botanic garden

Garden for Life

Barrier-free gardening with containers and raised beds

Making gardening more accessible is easier than one might realize. Simple adjustments work wonders and contribute to making a garden barrier free. One of the most common concepts in barrier-free gardening is raising the soil to a safe, comfortable height. This can be done with containers and raised beds.

Container gardening

Container gardening is an easy and versatile way to enjoy an instant, individualized garden just about anywhere. When compared to traditional in-ground gardens, container gardens are easier to set up, more manageable, and more portable. Design your own container gardens and plant them with bush or cascading varieties; or add a trellis and let vegetables, vines, and flowers ramble upward.

Container gardens provide maximum accessibility and can be easily adapted to the different abilities, needs, and interests of gardeners. They are particularly useful for gardeners with limited vision. Plants are brought within easy reach to touch and smell, and the edges of the container also identify the edges of the garden.

Carefully selected and positioned containers will greatly reduce the need to bend, stoop, reach, or kneel at ground level and are fully accessible from all sides.

Containers can be placed on patios, decks, balconies, or rooftops as well as along walkways or outside doorways—anywhere they are easily accessible and sited in appropriate light conditions to support healthy plants.

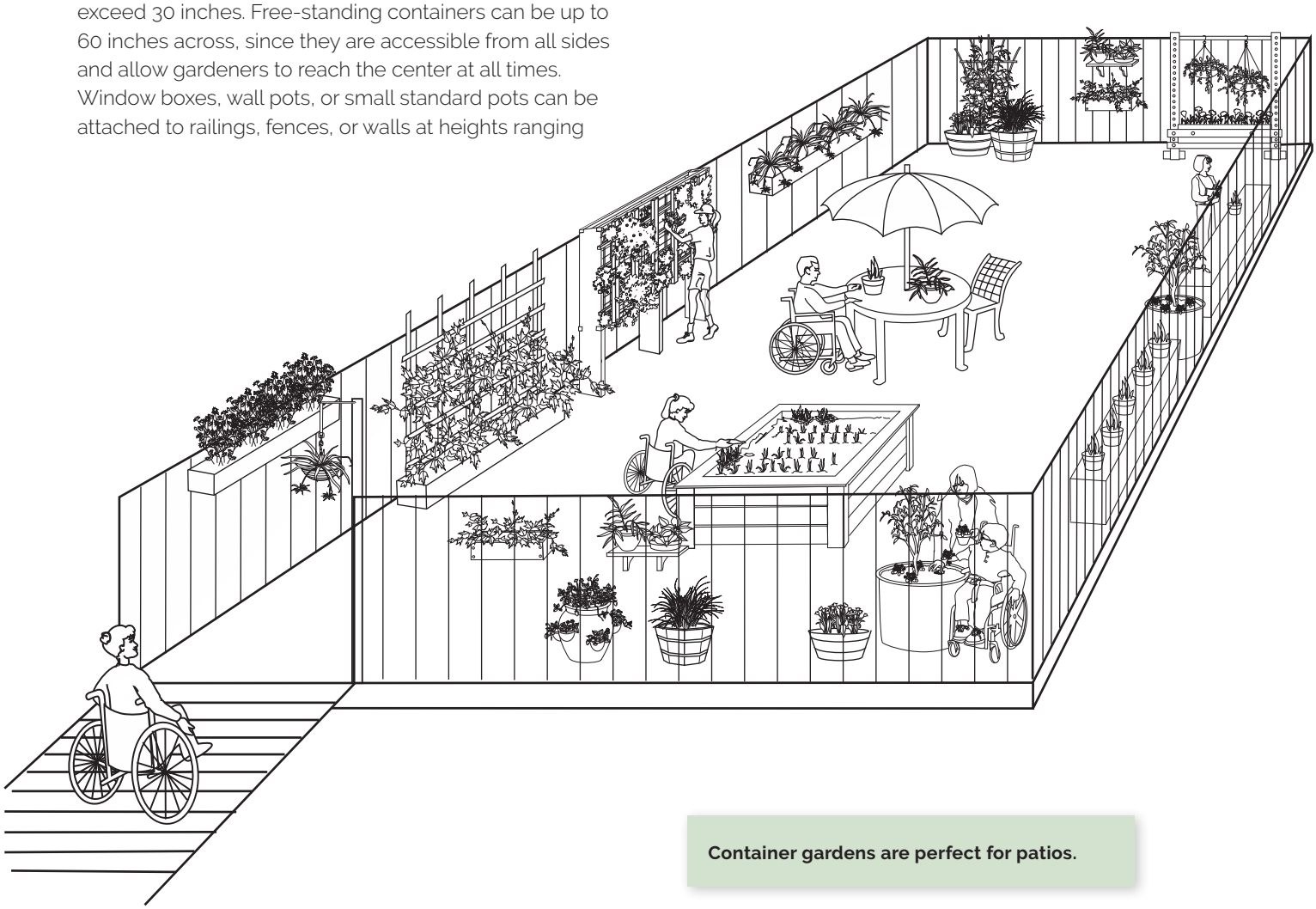
Because containers are easy to establish, consider them first when starting an enabling garden, whether at home or at a healthcare agency. Their versatility and range of materials, sizes, and shapes accommodate any design style or budget. If you require a temporary raised-garden space that eliminates the need to get up and down from the ground, try inexpensive bushel baskets filled with a light soil mix. These will last about one season. Larger containers holding five or more gallons of a soil mix are ideal for growing most annual flowers, vegetables, or herbs. Container gardens can be customized with any combination of plant materials as long as the plants are hardy to your growing zone and are appropriate to the scale of the container.

Container gardens are easy to establish and maintain.

On larger paved patios, decks, or rooftops, cluster containers of varying heights. Consider, for example, three containers: 18 inches, 20 inches, and 24 inches high, placed together to create a "step-down" design. This arrangement is very accessible to a seated or standing gardener and creates an image of a larger, three-dimensional planting space. Locating containers singly or in groups around the outside edge of patios allows freedom of safe movement for people using wheelchairs.

When you consider an item as a potential container, be sure it can hold soil, support a mature plant, and provide adequate drainage. In the barrier-free garden, large containers are best. To minimize stooping and bending or to accommodate a seated gardener, containers should range from 18 to 30 inches high. Gardeners must be able to reach across to the center of containers, whether they are positioned singly or in clusters. When seated, the average person has a reach of approximately 30 inches. Therefore, the width of a container that is positioned against a wall or otherwise accessible solely from one side should not exceed 30 inches. Free-standing containers can be up to 60 inches across, since they are accessible from all sides and allow gardeners to reach the center at all times. Window boxes, wall pots, or small standard pots can be attached to railings, fences, or walls at heights ranging from 18 to 60 inches to accommodate the reach of most gardeners, whether sitting or standing. Choose durable, low-maintenance materials such as heavy duty plastic, wood, ceramic, or terracotta for all containers.

With the wide range of materials, styles, and sizes, containers can fit any need and any budget. However, size, height, and placement are key factors to keep in mind when creating a container garden that is barrier-free, accessible, and low-maintenance. Once a container garden is set up, it will be an ideal way to ensure that gardening remains an important part of your life.



Container gardens are perfect for patios.

For easy gardening, containers should be between 18 and 30 inches tall.

Raised-bed gardening

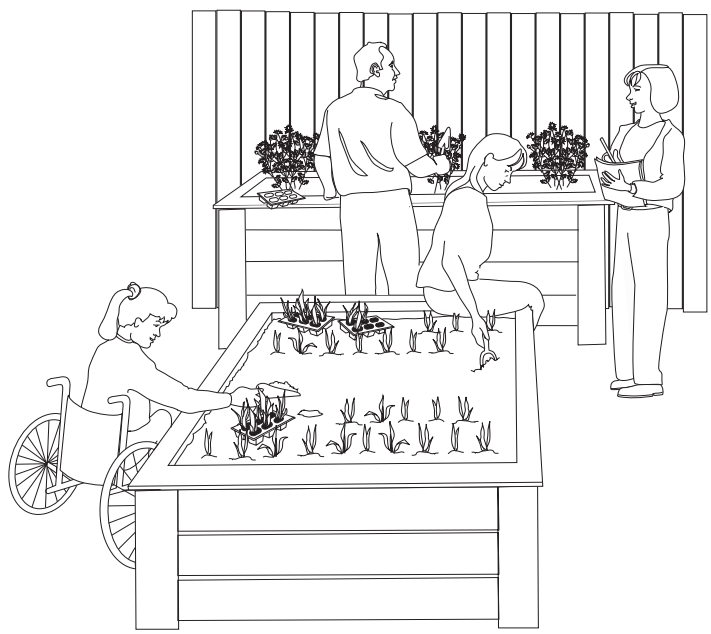
Gardening in large raised beds is a way to make gardening less taxing and more relaxing. The purpose of a raised bed is to provide a larger growing area that is comfortably situated for the gardener. This is accomplished by raising the soil level in a permanent, large container. Such containers are available in a wide range of shapes and sizes or can be specially made.

Carefully designed, they eliminate the need to bend, stoop, reach, or kneel at ground level. With raised-bed gardening, the garden is lifted up to you.

Since raised beds are usually considered permanent fixtures in the garden, they are best used for important flower, vegetable, or herb gardens that are frequently tended and are worth the investment. Raised beds are initially more expensive than containers and require more effort to build. Container gardening is a more temporary way to raise the soil to a comfortable height.

In addition to customizing soil height to gardeners' needs, raised beds maximize accessible garden space and accommodate seated and standing gardeners simultaneously. Gardeners save energy by avoiding the need to get up and down from the ground. It's also easier to experience plants in a raised bed, which brings fragrant blossoms within easy reach to see, smell, and touch.

Raised beds lessen the need for special tools and equipment because plants can be tended with hands or hand tools alone. Although raised-bed gardening has similar advantages to container gardening, the biggest difference is the larger scope of raised-bed gardening.



Raised beds make gardening easier for everyone.

Plan for raised beds in an accessible location, such as on or adjacent to firm, level, and well-drained paving. In this way, people who use wheelchairs, walkers, and scooters, as well as gardeners with poor balance and coordination, will have easy access and freedom of movement in the garden. It is better to position the raised bed on soil and pave around it rather than build on top of pavement. Placement on soil allows excess water to drain through the bed into the subsoil.

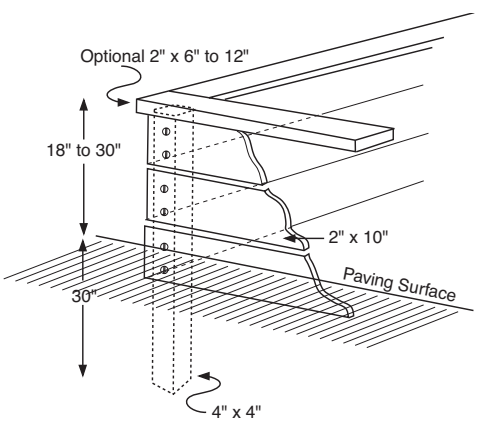
Raised bed height

The key to a successful raised bed is to provide a comfortable match between your preferences and your abilities. An 18- to 30-inch height is effective for many gardeners who use a wheelchair, scooter, or walker; 24 inches works well for most people. For standing gardeners who want to minimize stooping and bending, 24 to 41 inches is effective. The raised bed height should relate to the individual gardener's height, general mobility, reaching limits, or preferred position while gardening. Gardens designed for groups of people with different mobility may require raised beds of several different heights.

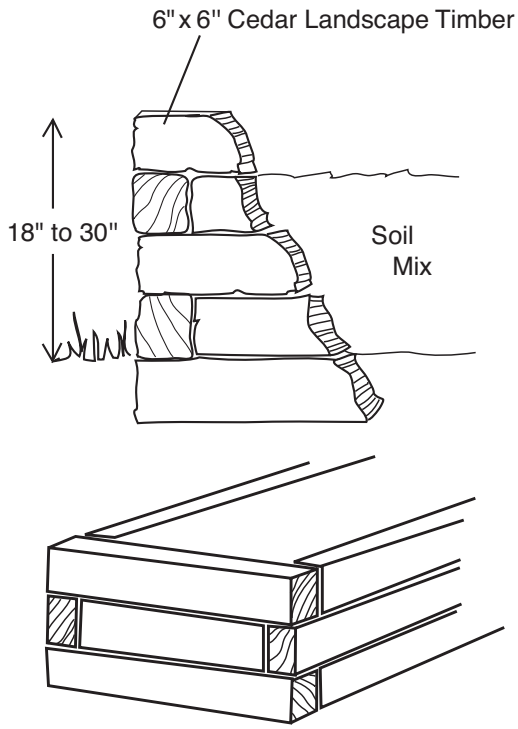
Raised bed width and length

The walls of the raised bed should be as thin as possible to maximize the amount of gardening space within reach for gardeners who are standing or using wheelchairs.

For gardeners who prefer to sit on a ledge, a wider platform will be needed. Beds should be no wider than a gardener can comfortably reach: 60 inches for beds accessible from all sides, or 30 inches for beds accessible from only one side. If beds are wider, plant the inaccessible areas with smaller or dwarf varieties of low-maintenance trees and shrubs.



This is a landscape timber raised-bed construction detail.



This is a landscape, timber, or plank raised-bed construction detail.

Raised bed construction

Raised beds are made in many different styles, from a range of materials including wood, stone, concrete, plastic, and metal. You can choose a design and material to suit any style or purpose. You can construct one yourself, or purchase one ready to plant. The following sections describe various material choices and designs.

Wood

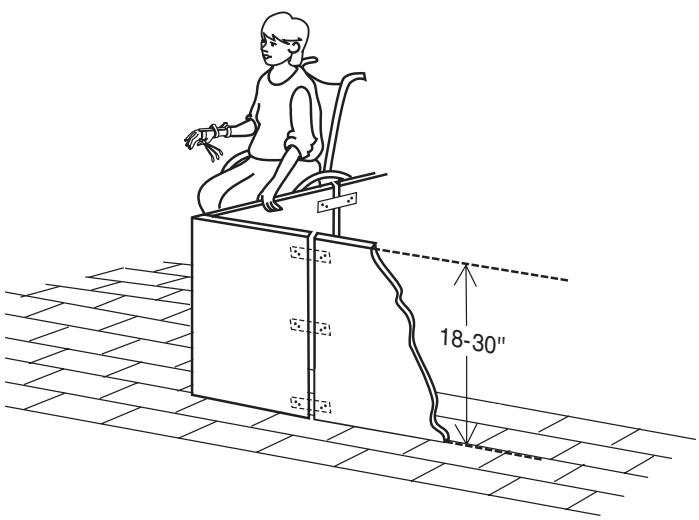
Wood, which is less expensive than masonry for constructing raised beds, is perhaps the material most commonly used. Naturally rot-resistant wood such as cedar is the best choice. Consider recent versions of recycled plastic "lumber" that closely match the look of real wood. Recycled plastic lumber is very durable, maintenance-free, and only slightly more expensive than rot-resistant wood. Avoid using railroad timbers or other treated wood as they may be toxic.

Landscape timbers made from various kinds of wood are commonly used in both 6- by 6-inch and 6- by 8-inch sizes in up to 8-foot lengths.

Another, simpler design uses planks anchored to 4- by 4-inch posts, sunk 2 to 3 feet into the ground. Finally, you can now purchase corner brackets that wooden sides fit into to make a raised bed quickly and easily.

Reinforced Concrete Pavers

Reinforced concrete can be tinted to a range of colors and poured into molds that allow it to be used to create raised beds of any shape, including curved beds. While the results are attractive, the process is expensive. A less expensive way to take advantage of this nearly indestructible material is to use reinforced concrete pavers. Available in a range of sizes, shapes, colors, and textures, pavers that are larger in size and square or rectangular in shape work best for larger raised beds. For example, pavers that are 24 by 36 inches and 3 inches thick, stood on end and buried 12 inches deep, can be bolted together side by side to make a 24-inch-high, narrow-walled raised bed.



This is a concrete paver raised-bed construction detail.

Elevated garden beds

Elevated beds may also be called "pan beds" or "table beds". Their distinguishing feature is space for knees to go under the bed. This allows the gardener to get close to the planting surface while seated in a head-on, rather than side-sitting posture. For many people, this is far more comfortable. Often the soil depth in an elevated bed is fairly shallow. This may mean that the bed needs to be watered and fertilized more often.

Raised bed soil mixes

The soil used to fill raised beds should be a light, loose, and easily worked mix that will promote healthy plant growth and reduce stress on muscles and joints. We recommend using high-quality soilless potting mix blended especially for containers. Soilless mixes are made with various combinations of peat moss, vermiculite, and perlite, without any real garden soil.

Since the mixes contain few nutrients, you will want to fertilize your plants with a dilute mixture every other week. Fertilizer choices include granular, liquid, slow release, and organic. A balanced fertilizer such as 10:10:10 is fine for most plants.

Raised-bed soils dry out more quickly than ground-level bed soil. The frequency of watering will depend on the soil volume in the bed, the weather, and the type and number of plants. Raised beds with intensive plantings of vegetables will usually need a thorough soaking every two to four days. Mulching the soil with organic materials such as shredded wood chips of cedar, pine, or cypress or with cocoa bean hulls helps to retain moisture.

Resources

Table Gardens and Elevated Gardens: vegogarden.com

Elevated Garden Beds & Planters: gardeners.com/collections/elevated-garden-beds

LiveWall Living Wall Systems: livewall.com

Pamela Crawford Living Wall Planter w/ Liner: kinsmangarden.com

Reading

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Jabbour, Niki, and Joseph De Sciose. *The Year-Round Vegetable Gardener: How to Grow Your Own Food 365 Days a Year; No Matter Where You Live.* Storey Books, 2011.

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