

Raised Beds

Not every landscape is suitable for in-ground gardens. If this is the case, raised beds are an option. For less than ideal garden locations, raised beds provide a tremendous amount of flexibility. Sites with steep slopes, poor drainage, and those with rocky, shallow, or low soil quality are ideal for raised bed gardens.



Raised beds can be used for vegetable and flower gardening. LayLa Burgess, ©2017 HGIC, Clemson Extension

Raised beds offer several advantages over in-ground planting. They tend to warm up faster in the spring, so the growing season begins earlier. Raised beds are easier to take care of because only the defined space within the bed needs weeding, irrigation, and mulch. Raised beds are capable of producing high quality vegetables, save space, and are a perfect choice for those with physical limitations.

Simple, rectangular designs are the most common and inexpensive to build, but intricate and creative shapes can be designed if desired. Many materials are suitable for raised bed construction including rocks, concrete blocks, landscape timbers, or similar rot-resistant material. Dimensional lumber is the

most commonly available cost effective wood material used. Raised beds can also be formed by mounding soil. Mounded raised beds are not lined at the edges with structural materials.

A mixture of good topsoil and compost provides a foundation for proper plant health when filling the raised bed. The amount of compost added should be in a range of 10-20% of the total volume (length x width x height) of medium added to the bed. Too little organic matter as well as too much composted organic material can cause future problems in the raised bed. Narrow beds (about 3 to 4 feet wide) allow the gardener to reach the center of the bed without stepping into the bed.

Planning Stage

Carefully plan the location and layout of the raised bed. Locations convenient to walking past the raised bed daily help with monitoring for insects and disease on plants. Wind protection should be taken in to consideration as well. Place the beds in a well-drained site that receives a minimum of six hours of direct sunlight per day, and preferably near a water source. Beds can be as long as desired, but should only be as wide as can be easily worked from either side to the middle (3 to 4 feet wide). Once the dimensions of the bed have been determined, mark out the garden with stakes and string for construction. All cultivation, planting, and harvesting is done from the pathways created between the beds. For enclosed beds, 3 to 4 feet wide is comfortable for most pathways. If the raised beds are mounded and unlined, paths within the beds should be 2 to 3 feet wide for easy access with garden tools. To prevent soil compaction, never walk on beds once constructed.

Preparation of Beds with Sides

For enclosed beds, use insect- and decay-resistant wood such as cypress, redwood, or cedar. The American Wood Protection Association (AWPA) recommends labeled UC4A or higher treated lumber for horticultural uses. For more information on treated lumber, see [HGIC 1732, *Treated Wood in the Landscape*](#). Alternatively, attractive lined beds can be created using concrete or other decorative blocks and stone. After the enclosure is built and appropriate soil added, rake the soil flat until smoothed. Add sawdust, bark, pine straw, or pebbles to the paths between beds to improve the walking area and to minimize weeds.



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Raised beds should be approximately 3-4 ft. wide to provide easy access to the middle for gardening tasks.

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Work the existing soil within the beds as deeply as possible by tiller or shovel. If the soil is compacted, wait until it is dry to loosen. Continue to work into the existing soil a 2 to 3 inch layer of organic material, such as compost, ground bark, chopped leaves, or composted manures or add a layer of topsoil. The amount of compost added should be in the range of 10-20% of the total volume of soil in the bed. Soil testing will help determine which nutrients and how much lime are required. For more information on soil testing, see [HGIC 1652, *Soil Testing*](#).

Shaping Beds without Sides

Spread topsoil or soil with organic matter, then shape the bed with a shovel and rake to form a mound. The finished unlined raised bed should be 4 to 8 inches high. When mounding the beds, rake the soil so that the sides of the bed slope up at a 45-degree angle and smooth the top of the bed so it is flat.



Zachary Boone Snipes, ©2015, Clemson Extension

Mounded raised beds without sides are easily formed with pathways between rows for access.

Zachary Boone Snipes, ©2015, Clemson Extension



Zachary Boone Snipes, ©2015, Clemson Extension

Plan for irrigation in the initial design of the raised bed.

Zachary Boone Snipes, ©2015, Clemson Extension



Maintain turf and remove weeds surrounding raised beds to limit competition, pest insects, and potential plant disease. Zachary Boone Snipes, ©2015, Clemson Extension

Planting & Maintenance

Plant vegetables in blocks instead of rows while alternating crops that mature at different times. Planting the same crop at successive intervals during the growing season creates multiple harvests that are spaced over a longer period of time. Fertilize and water as needed. Raised beds will dry out more quickly than in ground beds, and will require more irrigation during dry periods. Place stakes at the corners of the unlined beds to prevent the hose from dragging across plants when watering or place drip irrigation hoses on timers for water delivery.

Organic material is constantly decomposing, so it is wise to replenish your raised beds with compost regularly. For more information on composting, see [HGIC 1600, *Composting*](#).

Cover the beds with 2 inches of pine straw, leaves, compost, or a cover crop when vegetables are not planted. Turn under the cover crop or leaves at the appropriate time for a spring or winter garden. Cover cropping helps supply the garden space with nutrients and organic matter for soil conditioning. It further helps in retaining soil moisture and suppressing weeds until the garden is replanted. For more information on cover crops, see [HGIC 1252, *Cover Crops*](#).

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