Railroad ties and treated wood are tempting to use for their rot-proof properties, but avoid them in garden beds where vegetables or edible flowers will be grown. Chemicals impregnated into the wood can leach into your soil and plants. If using these materials, line beds with heavy plastic before adding soil.

If construction isn't your forte you can create raised beds by raking the soil from the paths up into mounds several inches tall and augmenting with compost. It is not permanent like a bed defined by a frame, but gives the same benefits.

#### Site selection for raised beds

Know your plants before choosing a location for your beds. Many plants need at least 8-10 hours of sun per day to thrive, especially many vegetables, but many plants prefer cooler temperatures and some shade. Before planting, follow the path of the sun through your yard and remember that the angle of the sun will change as the seasons change. Look for shadows cast by trees and buildings and think ahead many years to how trees will grow, extending their shadows.

When surveying your yard look for low, boggy spots which require special attention. Consider soil depth, rocky patches, path of the wind, areas of intense sun or reflection from light colored buildings. Also be aware of areas at the bottom of hills, called frost pockets, where cold air gets trapped. After mapping all of these variations, choose plants adapted to these conditions.

When building a raised bed along the base of the house, slope the soil gently away from the house to aid in moving water away from your foundation. A two degree slope is sufficient.

Don't be overwhelmed. It's easier than you think and provides years of benefits you can hardly imagine.



#### **Resources:**

http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1102/HLA-6033web.pdf

http://www.uri.edu/ce/factsheets/sheets/raisedbed.html

https://utextension.tennessee.edu/publications/ Documents/SP291-N.pdf

> For more information visit the Master Gardener Diagnostic Clinic May through September Tuesdays 11:30 a.m. - 2:30 p.m.

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# Raised Bed Gardening





Master Gardener Program

### What is a raised bed?

Raised bed gardening has been popular for many generations, especially in areas with high population density or poor tillable land. A raised garden bed is made of soil piled above the surrounding soil level, either raised by mounding up the earth or filling a frame set atop existing soil. The beds are small enough to work from either side into the center without stepping into the bed, usually 4 feet wide or less, though the length can be whatever size fits your garden space or needs best.



### **Benefits of raised beds**

Soil is a living ecosystem, requiring air, water, nutrients and pore space. The most important goal in raised bed gardening is eliminating stepping on the soil in the planting bed, dramatically improving the health of the soil. Compacted soil is not healthy because air, water and nutrients cannot move freely. By making the beds narrow enough to work from outside the bed you don't have to step on this delicate ecosystem. Compaction reduces yield by up to 50%.

- improved soil condition more efficient use of compost because it is only put in the growing area, not the paths; reclaim problem ground – low, boggy areas can be raised; poor quality soil can be augmented or covered over
- higher yields wider beds create more planting area and less path area; wider beds allow tighter interplanting instead of single rows of plants; intercrop fast growing plants with slow growers; traditional row gardening yields .6 lbs/sq ft versus 1.24 lbs/sq ft in raised beds
- work soil sooner and in a greater variety of weather; soil warms faster so you can plant earlier; drains better; you can work the bed when it is muddy because you are not stepping in the planting area
- water conservation ideal design for soaker hoses and drip irrigation; water only in planting rows, not paths; tighter, closer planting shades soil, decreasing evaporation
- water drainage drains better so ideal for plants that don't like wet feet, such as garlic
- accessibility can raise beds extra tall to accommodate people who cannot stoop or people in wheelchairs; build a U-shaped bed wheelchairs can park inside to access three sides at once
- pest control burrowers line bottom of bed with chicken wire before adding soil; rabbits – surround with a short fence; birds – cover with bird netting; insects and diseases – increases varieties of plants; easy to rotate plants from bed to bed to break pest cycles; weeds – tight intercropping crowds out weeds

 psychological benefit – break down tasks to manageable sizes; work one bed at a time rather than the whole garden

## Constructing a raised bed

Creativity is easy to tap when designing your raised beds. As long as you use plant-safe building material and keep it narrow enough to reach into the center without stepping into everything else is flexible. Do you have an unused corner with poor soil? Make a triangular bed with amended soil. Do you have a narrow strip between your sidewalk and fence? Build a long skinny bed. Are you renting and don't have permission to dig up the lawn? Use old tubs or a plastic wading pool on the patio for your garden.



Cedar is naturally rot resistant so use this if you want your bed to be in place a long time. Bricks, concrete blocks or stones (who doesn't have a pile collected from your property?) are also safe, long-lasting material. Recycled 2x4s, 2x6s or larger are also appropriate material which will last for years, though will need to be replaced over time. But if you're just going to throw them out anyway, why not get more use out of them?