

How to Build a Raised Garden Bed

It is just March and we are already dreaming of baskets full of freshly harvested tomatoes. When it comes to getting your hands in the soil, it does not matter if you are a beginner or advanced gardener. This step-by-step guide will aid you in constructing your very own raised garden bed.

Getting Started...

What you'll need:

- 24, 2-inch galvanized deck screws
- One 2-by-4 board, 8 feet long
- Three 2-by-12 boards, 8 feet long

In regards to wood, cedar is best but any untreated wood should work fine. Never use pressure treated lumber when building your raised bed!



Preparing the Boards:

Step 1:

- The two 2-by-12 boards will serve as the lengths of the bed.

Step 2:

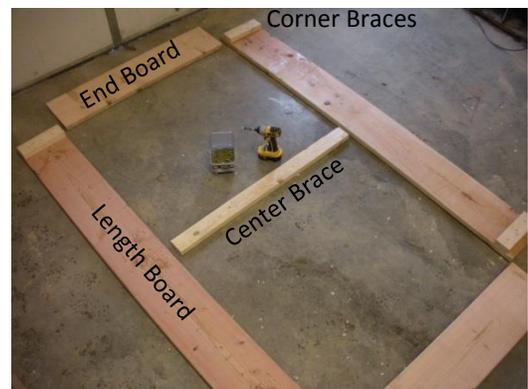
- Cut one 2-by-12 into two, 4ft boards to serve as the end boards.

Step 3:

- Cut the one 8ft 2-by-4 into one, 4ft board to serve as a center brace for the raised bed.

Step 4:

- With remaining 4 feet from previously cut 2-by-4, cut into 4, 11in pieces for corner braces.



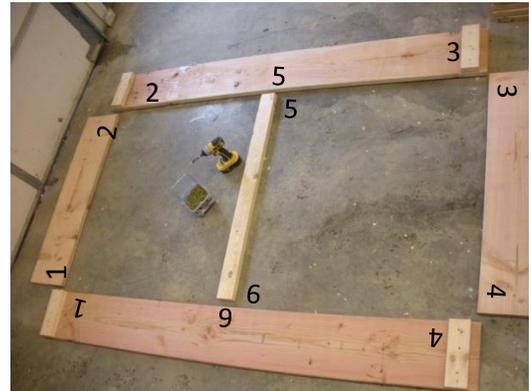
Assembly:

*Each corner is labeled with a number. Match corners to corresponding numbers.

Example: 1 to1

Step 1:

- Attach the four, corner braces to the ends of each 8ft side board, about 2in from the edge.



Step 2:

- After drilling starter holes, secure one of the side boards to an end board with three evenly spaced screws. Working with the same corner, drill two more screws into the brace of the adjacent end board for further support.
- Complete this same step in all four corners until all length and end boards are secured.



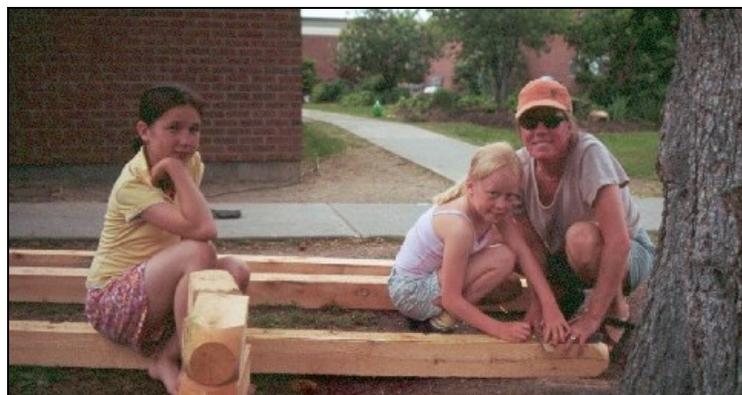
Step 3:

- With the 4ft, 2-by-4, center brace in middle of bed (4ft in) and about 1in up from the bottom of the side boards.
- Secure the center brace by drilling in screws from both of the length boards.



Your completed raised bed should look like this!

How to Build a Raised Bed



Twelve 8-foot 4" x 4" timbers are needed to assemble a 4-layer, 4 ft. x 8 ft. raised bed. The lumber will be stacked and each layer will overlap the layer below it at the corners. Here are the four different measurements to prepare.:

- 1) First, trim all timbers to the maximum possible common length, as they may not all be exactly 8 ft. Set aside four boards. These will be used for the sides of layers 1 and 3.
- 2) Measure the width of a timber (as it may not be exactly 4 inches). Double this width and subtract from the length of the timbers cut in step 1. This will be the length to cut the four timbers used for the sides of layers 2 and 4.
- 3) The end pieces of layers 2 and 4 are made by cutting two timbers in half.
- 4) Subtract the doubled timber width from the length of the end pieces of layers 2 and 4. This will be the length to cut the two boards used for the ends of layers 1 and 3.

**Note: A simpler option is to cut all the timbers to the maximum possible common length, then cut four timbers in half for the ends and follow the stacking process as outlined below. The bed will end up slightly larger than 4ft. X 8ft.*



The first layer is the most important as all other layers are built on it. The raised bed box will be sturdiest if the first layer is dug into the ground. Use a square and level to ensure that the first layer is as square as possible.



If the area under the raised bed is grass, the sod can be stripped and composted. If the soil underneath the raised bed is determined by a soil test to have contaminants and/or heavy metals, a layer of landscape fabric can be put under the bed as a semi-permeable barrier that excess water in the bed can seep through. When constructing the frame, each layer is nailed to the layer below it with 6" long 60d galvanized timber ties, spaced every 16 inches. The final step is to fill the raised beds with a topsoil/compost mix. The beds shown below are 16 feet, 12 feet, and 8 feet long.



Vermont Community Garden Network

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VTGardenNetwork

For 1, 4 ft. wide x 8 ft. long x 1 foot high Raised Bed

Materials

Item or Service	# Needed	Unit Sold	Cost/Unit	Total Cost
4 in. x 4 in. x 8 ft. Hemlock lumber	12	Board	\$6/board (based on P&P Lumber)	\$72
6 in. long 60d galvanized timber ties	60	50 piece box or Individually	\$30/box or \$0.90/tie (based on ACE Hardware)	\$39
Topsoil/Compost Mix	39 cubic ft. or 1.43 cubic yd.	Cubic yards (whole units)	\$25/1-5 cubic yards (based on Highfields Center for Composting)	\$40
Landscape fabric	—————	3 ft. w x 36 ft. l Roll (Recycled Plastic Weed-block)	\$21.95/roll (based on Gardener's Supply Co.)	\$22
Estimated Total				\$173

Supplies

- Circular saw & accompanying safety equipment
- Square (tool)
- Level
- Measuring tape
- Pencil
- Shovels
- Hammer
- Scissors
- Wheelbarrow or buckets

Notes:

The instructions we've provided are just one way to build a raised garden bed. Many other designs have proven successful. If 4 in. x 4 in. timbers are hard to come by, try using 2 in. x 8 in. boards or other sizes that may lower your cost. If you are using thinner boards you can use long screws rather than timber ties, which can be less expensive.

Depending on your gardeners' needs, you may also want to consider a shorter or higher raised bed design.

In terms of wood used, hemlock is often used in New England for its longevity, decent price, and availability. Cedar and wood/plastic composite are also options, but can be prohibitively expensive. Most importantly, do not use pressure treated wood if you are using the beds for food gardens.



How to Build a Raised Bed Vegetable Garden

BELOW IS A BLUEPRINT used by Homegrown, Phipps Conservatory and Botanical Gardens' edible garden program, to build a raised bed for vegetables.

When creating your own, you can change the dimensions to fit your space but be sure to use untreated wood; we use cedar because it is naturally rot-resistant and will last for many years. Learn more about Homegrown at phipps.conservatory.org/homegrown.

Tools

- Saw
- Drill
- Tape Measure
- Spade/shovel
- Staple gun

Materials

- Lumber
 - Four 8' long 2"x8" boards
 - One 6' long 2"x2" stake for corners
 - One 6' long 1"x4" board for side straps
- 2" and 3" galvanized wood screws
- Landscaping fabric
- 20 square ft. of soil and compost (we use a 50/50 blend)



Photo © Adam Milliron



Directions

1. Cut all 8' boards into 5' and 3' sections (or have your hardware store cut it for you)
2. Cut both the 2"x2" stake and 1"x4" board into four 16" sections
3. Join the long side boards using the 1"x4" straps and 2" screws (see left)
4. Join the short side boards by attaching the 2"x2" stakes to the ends with 3" screws (see left)
5. Assemble the bed by joining the long sides to the short sides, using 3" screws
6. Staple landscaping fabric to the bottom side of the beds
7. Put in place, fill with soil and compost, and plant

