



## Raised Bed Gardening

Raised bed gardens offer several advantages over conventional gardening plots. Soil above ground level warms up more quickly in the spring (so you can plant earlier); usually high-quality soil is used, which improves drainage and increases the yield of fresh, high quality, good tasting vegetables; and the size is easier to maintain and allows for more efficient use of space. A disadvantage is that elevated beds tend to dry out more quickly, increasing watering frequency.

Here are some guidelines to get you started. As with any project, have fun, experiment, and learn what works best for you.

**Construction:** The beds are usually raised off the ground 6-8 inches. Not using a support, just mounding the soil, is the simplest method and works well. However, most gardeners use some sort of framing material such as landscape timbers or bricks. We have a variety of raised bed kits that make it easy to get started.

**Size:** A 4 ft. width is preferred for an easy reach into the bed from either side. This prevents soil compaction because the soil is not walked on. Length of the bed can vary depending on materials used and the space available. A 6-8 inch depth of the bed is recommended for drainage and soil tilth. Most of the main feeder roots of the vegetable crops will be here for nutrients and water uptake.

**Location:** Full sun is best for production, but if not available, you need an area with at least 6 hours of sunlight. The bed should also be located near a water source, as raised beds will require more water than conventional plantings. Some protection from harsh summer winds is recommended for vegetable crops. A tree, shrub screen or border will work if it is on the south or southwest side.

**Soil Mix:** Control the quality of the soil by filling the bed with a pre-mixed, raised bed soil. We recommend **ferti • lome Organic Potting Mix**. To add to existing soil or to an older bed to refurbish the soil, use **Natural Guard Organic Garden Soil**. If you would like to create your own planting mix to amend existing soil, mix up a batch of "Johnson's Soil Recipe". It drains well and is easy to till. For a 100 sq. ft. area mix:

- Three 2 cu. ft. bags **Cotton Burr Compost**
- 3.25lbs. **Hi-Yield Bone Meal**
- 3.25 lbs. **ferti • lome Gardener's Special (11-15-11)** All-Purpose Plant Food
- 3.25 lbs. **ferti • lome HuMic Granular Humic Acid**

Before incorporating the soil mix, spade or till the existing soil 6-8 inches deep to improve drainage from the bed and prevent waterlogging. Next, blend about 2 inches of mix into the upper few inches of existing soil. Now you're ready to begin filling the bed. This allows 10-12 inches of rich soil for plants to grow in.

**Efficient Space Use:** Group vegetables together based on the maturity time. Plant short-season crops in one area so that when they finish producing they can be replaced with another crop. For instance, plant lettuce, spinach, radishes, and other leafy crops, then replant with beans, cucumbers, or other warm season crops after the first crop is harvested. Utilize empty row space. For example, plant tomatoes or peppers between rows of onions. The onions will be harvested by the time the other plants will be growing larger. Continue using the space with a fall garden.

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*Raised Bed Gardening continued*

**Watering:** It is best to water when the soil dries slightly. One or more inches of water per week is the general recommendation. The use of drip irrigation or a soaker hose allows you to use less water and apply it more efficiently. By spacing the drip tubes about 2-3 feet apart and using very low pressure, the water slowly drips and filters down into the soil at the root system. There is less evaporation and water isn't wasted on non target areas.

**Fertilization:** Fertilize the same as for a traditional garden, based on needs of individual crops. It is best to start with a soil test. Overfertilizing will lead to poor production. Adding fertilizer each year is important to replace lost nutrients.

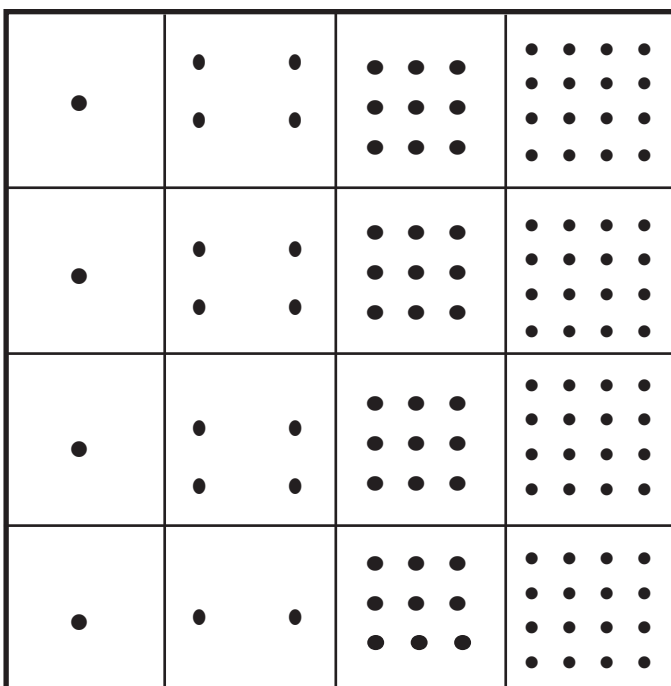
**Mulches:** Summer mulches, such as straw or cottonseed hulls, help to conserve moisture, cool the soil, and control weeds. Apply a 2-4-inch layer over the soil after it has warmed; do not apply too early as you may keep the soil cool and slow the growth of warm-season crops.

Floating row covers or similar devices can be used to trap the radiant heat of the sun, to give the earliest returns. Be sure to remove the row covers when spring temperatures increase to 80°F so that temperatures under the covers do not build up too high and damage the plants. The floating row covers can also help reduce insects feeding on early season crops.

The techniques used in planting a **square foot garden** can easily be used in planting your raised bed.

**Square Foot Garden:** This type of garden is partitioned off in 1 ft. x 1 ft. blocks. A common arrangement is to block off sections that are 4 ft. x 4 ft. (16 sq. ft.). Within each section a different vegetable is grown.

- Depending on the vegetable, plant 1 to 16 seeds (per the "thin to" on seed packet) or plants in each square. Start with cool weather vegetables and as you harvest each square you can replant with other crops. Plant taller varieties on the north side so they won't shade the others and then you can construct supports on one side for them.



## Guide to plant spacing

**XXL** – 1 per 2 sq. ft.

*melons, squash, tomato (indeterminate)*

**Extra Large** – 1 per sq. ft.

*asparagus, broccoli, cabbage, cauliflower, eggplant, okra, peppers, cucumber, tomato (determinate)*

**Large** – 4 per sq. ft., 6" apart

*chard, corn, lettuce, parsley, potato, strawberry, basil*

**Medium** – 9 per sq. ft., 4" apart

*beans, peas, spinach*

**Small** – 16 per sq. ft., 3" apart

*beets, carrots, onions, radish, chives*

## Guide to amount of soil amendments

Bag size	2" deep	6" deep
1 cu. ft. covers	4 sq. ft.	2 sq. ft.
2 cu. ft.	8 sq. ft.	4 sq. ft.
3 cu. ft.	12 sq. ft.	6 sq. ft.
4 cu. ft.	16 sq. ft.	8 sq. ft.