

# GARDENER'S SUPPLY COMPANY

## Grow Bed, 3' x 3' and 3' x 18"

Raised beds are great for growing heat-loving plants because the soil warms earlier, effectively extending the growing season. With mulch and a consistent water supply, the Grow Bed will produce an abundant harvest with very little effort. Two or more beds can be stacked to create a deeper bed. Assembly takes only a few minutes using four side panels and corner pins. No tools required.

### Parts Included

(4) Side Panels, 3' x 3' Grow Bed or (2) 3' Side Panels and (2) 18" End Panels, 3' x 18" Grow Bed

(4) Corner Pins

### Assembly

**Note:** The four panels are smooth on one side and ribbed on the other. Assemble the bed with the smooth sides facing out.

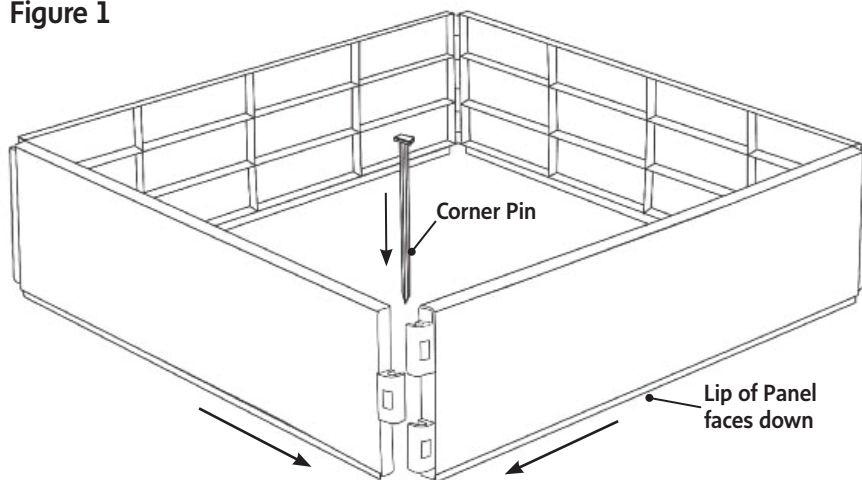
**Step 1.** Place four panels upright on the ground so that the lip of each panel faces down and the hinges interlock at each corner.

**Step 2.** Slide a Corner Pin into each hinge as shown (Figure 1).

**Step 3.** Place the Grow Bed on prepared soil, in an area that receives full sun.

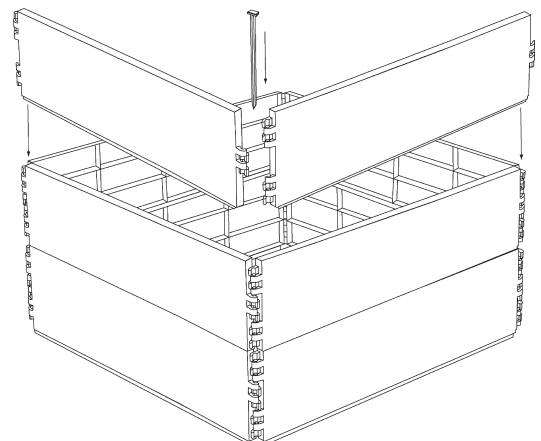
**Note:** If you live in a region with very hot summer weather, you may need to provide partial shade or position your Grow Bed where it will be shielded from intense heat.

Figure 1



Stack Grow Beds to make deeper beds. Lower Lip of Panels locks them together.

Figure 2



## Our Potato Growing Story

In our test gardens we found that growing potatoes in a Grow Bed was much easier than growing in the ground—and the harvest was bigger! In fact, we harvested 53 pounds from just one bed. Overall we averaged 46 pounds of potatoes per bed. Here's how we did it:

### Planting

First we loosened the soil underneath the Grow Bed with a garden fork, and then we filled the bed with regular garden soil. Two days prior to planting, we cut seed potatoes into pieces with at least 2 or 3 eyes each and allowed them to callous over.

We then planted 8 seed pieces per bed in two parallel rows. Each seed piece was planted 4" to 5" deep and 8" apart. The two rows were 24" apart.

### Caring for the Plants

Once the plants were well established, we mulched around them with about 2" of straw and continued adding straw as the plants grew. We used straw mulch to help retain moisture, keep the soil cool and suppress weeds. Potatoes are thirsty plants, so we used drip irrigation to keep the plants well watered. We made sure that the beds received an inch and a half of water per week. In the absence of rain, we irrigated 20 minutes a day, 7 days a week, delivering about 1.2 gallons of water per day, per bed. We recommend our Raised Bed Snip 'n Drip Soaker System.

### Harvest

Two weeks prior to harvest, when cooler weather settled in and the plants began to die back, we stopped watering completely. On harvest day, we simply pulled out the corner pins and enormous potatoes tumbled out.

## Growing Potato Basics

### 1. Use certified seed potatoes

You'll get best results if you use certified seed potatoes, which were grown, inspected, harvested and stored according to regulatory standards. Hundreds of potato varieties are available from garden centers and mail-order suppliers. Choose from a wide range of flavors, shapes, skin and flesh colors and days to harvest.

Most potato plants require 65 to 100 days to grow, mature and develop full-size spuds. Early varieties that thrive in cool weather can be planted in the spring about two weeks before the last hard frost. We used certified 'Elba' seed potatoes, which is a mid to late-season producer.

### 2. Cutting seed pieces

Some potato growers cut seed potatoes into chunks as they plant and others cut them a few days before planting and let the cut surfaces callous over. Either method works well. Each piece should weigh approximately 1-½ to 2 ounces with no fewer than 2 to 3 eyes (sprouts) per piece. Small seed potatoes may be planted whole.



### 3. Preparing the seed bed

**Note:** To reduce pest and disease problems when growing potato plants, avoid placing the Grow Bed on soil where potatoes, tomatoes, peppers or eggplant were recently grown.

Loosen the ground and make it as weed-free as possible—weeds rob potato plants of needed moisture and nutrients. Potatoes prefer a rich loam soil with a pH of about 6.0. If you're not sure of your soil's fertility, take a soil test to measure the N-P-K levels. If your soil needs fertilizer, follow these application instructions.

**Fertilizer application:** For soil with medium to low fertility, use 1 cup of All-Purpose Fertilizer (5-5-5) for the entire Grow Bed. Before planting your potatoes, broadcast the fertilizer over the surface of the bed and mix it in.

At mid-season, if the leaves are slightly yellow or the plants are not growing well, sidedress with 1 cup of All-Purpose Fertilizer (5-5-5). Pull back the mulch and mix the fertilizer into the soil in continuous bands along the sides of the rows.

### 4. When to plant seed potatoes

Avoid planting potatoes too early in cold, wet soil. Let the soil warm to above 45 degrees F.

### 5. Watering and Irrigation

Growing tubers need regular and consistent watering. Whether you hand water or use irrigation, we recommend that each Potato Bed receive 1.2 gallons of water per day which is equal to approximately 1-½" of water per week. During the summer, an irrigation system with a timer will ensure potatoes receive a consistent supply of water.

If you use drip irrigation, install it before you apply mulch. Begin irrigating shortly after plants emerge and keep the soil damp, not soggy. The amount of rainfall you receive will affect how often you need to irrigate. You can use a rain gauge to keep close watch.

It's important you don't over-water the potato bed. This could result in rotting tubers. However, not watering enough will reduce your potato yield. When cooler weather settles in and the foliage starts to die back, stop watering completely about two weeks prior to harvest.

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## 6. Mulch

Mulch helps retain moisture, keeps the soil cool and suppresses weeds. It also prevents light from reaching exposed potatoes, which could turn them green and make them inedible. As the plants become established and begin to grow, cover the soil with a 2" layer of straw and continue to add up to 12" of straw as the plants grow.

## 7. Pests and diseases

Most pests and diseases can be prevented with healthy soil and consistent watering. If your plants do become infected with a disease, replace the soil in the bed before planting the following year. Add humus-rich compost to discourage diseases.

Learn to identify the beneficial and pest insects in your garden. Common potato pests such as Colorado potato beetle and potato leafhopper can be removed by hand or controlled with repeated use of an insecticidal soap. Persistent observation and removal is the key to pest control.

## Growing Heat-Loving Plants in the Grow Bed

Experiments with Grow Beds in our test gardens have shown great success with several different crops. The plants grew well, the fruits ripened quickly, and the yields were impressive.

### Peppers

We transplanted 5 hot pepper seedlings into each Grow Bed, adding 2 teaspoons of Gardener's Supply All-Purpose Fertilizer (5-5-5) to each planting hole. We then installed drip irrigation and covered the soil with red IRT mulch. When the peppers began flowering, we applied a 3-2-2 seaweed extract and concentrated fish emulsion, as a foliar spray to help improve fruiting. By October, we harvested about 240 peppers from just one bed!

### Melons

We didn't decide to plant melons until late June but were thrilled by the results. We planted melon seeds directly into the Grow Beds. When the seedlings became established, we thinned them to just 5 plants per bed. We then installed drip irrigation and IRT mulch. We cut X's in the mulch and placed it over growing plants.

Just six weeks after we planted the seeds, melons began to form. And one month after that, we harvested our first melons. One bed yielded 17 melons for a total of over 50 pounds.

## Raised Bed Planting Tips

### Preparing the Site

Choose a level site in a sunny area. If you are installing the raised bed on a lawn, remove the sod and loosen the soil with a shovel or spade so that the plant roots will be able to penetrate to a depth of 6".

### Fill the Raised Bed

Combine soil with organic amendments such as compost, greensand, aged manure or peat to create a fluffy, loose soil. Before you plant or add mulch, consider installing a drip irrigation system to conserve water and save time.



## Watering and Irrigation

Whether you water by hand or use irrigation, 1" of water per week is a good rule of thumb for crops like tomatoes, peppers and melons. If you use our Raised Bed Snip 'n Drip Soaker System, we recommend running the system in the absence of rain for 35 minutes three times a week or for 15 minutes a day seven days a week. This should be adequate in most climates. The amount of rainfall you receive will affect how often you need to irrigate. Consider using a rain gauge to measure your rainfall and subtract that amount from your irrigation time.

## Using Mulch

Mulch helps control weeds and reduces the spread of soil-borne diseases. Mulch also conserves moisture by decreasing water evaporation. There are many materials suitable for using as mulch including polyethylene plastic, straw, hay and shredded leaves. Which mulch you choose really depends on what you have available, how you want it to look, and the types of plants you are growing. Many plastic mulches are water-impermeable. So if you use an irrigation system, it's best to install it underneath the mulch. Organic mulch such as straw tends to keep the soil cooler in the summer and warmer in the winter. They are best for hot climates or for cool weather crops like potatoes, broccoli or cabbage. Dark plastic mulches help to block weed growth and work well for warming the soil early in the season, especially for heat-loving crops like melons and peppers.

## Trellises and Supports

You can create more growing space in your raised bed if you provide trellises and supports for some crops. By enabling plants to grow vertically, trellises allow more sunlight to reach the leaves and the fruit. Most tomatoes, peppers, eggplant, cucumber and squash benefit from some kind of vertical support. Other vegetables that are commonly trellised include vining crops such as peas and pole beans.

Be sure to have your trellis or support in place well before the plants require it — preferably before you plant the crop. Anchor the trellis in the ground or tie it to a fence or post. Avoid using trellises in a very windy spot unless they are well anchored. The wind might lift the trellis right out of the ground and your plants along with it.

With some vegetables, such as tomatoes or melons, you may also need to tie the plants gently to the support, or carefully weave them through the trellis as they grow.