

# Square Foot Victory Garden

As the economy circles the drain, savings plummet and joblessness grows, so does momentum for old-fashioned self-sufficiency.

One cry you'll hear from several quarters calls for revival of a practice that swept the country in other troubled times; cultivation of a "victory garden" in the back (or front) yard.

During World Wars I and II, raising household produce was a hedge against rationing and food shortages, and a patriotic gesture to assure that food prices remained low for troops abroad. Nearly 20 million Americans joined the campaign, growing as much as 40% of all vegetables consumed nationally.



Wartime victory gardens were considered patriotic and practical.

Today, the new victory garden movement is inspired by rising food prices and concerns about food safety. Growing food where it's consumed also is a way to make personal inroads into transportation surcharges and carbon footprints associated with produce shipments from California or Chile.



In the 1940s, Eleanor Roosevelt plowed up a portion of the White House grounds for a victory garden. Should you rip up the front lawn and start your own farmette? No, at least not right away. The best strategy is starting small and building on your successes. Even a modest effort can pay big dividends.

Even if you don't make a serious dent in your food budget (there are start-up costs and annual expenses for seedlings and fertilizers), there's still an undeniable benefit to growing your own - flavor and freshness. Until you've plucked a fresh radish from the ground or sliced into a sun-ripened tomato, you may not realize how much better vegetables taste when they are really, really fresh.

## Laying the groundwork

Fall is actually the perfect time to get started. But, any time is a good ideal time to pick a spot, test and improve the soil, build raised beds if you want them, and set up fencing to protect your homegrown produce from critters.

In the fall, the weather is cooler, the list of chores a little less pressing than in spring, and the materials of soil improvement - including fallen leaves and garden trimmings - are available (and free). It takes the actions of weather, time and microbial life to bring substandard soil up to par, so starting in autumn gives you a huge head start.

During the winter you can page through seed catalogs and plan, and will be ready to plant as soon as conditions allow in spring. Doing things one step at a time will make the whole enterprise much less daunting and far more enjoyable.

First, choose a spot. A level, well-drained spot close to a water spigot is ideal. Don't over do it. A 10' by 10' plot is more than ample for most families, and will allow plenty of room for a nice selection of plants and paths to access them.



Sun is paramount. Leafy greens can tolerate part shade, but fruiting crops like tomatoes, peppers and squash want at least eight hours of sun daily. Avoid sites near trees or hedges, which can rob your vegetables of moisture and nutrients, but try to provide some shelter from the wind.

If your site tends to be soggy and wet or if your soil is generally stony or sandy, you may do better with raised beds. Defined by landscape ties, thick planks of composites like Trex or rot-resistant cedar and redwood, raised beds can be filled with a mix of purchased top soil and organic amendments to provide ideal conditions.

### **Raised bed garden**

The square foot concept is simple. It works best if you build a raised bed. That way there's no need to worry about poor soil (or total lack of soil - you can even build a raised bed atop a concrete patio).

Next, you divide your bed into sections of one square foot each, hence the name, and then plant vegetables, or flowers, in just the amount of space they need. For instance, you may be able to fit one tomato plant into a square. However, it isn't hard to stuff in a whole bunch of carrots, onions or other smaller vegetables into another square foot area.

The main advantages of the square foot system are less watering (great for drought areas), easier weeding (no long rows to wander down), and a greatly reduced workload.

On the downside, you won't be able to create a corn maze come October. But, with a little work, you should have fresh veggies on the table well through the end of summer.

### **Build a box**

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The next thing to do is construct your beds. You can make the beds whatever size you'd like. We recommend a 4' x 4' plot. It's small enough that you won't feel overwhelmed and big enough to yield a decent crop. It also just so happens that most lumber comes in 8' lengths, so you only need to buy two boards and saw them in half. Many home improvement centers will do that for you at little or no additional cost.



Since your garden will be out in the elements all summer, you might think about getting pressure treated wood which is better at repelling water. However, you may want reconsider. Not only is pressure treated wood much more expensive, it has a number of chemicals in it that can leech into your soil. It is possible that a small quantity can leech into your vegetables. Cedar and redwood are best suited to build the frame. Make sure you get something thick enough. A couple of 12" x 2" x 8' boards should do the trick.

Use galvanized wood screws, # 10 or #12, that are 3" to 4" in length to attach the pieces of wood together, forming a corner. You'll want to pre-drill holes through the outer boards, making it easier to sink the screws all the way in. Do not drill too large a diameter pilot hole.

## **Preparing the ground**

If you're planting in the ground, stake out the site and remove the sod. Don't try to till under grass, or you'll be fighting it for a long time to come. If you're comfortable with chemicals, you can use a systemic herbicide like Roundup. Otherwise, shovel the sod up in sections and pile the pieces upside-down as the start of a compost pile. Apply a pre-emergent to keep other weeds or grass from germinating.

You can cover the sod with weed cloth, available at most landscape contractor stores, nurseries, or local home improvement center. You can also cover the sod with several layers of dampened newspaper or cardboard covered with mulch. Given time, this should smother the grass, leaving the ground clear to plant, but won't allow you to immediately incorporate amendments that boost soil texture and fertility.

You might even want to consider getting your soil tested. You'll get back specific recommendations for adding fertilizer and adjusting the pH, a measure of how acid or alkaline the soil is. Most vegetable need a neutral or even slightly alkaline soil to thrive, and the time to add lime is now since it takes a while to affect pH readings.

Try not to leave your newly tilled plot bare through the winter if erosion is likely to be a problem. You can use a top-dressing of mulch, but be aware that this will insulate the bed and prevent the soil from warming in spring. A loose layer of chopped leaves, peat or salt hay (if you can find it) will protect the soil from washouts and can simply be turned under in spring.

The final step in preparing the veggie patch is fencing it in, a precaution necessary in nearly every location. There's nothing more disheartening than being robbed of the fruits of your labors by hungry critters.

A wire mesh fence 36" or 42" high, supported by metal posts, is a relatively cheap solution, but you'll need a gate for easy access. To foil climbing animals, plan to leave the top 10", or so, unsecured and loose above fence posts. That way, when Mr. Groundhog reaches that flap, it won't support his weight and he'll be unable to climb over.

## **Build a trellis for vines**

Depending on what vegetables you decide to plant, you may require a trellis at the rear of a unit. They can be made of simple 2" by 2" redwood lumber for the sides and top, and either chicken wire or string for the actual trellis. Heavy wall PVC pipe or metal electrical conduit pipe (two sides and a top) with wires or string running from the top bar to the ground and/or from side to side at 12" spacing for the plants to cling to (or be tied to) can also be used.

You can use whatever you like, as long as it fills the function. The standard height is 6', but some crops can grow as tall as 8' to 10' in height, such as tomatoes, cucumbers, and beans & sugar snap peas. Higher is better - the plants take up less space on a trellis. Do keep in mind, however, that if you build a trellis, it could block out some of the sunlight from other plants. Therefore, if you need to build a trellis, try to do so in the rear of the bed (or north end).

## **Improving the soil**

Whether your soil is sticky and clay-like, or thin and sandy, organic amendments will help by introducing air (in the first case) or moisture-retaining material (in the second). Aim for a 4" layer over the entire bed.

The most common amendments are manure, available bagged, cured and practically odorless; humus, which is decomposed plant material; peat, either baled peat moss or more fibrous Michigan peat; compost, homemade or purchased; and decomposed leaves, often available free from municipal composting piles or from your own yard.

In the fall, you can collect fallen leaves in a simple cage of wire fencing to let them break down or run them over with the lawn mower and apply the crumbled remains directly to the garden plot. The debris you collect from a fall cleanup of the yard and garden also can be piled in an out-of-the way place as an informal compost heap, or shredded and added to the garden.

Incorporate your soil amendments with a rotary tiller or by digging. Aim to loosen the soil and mix in the new "ingredients" to a depth of at least 9" to 12". Avoid stepping on the newly fluffy soil, especially when wet, to avoid compacting it.

## **Planting**

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Now the fun part. If you're starting from seed, make sure you start early enough - just after the last frost. Check with your local nursery if you're unsure when to plant in your area.

Planting a square foot garden properly depends on what you're planting. Consult the directions on your seed packets to see how far apart the plants need to be in order to thrive. Generally you should plant in a grid of either 1, 4, 9, or 16 plants per square foot. If the plants too close, you can always thin them as they grow.

As for what you should grow, that's up to you. Plant things you like and don't limit yourself just the vegetables, herbs and flowers will work as well.

## Choosing vegetables



Winter is a good time for planning what to grow and how to lay out the garden. Order some seed catalogs and start making a list of different vegetables you'd like to try growing.

What should you plant? The answer is, whatever you like to eat. A good balance would include a few leafy greens like lettuce and spinach, a few roots crops like radishes and beets, and a couple of tomatoes and peppers. Poll the family before you begin.

Be sure to observe spacing recommendations, since plants need room to achieve maturity and to promote the good air circulation that helps prevent disease. Access paths through the garden are important, too, for tending plants and harvesting the crop.

Plants can be arranged in rows or in squares. After all, you'll want to replace picked crops with a new set of seeds or seedlings for a continuous harvest.

Another pressing question is when to plant. Charts are available that tell you when to plant what, based on your average last frost in spring. (For much of California, that's the end of March to mid-April, but check with your local extension service.) One planting chart can be viewed at [heirloomseeds.com](http://heirloomseeds.com); choose "Planting Schedules" at the bottom of the home page. There's plenty of information out there for those who are new to vegetable gardening, or want to come back to it.

In the face of skyrocketing food prices, vegetable plant sales have jumped last year alone 16% to 20% nationwide. If you start a victory garden now, imagine all the money you could save.

## **10 easy vegetables**

If you're a beginner and would like to try your hand at raising vegetables, start with the easiest backyard crops. These require less experience from the gardener and lend themselves to chemical free growing.

### **For the salad bowl:**

Chard: Tolerant of cool temperatures and slug-resistant. Varieties like 'Bright Lights' and 'Rainbow' have brilliantly colored stems.

Cucumber: Vines appreciate supports. Plant seedling once weather warms.

Lettuce: Go for easy-to-grow "leaf" lettuces like 'Buttercrunch' or 'Salad Bowl', rather than head-forming types like 'Iceberg.'

Radishes and Green Onions: Simple and reliable with few pests. They're ready for harvest in three to four weeks.

Tomatoes: Need warmth and sun. Cherry tomatoes are easiest of all. But, 'Beefsteak' and 'Hybrids' are extremely meaty and tasty and wonderful for summer salads.

### **On the plate:**

Beans: Bush beans are easier to harvest, but vine-like "pole" beans have higher yields.

Beets: Best sown in spring and fall. Harvest greens for salads or roots to boil or roast.

Bell peppers: Harvest green or red, when vitamin levels are higher.

Spinach: Thrives in cool temperatures of spring and fall.

Summer squash and Zucchini: Flourishes without much help. Notoriously productive.

Carrots: Who doesn't like to munch on a fresh carrot?

Corn: Corn is fun to grow, but takes up a lot of space. And, for the number of ears you may get off one plant, it may not be worth it. Also, keep in mind that it does grow tall and therefore needs to be at the back of the bed so as not to block the sunlight from other plants.

### **Fruit:**

Strawberries

Cantaloupe

Watermelon

**For seasoning:**

Herbs: oregano, basil, thyme, etc.

**For color:**

Flowers: assorted

**Installing a drip irrigation system**

Your control valve may be either a garden valve/hose bib or manual or electric anti-siphon valve. You can also install a battery operated timer on your hose bib to control when the garden is watered, and for how long a period of time.

Every drip irrigation system should have not only a pressure regulator and filter, but a fertilizer injector as well. After you install a drip irrigation system, there virtually is no longer a way to apply a dry granular fertilizer to the surface of the ground and have it leached into the ground by overhead watering. Therefore, the nutrients must flow out to the plants with the irrigation water. This concept is called fertigation. It is the only easy, efficient, and economical way to fertilize as you irrigate.

Once the filter, pressure regulator and fertilizer injector are attached to the control valve, you're ready to attach the polyethylene mainline that you will run over to the Square Foot Victory Garden. There are numerous types of emission devices you can use to distribute the irrigation water directly to each plant. The most common component is what is called an emitter. They are available in different flow rates and can either be inserted directly into the mainline or at the end of a piece of ¼" tubing, that is attached to the mainline with a ¼" coupling. Also available are micro-sprinklers, foggers, ¼" dripperline that has emission holes (usually ½ gph) every 6" or 12" along its entire length, and porous pipe which weeps along its entire length. Barbed and compression fittings are available to connect all components.

Keep in mind, you'll also have to do a little extra overhead watering to help germinate the seeds you plant. However, if you plant small plants to begin with, a drip irrigation system will be more than adequate.

Watering your garden with a drip irrigation system leaves you a lot of free time.

**What next?**

Now you're ready to sit back, relax, and wait for nature to take its course. Soon, you'll be able to enjoy fresh, tasty vegetables right out of your own Square Foot Victory Garden!