

Building a Backyard Food Factory

Written by Greg Seaman

Tuesday, 01 March 2011 00:00 - Last Updated Wednesday, 18 March 2015 09:36

Our backyard food factory.” That’s how our family refers to our small backyard vegetable garden. From just 500 square feet (a 20- by 25-foot patch), we enjoy a wealth of fresh vegetables for up to eight months of the year. Working in the garden is also a shared experience for the family, and instills in children an understanding of the natural cycles of growth, providing lessons of lifelong value. Consider the benefits of growing your own vegetables at home:

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It lowers the cost of providing your family with healthy, organic vegetables.

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It reduces the environmental impact of transporting and warehousing food.

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It makes your meals more personal and interesting.

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BUILDING A BACKYARD FOOD FACTORY

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On backyard food factory? That's how our family refers to our small backyard-vegetable garden. From just 500 square feet (20 by 25-foot patch), we enjoy a wealth of fresh vegetables for up to eight months of the year. Working in the garden is also a shared experience for the family, and teaches children an understanding of the natural cycles of growth, providing lessons of living-yet. Consider the benefits of growing your own vegetables at home:

- It keeps the cost of providing your family with healthy, organic vegetables.
- It reduces the environmental impact of transporting and warehousing food.
- It makes your meals more personal and interesting.
- It connects your family to the natural cycles of weather, growth and renewal.
- It provides wholesome activity and lasting memories for your children.

What to Plant (When Space is Tight)
Although you will have your own ideas and preferences about what vegetables to grow, this list is developed for people with limited space for a backyard vegetable garden, with a focus on crops that are easy to grow and expensive to buy from the store.

Peas (edible pod). Peas are one of the first crops to plant in spring, and with a short season of 50 to 60 days, one of the first to harvest. Peas need well-drained soil, and do well in raised beds and large planters. A medium-height trellis (3 to 4 feet tall) should be provided for the peas to climb. Peas are commonly sown directly into the ground from seeds, and they should be sown thickly. However, they can also be sprouted indoors, which can ensure success in damp conditions. (Tip: When sprouting indoors, prepare a shallow dish with water which has a tablet of vitamin C dissolved into it. Set the seeds to sprout in this solution. This will increase the size of the plants and the peas.) Stagger the planting time every two weeks to extend the harvest. Peas also contribute to the health of the soil by fixing nitrogen.

Lettuce. Many varieties of lettuce are available. Large, head-forming lettuces like iceberg and

Onions and leeks. Slow to mature, taking 3 to 5 months, onions and leeks need moist soil with good drainage. Purchase onion "sets," or small bulbs, which will shorten the time to maturity by 4 to 6 weeks. Plant onions early in the season and sow thickly. The secret to large bulbs is to provide warmth early; this can be done by covering the shoots with a row cover or cloche, and tilling some green grass clippings into the soil before planting. Harvest when the onion tops turn yellow and wither.

Swiss chard. Easy to grow, with few pest problems and a long productive season, Swiss chard lends itself to many recipes or salads because it's equally good cooked or raw. Chard can be grown from transplants or sown directly into the garden beds. To discourage leaf miners, do not plant chard near squash or beets. Row covers can also be used to protect chard from leaf miners.

Squash (summer and winter). Zucchini and yellow squash are compact, easy-to-grow plants which provide great summer vegetables. Winter varieties tend more room to grow but are highly valued winter vegetables. Plant squash individually in small hills. For winter squash, allow plenty of room for their long vines and large leaves to crawl along the ground. If ground space is limited, squash can be grown vertically on a sturdy trellis. Each squash will need to be tied to the trellis by its stem to support its weight as it grows. To protect seedlings from squash bugs, start the seeds indoors in small pots.

Beans. While there are many varieties of beans, they can be generally classified into bush beans or pole beans. Bush beans grow to about knee height and can be planted in front of taller plants, like tomatoes. Pole beans grow tall, and require support in the form of tall poles or a trellis. Pole beans should be grown in the back of the garden so they don't shade other plants. Beans should be sown directly into the ground from seeds, as they do not take well to transplanting from smaller pots. Stagger the planting times to extend the harvest.

TIP: BARRIER FOR BROCCOLI
Cabbage moth larvae kill young sprouts of the brassica family (broccoli, cabbage, brussels sprouts, kale, cauliflower). A simple barrier against them can be made from scraps of wood cutboard from milk cartons, or a scrap of roofing felt. Cut into 2-inch squares and air one side into the center, make another small slit on one side. As soon as the ground opens, slide the square over the seedling stem in the center. This will prevent moths from laying eggs at the base of the sprouts. Leave the squares in place. As the plant grows, it will push the slit open wider.

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butterhead can be planted single file in rows, which makes mulching easy. Smaller, leafy varieties can be thickly planted in swaths 24 inches wide for a “self-mulching” effect. Ideally, grow several varieties of each type. Small lettuce transplants can also be interspersed throughout the garden wherever there is room.

A common problem with lettuce is “bolting.” Bolting occurs when the plant goes to seed and the leaves stop growing. Bolting is caused by temperatures that are consistently too high. To prevent bolting, plant lettuce in a shaded area, or plant next to a shading crop, such as tomatoes.

Broccoli. This member of the Brassica family is highly valued because of its nutritional value, long period of productivity, and because it’s so expensive to buy. Broccoli can be over-wintered, providing new shoots with small clusters of broccoli, which are much appreciated through the winter. Sow brassicas from seed directly into the ground or in small starter pots. Starter pots are recommended because the seedlings are easier to protect from birds and slugs, and they can be moved indoors in inclement conditions until they are strong enough to transplant. Brassica crops should be grown on different beds (rotated) each year.

Tomatoes. There are many varieties to choose from for cherry, table and paste tomatoes. These plants will need tall stakes, which should be set when the plants are transplanted. Some people prefer to use wire cages. In either case, the plants will need to be tied to the stakes as they grow, which takes a little time. Tomatoes do best when their leaves are kept dry. A simple shelter can be constructed for clear plastic sheeting to cover the plants; the sides can be left open. A layer of mulch will prevent rain splash from wetting the lower leaves, and will help retain moisture in the upper soil. While the transplants are growing in pots, till some green grass clippings into the soil where the tomatoes will be planted. This will warm the soil and give the young seedlings a boost when transplanted.

Garlic. Where winter is mild, garlic is usually planted in the fall, before the frost. Garlic can also be planted in early spring. Separate and plant cloves base down, 2 inches deep. To harvest, lift bulbs out when leaves die, after the plant blooms. Save several heads for next season’s crop. You’ll only have to buy garlic once for the initial planting, so buy quality certified disease-free bulbs from a seed catalog.

Peppers. Easy to grow, peppers are commonly started early in small pots and transplanted when it’s warm enough outside. Pick off any small peppers that form on transplants, or the plant

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growth will be stunted. Pick green peppers as soon as they reach size; this will stimulate new fruiting and increase the yield per plant. You can leave one or two plants unpicked if you want the peppers to sweeten and turn red or yellow. However, these plants will produce fewer peppers.

Onions and leeks. Slow to mature, taking 3 to 5 months, onions and leeks need moist soil with good drainage. Purchase onion “sets,” or small bulbs, which will shorten the time to maturity by 4 to 6 weeks. Plant onions early in the season and sow thickly. The secret to large bulbs is to provide warmth early; this can be done by covering the shoots with a row cover or cloche, and tilling some green grass clippings into the soil before planting. Harvest when the onion tops turn yellow and wither.

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Cut into 2-inch squares and slit one side into the center; make another small slit crossways. As soon as the sprout appears, slide the square so the seedling stem is in the center. This will prevent moths from laying eggs at the base of the sprouts. Leave the square in place. As the plant grows, it will push the slit open wider.

If You Have the Space

In gardening, success breeds expansion. If your backyard has enough space, you might want to add a few more crops. Here are some suggestions to make the best use of the space.

Potatoes. As the cost of bread rises, potatoes are more and more valued as a nutritious starchy food. Potatoes are easy to grow, can take marginal soil, and give a good yield for the space they use. Early “new” potatoes can be planted in mid-spring, just before the last frost; winter varieties are planted in early summer. Potatoes are planted directly in the ground, in rows, from cut seed potatoes or old potatoes that have started to sprout.

Blueberries. This highly nutritious berry plant is a perennial, waist-high shrub which should be planted along one of the side borders of your vegetable plot. The soil should be slightly acidic. Choose from locally recommended varieties. Plant six to eight bushes for a reasonable harvest, and plant two varieties to promote fertilization. Fruit is borne on the previous years’ shoots, so

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once the plant is 3 to 4 years old, prune out the older, central shoots to stimulate new growth.

Bush cucumbers. Choose from locally recommended varieties of slicing-type cucumber. Bush varieties are compact, and better for small gardens. Start from seed in pots, or sow directly. The soil must be rich, moist and well drained, so make a small hill and plant two or three seedlings. To retain moisture, cut holes in black sheet plastic and set it over the seedlings. Protect the seedlings from cold spring nights and pests by covering them with a clear plastic or glass container. Be sure to remove it as soon as the sun comes out, or the seedlings will get too hot.

Strawberries. Strawberries are a good crop to get children interested in gardening, but you'll have competition from the predators. Netting is not good enough to protect it—birds will get caught in the net. Build a frame with 1-inch poultry mesh around the entire bed. To prolong the harvest, try “ever-bearing” varieties, which bear fruit all summer.

Spinach beets. These beets are easy to grow, and not a favorite of slugs and caterpillars. Sow seeds directly into the soil and thin out the seedlings when they come up. Beets grown for greens will produce all summer; just harvest the leaves for salad greens as you need them.

Crops We No Longer Grow

Some gardeners may howl at these suggestions, and rightly so, as we each have our own preferences and tastes. However, over the years we have given up on a few crops because of difficulties with pest management, crop yield or their relatively low prices in stores and farmer's markets.

Corn. Corn is a heavy feeder, requiring lots of fertilizer. Keeping up with the demands of enriching the soil can be difficult, and raccoons have a taste for corn. Corn also takes up a lot of space for the yield, especially when the price of corn at local farmer's markets is so low.

Carrots. Carrots take up very little room considering the yield, but require rich, deep soil, free of

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stones. Prone to rust fly damage, carrots need to be grown under a floating row cover. While a few carrot plants, especially the baby varieties, are recommended for a child's garden plot, we were never successful at growing a carrot crop. It was too difficult keeping the row cover anchored in winds, and rust flies would get in.

Pumpkins. It takes a lot of space to grow pumpkins; their vines can trail along the ground for twenty feet. And in the end, you get a large squash that doesn't store well. Better to give any squash space to a good winter keeper, like buttercup.

Watermelons. Watermelons are similar to pumpkins in the space they need to grow. They have to be well-grown to be large and tasty; in our experience, the fruit was always smaller than expected and not very sweet. Not the best use of space, especially for an inexpensive, short-season melon.

Planting Tips

Basic gardening tips are outlined on the next page. Here are some other general planting tips.

Seeds or starters? Garden vegetables can be grown from seed sown indoors in pots or trays, sown outdoors directly into the garden beds, or transplanted from starters bought at a garden center. When sowing seeds indoors in trays or pots, use a fine, sterilized potting mix (do not use compost or garden soil for starting seeds). Stand pots in water until the soil is fully wetted. Set pots on a windowsill for light, but remove at night if frosty.

Some plants, like peas and beans, must be sown directly. Plants which are directly sown are usually sown thickly (very close together), and then thinned once they are sprouts. This ensures a full crop, since some of the seeds may not sprout.

Assign permanent spots for perennials. Most vegetables are annuals. However, some, like asparagus, are perennials. Once perennials are established, you won't want to move them.

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Take care to locate perennial crops in an area that won't interfere with future plantings of annual crops.

Plant extras. It is unlikely that all your seeds will sprout, so plant more than you think you'll need, to ensure a rich harvest.

Avoid direct sunlight when setting your starters. Do it on a clouded or overcast day, or in the later afternoon, so that the delicate young leaves don't wilt in direct sun. Keep them well watered until they are established. Smaller roots have difficulty drawing enough moisture from the soil.

Transplant with care. Plants which have been started in any type of container should never be uprooted or separated from the soil. Lightly water the pot so the soil is moist, then coax the seedling out using a gentle tap to the side of the pot. Turn the pot on its side and the seedling should easily slide out. When setting out plants started in peat pots, gently tear off the rim and the bottom of the pots, leaving the rest intact to protect the roots. The remaining sides of the pot will break down into the soil over time.

After transplanting new plants, create a berm of soil around their base with a slight depression in the center. This directs water down toward the central root zone, and reduces the amount of water lost to runoff.

Arrange your plants in "tiers" facing the sun. Watch how the sun travels in your garden. Plant your garden with the shortest plants at the southern end, and build up to the tallest plants at the northern end. Make sure your taller plants don't block the sunlight for the smaller plants. Plants which are supported by a trellis, like squash, peas or pole beans, should be placed toward the northern and eastern edges of the garden plot, so as not to shade other plants.

Plant successively. Rather than plant a crop, such as lettuce or broccoli, all at once, it's better to plant several crops spaced two weeks apart. This will prevent a windfall of one crop all at one time, and will extend the harvest over the full length of the growing season.

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Protect your seedlings. A small, clear shelter will protect seedlings from pests, warm the soil, and provide more favorable conditions for delicate seedlings. Use a cloche or cold frame for the job. However, be sure that the soil is kept watered, as the cloche will prevent rain from wetting the soil.

Tuck plants into bare spots. Bare spots invite weeds. Fill in any bare spots with small annuals like lettuce, celery, mint, nasturtium or parsley.

Don't add nitrogen once plants are established. Manure, bloodmeal, canola meal and other high-nitrogen sources are essential for vigorous plant and leaf growth, but should be withheld once the plant is established or shows any signs of flowering. Too much nitrogen will promote more plant growth when the plant should be producing fruit. Large, leggy plants with little fruit yield are an indicator of too much nitrogen.

Keep a planting record. Make a note of which plants are planted in each bed. At the end of the season you can note any problems or improvements for subsequent crops. Also, this record makes it easy to decide which beds to rotate crops into the next spring.

Rotate crops each year. Rotation will often prevent reinfection of vegetables from disease spores from last years' crops. Tomatoes, for instance, are susceptible to verticillium wilt, which remains in the soil over the winter and can attack a new crop.

Planting Basics: When and How to Plant Vegetables

The basic soil requirements for plants to grow and produce fruit are nitrogen (N), phosphorus (P) and potassium (K). The relative amounts of these elements is listed on most bags of

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fertilizer and soil amendments.

Nitrogen is essential for vigorous stem and leaf growth. Sources of nitrogen include manure, bloodmeal, bonemeal, canola meal and cottonseed meal.

Phosphorous is essential for strong root systems and flowering. It can increase fruit development and seed yield. Sources of phosphorous are rock phosphate, blood meal, bone meal, cottonseed meal and urine.

Potassium is essential for cell division and strong stems. It helps fight disease, improve the quality of fruit, and decrease the water requirement of plants. Sources of potassium are wood ashes, greensand, manure and compost.

You'll need to schedule your planting according to the seasonal temperature range in your region. Early-season plants like peas, Swiss chard, broccoli, brussels sprouts, cauliflower, turnips and onions grow best at temperatures between 50 and 70°F (10–20°C). These plants prefer a cooler time of the year to grow, and will usually tolerate frost.

Vegetables like lettuce, celery, cabbage, carrots, radishes, parsnips and leeks have intermediate temperature requirements. They grow best in temperatures between 60 and 80°F (15–25°C). Set these out after the early-season plants are established.

Warm-season vegetables grow best in temperatures above 70°F (20°C) and will die if exposed to frost. These include corn, potatoes, tomatoes, eggplant, beans and all the vine crops. So make sure the majority of their growing season is in the warmer months.

For crop-specific instructions, read the seed packets. Planting schedules, planting instructions and days to maturity will be listed on the seed packets you buy for each vegetable you plant.

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