

Bean Growing Guide

Beans are a rewarding crop for both beginning and experienced vegetable gardeners alike. They're especially ideal for young gardeners, because their large seeds are easy to handle and plant, and the fast-growing plants provide a bountiful harvest within a fairly short period of time. But there are enough varieties and types of beans available to whet the horticultural and culinary interests of more seasoned gardeners and keep bean growing fresh and exciting.



Bean Facts

- Dry beans, such as pinto beans, navy beans, kidney beans, and black beans, were first domesticated thousands of years ago by the indigenous peoples of Latin America. An important source of protein, beans are familiar in many cuisines of these regions. Charro beans, feijoada, frijoles de la olla, baleadas, habichuelas guisadas, frijoles negros, and gallo pinto are a few traditional Latin American dishes containing beans.
- Beans are one of the “three sisters” of Indigenous North American gardens, along with corn and squash. When these three crops are grown together, they offer symbiotic benefits to each other. The beans “fix” nitrogen and make this nutrient available to the other plants; the corn provides a support for bean vines; and the broad, prickly squash leaves shade the soil, keeping weeds down and hungry animals away from the ripening ears of corn.
- Like their cousins, the peas, beans are members of the Legume family. This means that, with the help of specialized bacteria in the soil, they can take up and use nitrogen from the air. So, you don't need to worry about adding extra nitrogen to the soil for your bean crop.
- Celebrate beans! January 6th is National Bean Day.
- North Dakota is the top dry bean producer in the U.S., while Wisconsin leads in snap bean production.
- In 1986 Barry Kirk of the United Kingdom, also known as Captain Beany, set the world record for the longest recorded time sitting in a bath of cold baked beans – 100 hours! Captain Beany also set world records for the longest time walking on a treadmill holding a plate of baked beans on toast – 12 hours – and the fastest marathon running time while holding a plate of baked beans on toast – 5 hours, 46 minutes, and 25 seconds.

How to Grow

Choosing varieties. There is a bean for just about every garden situation and palate. Bean varieties can be categorized by the growth stage at which they are picked, their growth habit, and the color of the pods or seeds.

Snap beans, also called green or string beans, are harvested when the pods are young and tender and the seeds inside are not fully developed. They are eaten pod and all. **Shell beans** are picked when they are about halfway to maturity when the pods are green but no longer tender. The seeds inside the pods are “shelled” or taken out of the pods for eating fresh. **Dry beans** are harvested when the seeds are fully mature and hard, and the pods are dried out and brown. The dry beans are removed from the pods and can be stored for many months – even years.

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The growth habit of bean plants varies as well. Low-growing **bush beans** mature at 2 feet or less. They produce large crops that are ready for harvest quickly and can be planted in successive sowings, so you'll have plenty of tender pods throughout the season. The bush snap bean varieties with round green pods are probably the most familiar. They germinate reliably, even if the soil is on the cool side, their sturdy seedlings shouldering their way through the soil toward the light. Prolific bearers, they are great for fresh use. And because they ripen their pods within a fairly short period of time, they work well for folks who want to can or freeze their crop. Bush bean varieties include yellow wax beans that add a beautiful color to the garden or the dinner plate, as well as slender French or filet beans with a delicate flavor and texture.

Tall growing **pole beans** are produced over a long season. Many folks think that pole snap beans have the best, most pronounced "bean" flavor of all. Their tall vines will produce more beans in total over the course of the growing season than bush beans, and for a longer period of time, but the harvest at any one time will be smaller. This makes them a good choice for gardeners who grow beans mainly for fresh eating. Pole beans need the support of a sturdy structure of poles or a trellis to support their vigorous growth.

Want to expand your bean horizons? Red-flowered scarlet runner beans can be eaten as young pods, green shell beans, or as black and pink speckled dry beans – and the blossoms on the tall vines will attract hummingbirds! Fava beans, grown in the Mediterranean region for centuries as shell or dry beans, do best in cool weather and are planted early in the growing season as soon as the soil can be worked. Chinese yard-long beans may not actually reach 36 inches long, but especially in warm climates, the vines may grow 8 feet tall or higher!

Selecting a site. Plant beans in well-drained soil that is rich in organic matter in a location that receives full sun. To minimize disease problems in the bean patch, use a three-year rotation for the location of beans in your garden space.

Sowing seeds. Don't rush spring bean planting, or your seeds may rot in the cold soil before they germinate. Wait until the soil is warm and dry before tucking seeds in the ground. Varieties with dark-colored seeds germinate better in cool soil than white-seeded varieties. Pole beans are more demanding of warm soil, so wait a little longer to plant them, usually about a week or two after your last spring frost date.

Plant bush bean seeds 1 to 2 inches deep and an inch apart in rows 1 to 2 feet apart. The tall vines of pole beans climb by twining and need strong support 6-8 feet tall to clamber up. Plant the seeds of pole beans 1 to 2 inches deep at the base of their support. If you are using poles for support, place 4 to 6 seeds in a circle about 6 inches out from the base of the pole; thin to one or two of the strongest plants per pole.

Make successive small plantings of bush beans every 2-3 weeks until about 2 months before your first fall frost date for a continuous harvest all summer long. As individual plants finish bearing, pull them up and add them to your compost pile (as long as they are disease-free).

Care. Beans are generally a pretty trouble-free crop. They will do best if they have consistent moisture and don't have to compete with weeds. A mulch of straw put down after the seedlings have come up will help retain soil moisture and keep weeds at bay.

Wet foliage promotes disease problems. Use drip irrigation or soaker hoses to provide water, or water with sprinklers early in the day so leaves dry quickly. Avoid working among bean plants when the leaves are wet to prevent the spreading of disease-causing organisms.

Harvest. Bush and pole snap beans are ready to pick when their pods are firm and crisp, about the size of a pencil in diameter, and the seeds within the pods are still undeveloped or just barely visible as small bumps in the pod. Pick filet beans when they are very slender, only 1/8"

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to ¼" in diameter. Bean plants are somewhat brittle, so pick pods carefully -- hold the vine in one hand and pull off the individual pods with the other to avoid breaking the stems. Pick often; the more you pick, the more the plant will produce. Shell beans are ready when the pods are full and green. Let your dry beans mature on the vine until the pods are dry and begin to split.

Troubleshooting Tips

- **Few or misshapen pods:** The pollination of bean flowers can be affected by temperatures that are too high or low. Temperatures over 90 degrees can cause blossoms to drop, so no pods form. If temperatures stay below 60 degrees in the day or 40 degrees at night, pods may be misshapen or incompletely filled. Once temperatures moderate, the plants will resume bearing. Moisture stress can also cause bean plants to drop blossoms, so try to keep soil moisture consistent. An organic mulch spread after the seedlings have come up will help to retain soil moisture and keep weeds down.
- **Mexican bean beetle.** This common insect pest is found in most parts of the country. It looks something like a ladybug, but it's definitely not beneficial! The ¼-inch long, reddish adult beetles have 16 black spots on their backs; the orange-yellow, soft-bodied, spiny grubs also dine on bean leaves. The tissue between the leaf veins will be eaten, giving the leaves a lacy appearance. Adults overwinter in plant debris, so clean up the garden well at the end of the season. Look for and crush the yellow eggs found on the undersides of leaves. Handpicking adults will often control the problem. Floating row covers can prevent damage to young plants, but you'll need to remove them once plants begin to flower so pollinators can reach the blossoms.
- **Disease problems.** Beans are susceptible to a number of bacterial and fungal diseases. Bacterial blights cause small, water-soaked spots on the leaves. Lesions may also appear on stems and pods. Common blight causes larger spots with a narrow yellow border and can be a problem east of the Rockies, especially when the weather is hot and humid. Halo blight is more of a problem when the weather is cool; its lesions are surrounded by a wide yellow halo. White mold is a fungal disease that causes water-soaked spots on leaves, stems, and pods. When the weather is moist, a fuzzy white mold forms on these spots. You may see what looks like small, black seeds in the mold. To keep these diseases to a minimum, plant in well-drained soil, avoid overhead watering or water early in the day so plants dry quickly, and space plants widely to encourage good air circulation. Avoid working in bean patches when the leaves are wet to prevent the spreading of diseases from plant to plant. Remove infected plants and clean up and dispose of plant debris at the end of the season. Plant beans in a different location of the garden each year; a 3-year rotation is best.

Enjoying Your Harvest

There are countless ways to cook and eat beans. Green beans can be steamed, boiled, and sauteed. They're an important ingredient in cuisines from around the world, often featured in hearty stews, curries, stir-fries, and casseroles. Dried beans are a staple food worldwide. Cookbooks and the internet will provide abundant ideas and inspiration!

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