



Beans

Bean is a common name for large plant seeds of several genera of the family *Fabaceae* (alternately *Leguminosae*) used for human or animal food. The whole young pods of bean plants, if picked before the pods ripen and dry, are very tender and may be eaten cooked or raw. Thus “green beans” describes the unripe fruits (many are, in fact, not green in color), as the “beans” (seeds) inside the pods of green beans are too small to comprise a significant part of the cooked fruit.

- **Bush beans or snap beans** are popular because of their early maturity and bush growth habit. Varieties include standard green, yellow wax, and purple-pod types. Many gardeners prefer flat-pod (Romano) green snap beans because of their distinct flavor and texture. These are available in both bush and pole types. Approximately 50 to 60 days to maturity.
- **Half-runner beans** are a snap bean with a growth habit between that of bush and pole beans. Though they have runners about 3 feet long, half-runners are generally grown like bush beans. Trellising, however, may increase production of these heavy yielders.
- **Pole beans** generally produce higher yields over a longer period in less space than bush types. Pole beans are natural climbers but will not interweave themselves through horizontal wires. Many types of homemade trellises, including tripods, work well as long as they provide the needed support. Trellises should be 6- to 8-feet tall and sturdy enough to withstand strong winds and rain. Approximately 60 to 110 days to maturity.
- **Scarlet runner beans** are a type of pole bean that grows rapidly, producing delicious beans and beautiful red flowers that are attractive to hummingbirds. Harvests are larger when pollinating bees are plentiful and more than one cultivar is planted. They may be harvested as snap beans when young and as green shell beans later. Beans, several pounds per plant, are ready to pick in 75 to 85 days. The lush 6- to 15-foot vines can be used to cover arbors, trellises, or fences. Scarlet runner bean grow best in cooler weather. Prolonged high temperatures will reduce yield and pod quality.
- **Lima beans** are available in bush or pole types. Bush limas mature about 10 to 15 days earlier than pole limas, but pole limas are more productive over a longer period. Soil temperature must be 65°F for five days in order for the beans to germinate well. Because the large seeds store considerable amounts of carbohydrates, limas are quite susceptible to attack by soil fungi and bacteria. Cold, wet spells and excessively hot, dry periods can cause lima flowers to drop, reducing yields. Harvests are larger when pollinating bees are plentiful. Bush limas mature in 65 to 75 days, pole limas in 85 to 110 days.

Planting:

Seed after danger of frost is past. Pre-germinating seed before planting in cool, spring soil may help prevent soil rot and seed maggot problems. Spacing: Bush snap 2" spacing in the row with rows spaced 24" to 30" apart; bush limas 4" spacing in the row with rows spaced 18" to 30" apart; pole beans 4" to 8" spacing in the row with rows spaced 24" to 36" apart.

Cultivation:

- **Weeding** – Remove all young weed seedlings by hand or with a hoe and use mulch on each side of row to keep weed seeds from germinating.
- **Watering** - Keep the root zone moist by watering deeply and regularly during dry periods. Water more frequently when pods begin to develop.
- **Fertilizing** - Medium feeder. Since beans are legumes they will fix nitrogen once they establish a good root system; inoculation will speed the process. Excess nitrogen will delay flowering, so side-dress only after heavy bloom and set of pods, using 3 tablespoons of 10-10-10 or equivalent per 10 feet of row.
- **Special directions** - For a continuous harvest, plant snap beans every 2 to 3 weeks from the frost-free date through mid- to late July. Pick snap beans regularly to keep plants producing heavily. Cover seed with 1/4 to 1/2 in. of soil or

compost. Keep soil moist, but not soaking wet, until seedlings emerge.

Harvesting:

Snap beans – Seeds will be ¼ of full size; seed should not cause pods to bulge. Pods should be tender and break easily with a snap when ready. Approximately yield per 10 foot row is 3 to 5 lbs.

Green shelling beans (Lima beans) – Seeds will be full size and pods will be bright green. End of pod will be spongy. Approximately yield per 10 foot row is 4 to 6 lbs.

Storage and Preservation:

In perforated plastic bag in refrigerator for up to one week. Beans freeze well. Clean, trim ends, and snap beans; blanch for one minute in boiling water; plunge into ice water for a minute. Drain thoroughly prior to freezing.

Nutrition:

Good source of vitamins A & C, and contains some vitamin K, thiamin, riboflavin, niacin, and B6

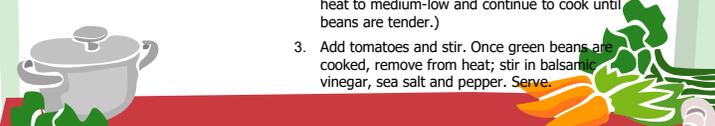
Preparation and use:

Trim stem ends and rinse with water. Sauté, steam, microwave with a little water or cook in boiling water. Adding baking soda to the cooking water makes beans mushy and reduces their vitamin content, although it is sometimes added to retain the bright green color of the beans.

GREEN BEAN AND TOMATO SAUTÉ

INGREDIENTS	DIRECTIONS
1 t extra-virgin olive oil, divided	1. Heat oil in a large skillet or pan over medium-high heat. Add green beans and cook, stirring often until seared in spots, about 2 – 3 minutes.
1 lb fresh green beans, trimmed	2. Push beans to the side; add garlic and additional olive oil if necessary; cook until fragrant, about 20 – 30 seconds. Cover green beans and reduce temperature setting to low. Cook over low heat for 8 – 10 minutes. (If using cookware other than multi-ply stainless steel, cover green beans with water, reduce heat to medium-low and continue to cook until beans are tender.)
1 t garlic, minced	3. Add tomatoes and stir. Once green beans are cooked, remove from heat; stir in balsamic vinegar, sea salt and pepper. Serve.
1 c cherry tomatoes	
1 T balsamic vinegar	
sea salt and pepper to taste	

Yield: 4 servings



— Courtesy of Regal Ware Worldwide at fruitsandveggiesmorematters.org —

Authors: Jon Traunfeld, University of Maryland Extension Specialist, and Jeanine Smetana and Peggy Yen, University of Maryland Extension Master Gardeners

Do you have a plant or insect pest question? Visit us at extension.umd.edu/hgi

This publication is a series of publications of the University of Maryland Extension and The Home and Garden Information Center. For more information on related publications and programs, <http://extension.umd.edu/hgic>. Please visit <http://extension.umd.edu/> to find out more about Extension programs in Maryland.

The University of Maryland. College of Agriculture and Natural Resources programs are open to all and will not discriminate against anyone because of race, age, sex, color, sexual orientation, physical or mental disability, religion, ancestry, or national origin, marital status, genetic information, or political affiliation, or gender identity and expression.

For more information on this and other topics visit the University of Maryland Extension website at <http://extension.umd.edu>