

Organic Beans:

Growing and Seed Saving Information



Beans

Beans are tender annuals in the Leguminosae family, which also includes garbanzos, peas, lentils, and peanuts.

- Snap beans (*Phaseolus vulgaris*) – Most often green but sometimes gold or purple, these beans are eaten fresh, steamed or pickled within their succulent pod. Snap beans have both bush and pole growth habits.
- Dry beans (*Phaseolus vulgaris*) - These varieties are grown for the mature bean seed. Dry beans have both bush and pole growth habits.
- Fava beans (*Vicia faba*) - Plants are 2-3' tall with an upright central stem, lovely foliage and striking white and purple flowers. They yield gigantic beans that can be eaten at the shell stage or dried for later use.

Soil and Nutrient Requirements

Beans only require average fertility and prefer pH in the 6.0 - 6.8 range. Choose well drained, warm soils and use inoculants to increase yields where natural Rhizobia populations are low.

Position

Full sun to part shade

Seeding Depth

1-2"

Plant Spacing

For bush beans, 2-3"

Row Spacing

For snap bush beans 18-36", for bush dry beans 28-36", for pole beans 6"; for pole beans use single or double rows, with 12" between, and 4' center beds with trellis in the middle.

When to Sow

Days to maturity are from direct seeding. Direct seed after all danger of frost has passed. Optimal soil temperature for germination is 75-95°F. Beans are particularly sensitive to cool soils and are prone to rot if temperatures are below 55°F. White-seeded beans typically do not germinate as well as dark-seeded beans. Snap beans can be planted every 2-3 weeks for a continual harvest through mid-summer.

Other Considerations

- When possible, wait for dry conditions before handling plants.
- Pole beans require trellising for support. Plant in single or double rows, or a circle for a tripod trellis.

Frost Tolerant

No

Drought Tolerant

Even moisture is important, especially during flowering and fruit set. Lack of moisture may cause deformed pods.

Heat Tolerant

Pod set is poor when temperatures exceed 90 degrees.

Seed Specs

75-150 (115 avg) sds/oz, 1200-2500 (1850 avg) sds/lb varies greatly between varieties.

Organic Beans:

Growing and Seed Saving Information



Seeding Rate

Bush Beans - 800 sds/100' (~.5lb/100'), 130M sds/acre (~70 lbs/acre) using 8sds/ft, 36" row spacing. Pole Beans - 800 sds/100' (~.5lb/100'), 96M sds/acre (~52 lbs/acre) using 4 sds/ft, double rows 12" apart on 4' centers. M=1,000 seeds

Harvest

Harvest early and often to increase yields. Remove oversized beans to maintain pod production. Dry beans are harvested once in the fall, when plants are drying down. Harvest by hand or machine, using either a combine or a stationary thresher. Avoid harvesting moldy pods whenever possible, and make sure beans are completely dry before threshing.

Storage

Dry further in cool, dry conditions prior to long-term storage. Beans are ready for storage when seed coat can not be dented by fingernail. Store beans in a cool dry place.

Pest Info

- Aphids can be washed off plants with a hard stream of water. They have several natural predators that control populations including parasites (aphids appear grey or bloated), lady beetle larvae and lacewings
- Seedcorn maggot is attracted by heavy applications of manure or organic matter which encourage egg laying.
- Leafhoppers are small wedge shaped insects that suck the juice from leaves rather than eating holes through them. If leaves are yellowing and curling under, examine the underside for leafhoppers. They overwinter in the Louisiana area and arrive with storm fronts in other parts of the country.

Disease Info

- Root rot, caused by several different soil-borne fungi, can be prevented by rotating with a cereal or pasture crop and by planting into soil temperatures above 60°F. Root rot is less of a problem where soil is warm and well-drained.
- White mold, *Sclerotinia sclerotiorum*, causes a pod and stem blight and is generally a disease of cool, damp conditions. Do not handle plants during wet conditions. Wider spacing can allow more aeration between plants and help control the spread of disease. White mold survives in soil and plant debris; therefore infected plants should be removed from the field. Dry beans and soybeans are not as susceptible to white mold as snap beans. Crop rotation is essential.

Seed Saving Instructions

Self-pollinated. Insects are capable of cross pollination, and the extent of this depends on several factors including the type of flower, the bee population, and other pollen sources available. Depending on the location, it may only be necessary to separate varieties by five feet. The seed coat is one indication of crossing, but many traits can be crossed that are not visible in the seed coat color. When planting, increase row and plant spacing to allow for greater air circulation and space for a mature plant. Pods should be papery and dry when harvested. Harvest by pulling up the entire plant. Windrow in the field or lay on a tarp in a dry place like a barn or greenhouse. When seeds are fully dry they are ready for threshing. Your fingernail should not be able to make an imprint on a fully dry seed. Thresh by flailing, jumping on pods, or shell by hand. Use a ½" screen on top of a ¼" screen to clean the seed. Bean seed can remain viable for up to 4 years under cool and dry storage conditions.