

Bean

Planting & Growing Guide

Questions? Contact us at (888) 784-1722 or helpdesk@groworganic.com

Beans are a popular garden vegetable and can be separated to 3 groups—snap, shelling or dry bean. There are 3 basic growth habits of beans—bush, pole or half-runners. Beans are legumes and if sufficient rhizobium soil bacteria is present (the proper strain), they can fix atmospheric nitrogen in small nodules found on their roots.



BEAN TYPES

Broad: Often shelled beans such as fava; prefers cooler weather.

Bush: Does not need support, produces earlier than pole varieties, but sets a determined amount of beans. Flowers are formed at the end of branches. Continuous crop if planted successionaly about every two weeks.

Dried: Ripens in pod prior to harvest for long term storage.

Pole: Requires trellis or other support. Indeterminate growth so produces beans over a longer period than bush beans. Flowers are formed in leaf axils. Twines around supports in a counter-clockwise direction. Tolerates hot dry weather better than others.

Runner: Ancestor of modern pole bean; long pods and seed. Twines around supports in a clockwise direction. Grows better in cooler climates.

Shell: Edible seed in the pod must be removed before eating (such as soy or lima beans).

Snap: Pod and immature seed within are eaten.

Yard Long: Subtropical Asian varieties; require hot day and night temperatures. Harvest pods when they are about pencil thickness.

Half Runners: has growth habits of bush and pole beans. Does not grow as tall as pole beans.

GROWING BASICS

Soil: beans prefer a soil pH around 6.5 and temperatures of 70-80°F (above 60°F for germination). Tolerates 40-80°F (night temps can affect bloom set).

Seed longevity: if properly stored, the seeds should be viable for at least 3 years.

Companion planting:

Incompatibility – Basil, kohlrabi, onions, fennel.

Companions – Carrots, cucumbers, cabbage, lettuce, peas, rosemary, and parsley.

Water requirements: Consistent moisture. Do not overhead water, use drip irrigation. Use mulch to conserve water. Excess humidity will increase pest/disease issues; space further apart for good air circulation.

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Fertilization: Excess nitrogen will create excess foliage to the detriment of pod formation. Inoculating seeds with Rhizobium bacteria may increase yields. A low nitrogen fertilizer is suggested if soils are deficient. Address amendments prior to transplanting into garden; supplement per product label. Weekly waterings of kelp will assist with plant strength.

PLANTING & GROWING

Seed Sowing: Sow directly in garden bed after frost has consistently past and soil has warmed to at least 60°F. If the soil is not warm enough the seeds will not germinate and may rot. Choose a sunny area and amend the soil with compost so that surface will not crust and hinder emergence of seed sprout. Beans do not transplant well. If started indoors, use a biodegradable pot and transplant out with care.

Optional: prior to planting, coat seeds with a nitrogen-fixing Rhizobium bacteria, such as our **Garden Combination Mix Inoculant (ISE350)**. This will allow the plants to fix nitrogen in the soil and may improve yield.

If planting bush beans, sow in succession approximately every 2 weeks (through August) for a continual harvest. Space seeds 2-4" apart in rows at least 18-24" apart.

If growing pole or yard long beans, erect a trellis for the plants to grow up. If using a teepee made from bamboo (6-7'), plant the seeds on the outside of the support in a circle. Spacing of seeds should be 4-6" apart about 6-8" from the poles.

HARVESTING

Pick often to extend season. Snap beans (or green beans) should be immature so that seeds are still small and pod snaps. Store in moisture proof, air tight container in refrigerator. Best eaten within 4 days of harvest.

Shell beans should be picked when the beans inside the pod have enlarged and the pods are thin, tough but not dry.

Dried beans may be eaten at young snap or shell stage as well. They most likely have strings in the pod and it should be removed before eating. For storage wait until most all leaves are dead and pods are dry and beans rattle inside. If rain is in the forecast, pull up entire plant and hang indoors until the seeds are dry. Remove from dried pod before storing.

COMMON PESTS & DISEASES

Blight: Brown spots of leaves or pods with yellow edges. Excessively wet and/or humid conditions.

Blossom Drop: Too much nitrogen or very high heat.

Leaf Spot: Leaves with irregular brown lesions. Can progress to shot hole where areas brown and drop. Use an organic fungicide labelled for leaf spot.

Mosaic: Mottled color pattern on leaves and stunted growth. Can be spread by aphids. May be a sign of nutritional deficiency.

Aphid: Colonize on stems and leaves and extract sap. Spread other diseases to plants. Use yellow sticky traps, green lacewings and ladybugs, or an organic insecticide labeled for aphids.

Cut worms: can use foil collars around the base of the plants (at soil level).

Corn Earworm: All parts of plant are susceptible to damage. Pest is usually visible at most stages or eggs on upper and lower leaf surfaces. Traps, beneficial insects or an organic insecticide labeled for corn earworms.

Mexican Bean Beetle: Skeletonized leaves. Handpick or use an organic insecticide labelled for Mexican bean beetles.

Spider Mites: can be washed with a strong stream of water or use an organic insecticide labeled for spider mites.

PEST CONTROL - IPM

Important to practice good cultural controls for pest management of beans. Cultural controls such as removing plants after harvest (to avoid leaving food for insects to continue to multiply on), practice crop rotation (i.e. do not plant crops in same family, in the same area for 3 years), use row covers such as Agribon AG15 (cover before insects arrive or to protect against birds when plants are young).

COMMON QUESTIONS

How are dried beans harvested? When beans rattle inside the dry pods, the pods can be removed. If rains or frosts threaten before pods have dried, the plant may be cut down and placed in a shed or barn to dry. If beans are not thoroughly dry, leave them on a screen in shed/barn to do so before storage.

Storage should be in airtight containers placed in cool, dry location out of the light. Freezing before storage will kill any pests that may have been present. It is best to eat stored beans within first year of harvest.

How much support do pole varieties require? Beans can be accommodated by trellising that is 6 feet in height minimum (above ground; more to stabilize in soil). It can be made as single stakes, arranged as teepees or use woven wire or Hortonova trellis supported by stakes. Be sure to have enough space between plants to allow for adequate air circulation. This will help prevent some pests and diseases.

Do beans require abundant pollinizers to be present? Most bean species take care of this essential process before their bloom opens - hence they are self-pollinating. However, yields may be higher with the help of bees and other insects.

DEFINITIONS

Heirloom: Heirloom seeds come from open-pollinated plants that pass on similar characteristics and traits from the parent plant to the next generation plant. Heirloom vegetables are old-time varieties generally which have been in production since before WWII, and have been saved and handed down through multiple generations.

Hybrid: a cross between two or more unrelated plant varieties. The two different varieties are cross bred, resulting in a seed that carries one or more favorable traits (increased yield, uniformity, color, disease resistance.) Hybrid seeds are not GMO, as they are manually cross-bred, not genetically modified in a lab. Hybrid seed is often sterile or does not reproduce true to the parent plant. Therefore, never save the seed from hybrids.

Open Pollinated: generally refers to seeds that will "breed true." When the plants of an open-pollinated variety self-pollinate, or are pollinated by another representative of the same variety, the resulting seeds will produce plants roughly identical to their parents. Genetic traits may differ only slightly due to variations created by local conditions.

GMO: Genetically Modified Organisms were genetically modified in a laboratory where DNA genes are extracted and mixed with other unrelated plants to improve characteristics. Saved seed will not always be viable and may be trademarked to prevent unauthorized use.

Limited Product Guarantees

Peaceful Valley Brand Seed Packs

Peaceful Valley Farm & Garden Supply brand vegetable seeds are guaranteed to germinate. Once the seeds have sprouted, please understand that Peaceful Valley cannot be held responsible for the many uncontrollable growing and climatic conditions that must be met to ensure the success of your crop(s).

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We warrant to the extent of the purchase price only that the seeds or plants sold hereunder are as described on the label within recognized tolerances. No other warranty is given, expressed or implied, of (1) the merchantability or fitness of the seeds or plants for any particular purpose, or (2) against loss due to any cause. We cannot accept any responsibility for the many uncontrollable growing and climatic conditions (soil preparation, fertilization, weed and pest control, temperature control, irrigation...etc.) that must be met to insure the success of your crop(s) or plants.



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