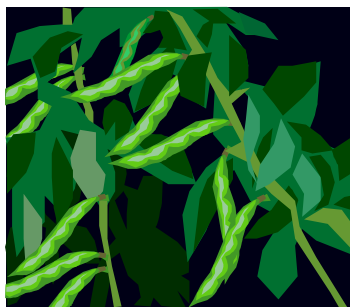


Beans

Phaseolus sp.



Beans are an essential food in many cultures throughout the world. They are a relatively undemanding, attractive and versatile crop to grow. Bush beans are easier and best for the beginning gardener. Pole beans are extra fun and can be grown onto teepees or trellises. The plants are also great for the soil due to their ability to fix nitrogen.

SITE REQUIREMENTS

Beans grow best in full sun (at least six hours of direct sun) in average well drained soil. Most soils should be amended with at least 1" of compost before planting.

PLANTING

It is best to directly sow bean seeds when the danger of frost has passed and the soil temperature is about 60°F. Beans will not grow or they may remain stunted in cold soil. You can always cover planting area with black plastic to speed soil warming. In Portland the planting window is mid May to mid August. For a continual harvest, plant bush beans every 2 to 3 weeks. A single planting of pole beans will bear all season. Cold tolerant fava beans are an exception to this schedule. Please refer to the "Types" section for fava planting guidelines.

Seeds can be moistened before planting by rolling them up in wet paper towels and letting them sit overnight. For optimum production, roll moist seeds in bean inoculant. This will help the roots fix nitrogen. Inoculant is not necessary (especially if you have planted beans in the area before). Plant seeds 1-2" deep in rows 18-24" apart. In spring a 1" planting depth will provide warmer soil. In summer a 2" planting depth will provide better moisture. Be sure to provide a trellis type structure for pole beans at planting time.

Beans are not fond of transplanting. However, sometimes this is the best method for the gardener. When transplanting, disturb the roots as little as possible. Do not separate individual plants, simply plunk the whole root ball in the ground and water in with liquid seaweed to alleviate transplant shock.

WATER REQUIREMENTS

Beans prefer lightly moist soil. Consistent moisture is essential during flowering and germination. Apply 1-2" of mulch along side the plants to help maintain moisture. Beans do not like overhead irrigation.

FERTILIZING

None necessary. If plants seem weak apply a light application of liquid fish and kelp emulsion.

HARVESTING & STORAGE

Filet beans are best before they reach pencil thickness. Pick snap beans (green beans) when you feel faint outlines of the seeds developing. Shell beans are ready when the seeds are full but the pods are still green. Dried beans are picked when pods are stiff and break open easily. Shell your dried beans onto screens or baskets and dry in a warm, well ventilated area for a week before storing in an air tight container.

PESTS & DISEASES

*Cutworm can often mow down all of your seedlings in one night. Spinosad is an organic control for cut worms.

*Damping-off may be an issue if your new seedlings die. It occurs in conjunction with cool wet weather. Wait for the weather to warm and replant.

*Aphids often appear as a black coating on the undersides of the leaves and growing tips. First signs may be yellow leaves. Also sticky sap on leaves and stems and white aphid skeletons are quite prevalent. There are numerous sprays and control measures to help combat aphids.

*Cucumber beetles will chew holes between the veins in the leaves. Some larva will feed on the roots. You can cover seeds at planting time with a floating row cover next time you plant in a different area. Pyrethrin sprays will also help control the population.

*Flea beetles chew dozens of tiny holes in the leaves. For prevention cover new seed beds with floating row cover until plants are 8" tall. Dust with diatomaceous earth or spray with pyrethrin.

*Spider mite damage appears as many, white pin sized dots all over leaves, or yellowing leaves. Tiny red mites will be on the under sides of leaves and webbing may be present along the main veins. Spider mites are most prevalent in hot dry weather. Spray with insecticidal soap three times every 7 days. Predatory mites, Cimmamite and pyrethrins are also effective.

*Gray mold, also known as botrytis, appears as brown or white spots on leaves and new stems. These spots will then develop grey fuzz. It is common in cool wet weather. Remove and destroy infected parts. Prevent further spread with a fungicide such as neem oil.

*Mildews appear as white patches, preceded by reddish patches, on the leaves and stems. Both downy and powdery mildew are fungal diseases. First remove as much of the infected areas as possible. There are numerous fungicides listed for edibles, such as Serenade, that can prevent the spread of powdery mildew.

*Bacterial blight also appears a white growth or water soaked spots on the leaves. In this case no mold will appear on the spots but it will continue to spread. Serenade may control the blight at the very beginning of infection. Otherwise remove plants and start over in a new area.

*Rust is a fungus that appears as rusty orange blisters on the leaves and sometimes pods. If possible remove all infected parts of the plant and avoid overhead irrigation. Fungicides such as Serenade and Fung-onil will help prevent the spread of the fungus.

*Anthracnose shows as dark streaks on the leaves and dark sunken spots on leaves. It is a fungal disease. Destroy infected plants. Prevent the fungus by avoiding overhead irrigation. Spraying with sulfur will slow the spread. Clean up all crop remains to prevent fungus from over wintering in the area.

*Root rot may appear as pale or yellowing leaves and stunted plants. Roots will be brown with possible sunken red spots at the base of the stem near the soil level. It is a soil fungus initiated by overwatering and/or very heavy soil. There is no recovery from root rot. Amend soil with at least 2" of compost and allow the area to become slightly dry to avoid root rot.

TYPES

*Dried beans- Most varieties require a long warm growing season. To get a jump start, prepare beds in fall with 4-6" of grass or leaf mulch. This will decompose in half by spring and help heat the bed. Plan for 10-20 plants per person. Some varieties for our area: Cannellini, Peregion and Yin Yang.

*Bush shell beans- These underutilized beans yield beautiful seeds that are best eaten raw or cooked. They are a beautiful and nutritious addition to any summer salad. Plant once a week for the month of June for fresh beans all season. Varieties for our area: Coco Rubico, Vermont Cranberry, Tongue of Fire and Flagano.

*Snap, green, or string beans- The most commonly grown type of bean. The entire pod and seeds are enjoyed in a variety of culinary dishes. Bush varieties are easier to grow and determinate. Starting in late May plant a new crop every 10 days for continual harvest. Pole beans are indeterminate and easier to harvest. One crop of pole beans will produce all season. Plan for 5-7 plants per person. Among snap beans there are many types: French Filet beans are harvest when very young (pencil thin) and tender to avoid strings and toughness. Maxibel is a popular variety. Round pod beans are your typical green, yellow wax or purple beans. Popular varieties include Blue Lake and Kentucky Wonder. Flat pod or Romano beans produce flat, broad string beans that are meatier than other types.

*Runner Beans- Gorgeous, fast pole bean with edible seeds and flowers. Seeds can be planted in late April. Scarlet runner beans also attract hummingbirds. Plan 3-4 plants per person.

*Fava Beans- One of the few cool season beans which doubles as a cover crop for winter. Plant favas September through November for spring harvest or when seeds have reached their full size (about ¼ - ½" thick). Fresh seeds are delicious cooked.

*Soy Beans- Fresh or dried soy beans are delicious crop to grow. Most varieties require a long hot growing season and are therefore not extremely productive in the PNW. Envy is a good variety for Edamame.