



HAWAII COOPERATIVE EXTENSION SERVICE

College of Tropical Agriculture and Human Resources

HOME GARDEN VEGETABLE SERIES No. 8

BEANS

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Most beans grow well in Hawaii. The most common types grown are green, snap or "string" beans, as well as the yellow or wax types. Lima beans can also be grown. All of these are available as either bush or pole types. The only other bean found in home gardens in Hawaii usually is the yard-long bean which is closely related to the Southern or Black-eye pea and is used for both the pods and seeds. Types used as dry seeds, such as navy, kidney or pinto beans, Garbanzo, mung, adzuki, and others, are not usually grown in home gardens.

Varieties

Nearly any variety of snap bean, both pole and bush, will perform well in Hawaii if the growing conditions are good. In home gardens, pole varieties are usually preferred because they yield more over a longer period of time. Most consumers in Hawaii prefer long, flat-podded beans. Greencrop, a bush variety of this type, has performed well in Hawaii. Two pole varieties developed by the Department of Horticulture with this type of pod are Hawaiian Wonder and Manoa Wonder. Hawaiian Wonder is resistant to rust in some areas and should be planted if rust might be a problem. Manoa Wonder is not resistant to rust but is resistant to root-knot nematodes, so should be planted if nematodes are likely to cause trouble, but not rust. Greencrop and most other bush varieties are resistant to rust. Most bean varieties carried in Mainland seed catalogues would produce round pods shorter than the three varieties mentioned. Two pole beans that are old favorites are Kentucky Wonder, with high quality and long but somewhat rough pods, and Blue Lake, with shorter, round pods, but known everywhere for its top quality and flavor.

Lima Beans

Bush and pole varieties are available which produce either large or small (baby) seeds. Pole varieties are essentially perennial in Hawaii as long as they are kept free of diseases. Recommended varieties are

King of the Garden (pole, large seed), Florida Butter (pole, baby), Fordhook 242 (bush, large seed), and Allgreen or Thorogreen (bush, baby).

Soil Management and Fertilization

Beans will do well in any well-drained soil that is neither too acid nor too alkaline. On highly acid soils, an application of lime will be useful; on soils with high pH, fertilizers that lower the pH (like ammonium sulfate) should be beneficial. They will benefit from incorporation of organic matter. If there are root-knot nematodes present, the soil should be fumigated unless the variety to be planted is Manoa Wonder, which is resistant.

Apply general garden fertilizer, such as 10-30-10, at a rate of about 2.5 to 3 pounds per 100 square feet at time of planting and again at the same rate when blooming starts, about 4 weeks after planting. If the vines are in good growing condition, harvest can be prolonged in the home garden by making similar applications of fertilizer about once a month.

Planting

Plant seeds directly in the field about 1-1½ inches deep in single rows spaced about 30 inches apart or in double rows spaced about 36 to 40 inches. The spacing in the row can be as close as 4 inches for bush beans, 6 to 12 inches for pole beans, and even farther apart for lima beans, which can make huge vines when growing conditions are good. Provide support, such as strings or sturdy, wind-resistant stakes, for the pole varieties by the time the plants start to vine, usually at the age of 2 to 3 weeks.

Irrigation

Irrigate beans on a regular basis so that there is a sufficient water supply for the plants at all times. Any setback in the early growth of the plants will result in smaller, weaker plants with reduced yields.

Insect Control

Insects that may cause trouble are cutworms, French bean fly, Chinese rose beetle, aphids, white flies, leafminers, mites, pod borers, stink bugs, and corn earworms. Insecticides recommended to control these insects are diazinon, dimethoate (Cygon), and malathion. A regular spray program should be started at the time of seeding to control cutworms, which eat the seedlings, and French bean fly, which can infect seedlings shortly after germination. The symptoms of French bean fly infestation are the wilting and dying of the top of the plant when it is about 2 to 4 weeks old with no evidence of diseased roots. Larvae or pupae of the French bean fly, about 1-2 mm long, may be found in the stem at the first node. A regular program started at seeding time to control these two insects should also effectively control the rest if spraying is continued at intervals of 1 week maximum. Once harvest has started, diazinon should no longer be used, but dimethoate can be safely continued, and malathion also with a 1-day wait between spraying and harvest.

Disease Control

The most common diseases of beans are root-knot nematodes, rust, anthracnose, and halo and bacterial blights. With the exception of nematodes, all these diseases increase greatly in severity during periods of prolonged wet weather and are rarely a problem in drier areas or in summer when there is less rain. The use of resistant varieties can control nematodes (Manoa Wonder) and rust (Hawaiian Wonder or most bush beans). Otherwise it is best not to plant during wetter seasons. Rust can be controlled by spraying with sulphur, but the con-

tinuously wet conditions that promote the rapid development of rust usually also prevent the effective application of sprays.

CAUTION: When using pesticides, always read the label and follow the directions carefully.

Harvesting

Snap beans should be harvested just before the seeds start to swell and become visible as bumps on the outside of the pod. This is about 10 days after blooming, or about 6 weeks after planting. Harvest the beans about every other day. Most pods on bush varieties will be mature at about the same time, with 2 to 4 harvests per plant. Harvest on pole varieties will continue as long as the plants remain vigorous and free of disease. Harvest lima beans when the beans have reached full size, but before the pods start to turn yellow.

Seed Availability

Seed of Hawaiian Wonder and Manoa Wonder pole beans are available from the Department of Horticulture of the University of Hawaii and from some garden stores. Seed of other varieties are available on seed racks in garden stores and from Mainland seed companies.

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NOTE: The use of trade names is for the convenience of readers only and does not constitute an endorsement of these products by the University of Hawaii, the College of Tropical Agriculture, the Hawaii Cooperative Extension Service, or their employees.

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