

Adzuki Bean

Phaseolus angularis is a member of the Leguminosae (legume) family. Varieties include Japanese Red, Chinese Red, Adzuki Express (Johnny's Selected Seeds), Takara (Japanese import), and Minoka (Minnesota Agricultural Experiment Station).

The adzuki bean plant grows 1 to 2 feet high, with leaves resembling those of Southern peas. Flowers are yellow and are followed by a cluster of smooth, cylindrical pods with seeds 2 to 3 times larger than the planted seeds. Seeds usually are dark red, but can be green, straw-colored, black-orange, or mottled. They are round with a protruding ridge (seed scar) on the side.

Other name. *Azuki* (Japanese).

Market Information

The U.S. market for adzuki beans is limited. Acreage is contracted in advance of planting. New domestic and overseas markets are currently being developed.

Current production and yield. Adzuki bean is a major crop in Japan and China and is cultivated in Korea, New Zealand, India, Taiwan, Thailand, and the Philippines. In the United States, adzuki beans have been grown in Florida, Minnesota, and California. Yields are the greatest in lighter soils with irrigation and good drainage. Research plots in Minnesota have yielded an average of 1,400 pounds per acre.

Use. In Japan, adzuki bean is the second most important dry bean crop. The beans are cooked with rice or used in confections. In the United States, the main adzuki product is bean sprouts. Young, tender pods can be harvested as snap beans and eaten like snow peas or cooked like common green beans. Puréed beans are eaten as a vegetable and in baked foods. They have a slightly sweeter flavor than other beans.

Dried adzuki beans require 1 hour of soaking before boiling. To purée adzuki beans, mix the mature, dried beans with minced garlic, a pinch of tumeric or Chinese mustard, and some grated ginger. The purée can be served as a hot vegetable, mixed in sour cream or yogurt, used as a salad spread, or stuffed into mushroom caps. An, a mixture of adzukis, sugar, and water, serves as a filling for bread, steamed breads or dumplings, and sweet cakes.



Dried adzuki beans at the market.
(Photo: Suzanne Paisley)

Nutrition. The beans are high in protein (25%) and easy to digest.

Culture

Climatic requirements. Seeds do well during frost-free periods with cool nights. The plant is reported to be somewhat drought resistant. Requirements for adzuki beans are similar to those for soybeans or other dry beans.

Propagation and care. Adzuki is a short-day plant that does not grow well in waterlogged soil. The seeds may be treated for fungi, insects, and bacteria before planting. In Minnesota, the best planting dates come in May and June. Bean plants emerge more slowly when the soil is 50° to 55°F. A good plant population is 105,000 plants (25 to 35 pounds of seed) per acre.

Plant seeds in rich, loamy soil, ½ to 1 inch deep. Plants should stand 2 to 3 inches apart. Recommended space between rows varies between 12 to 18 inches and 18 to 30 inches. Neutral to alkaline soils are required for maximum nitrogen fixation. Adzuki beans will fix nitrogen, but to do so they must be inoculated with a crop-specific *Rhizobium* strain. Fertilize seedlings when they are 4 to 5 inches tall, and again when the flowers start to form pods. Moisture should be ample and consistent.

Seed quality is important for vigor in young plants, since this crop competes poorly against weeds. Choose a location with light weed pressure, and rotary hoe 7 to 10 days after planting. Cultivate the beans when the primary leaves are fully developed and, if necessary, 10 to 20 days later.

Pests and diseases. White mold, bacterial stem rot, and other bean diseases may affect adzuki beans. A rotation program, furrow irrigation (rather than overhead), disease-free seed, and a spray program can help prevent these diseases. Most varieties are susceptible to aphid-borne viruses that attack legumes, including curly top virus.

Harvest and postharvest practices. To harvest as green beans, pick the adzuki pods when the beans are faintly outlined in the pod. Picking every 5 to

6 days is usually sufficient. In California, adzuki beans will mature in fewer than 120 days for use as dry beans.

Growers can cut and windrow in the morning to allow drydown and then collect seeds with a combine later in the day, or they can direct-combine the beans with a grain header or row crop headers. Adzuki pods shatter easily, especially if they are harvested late in the season or late in the day. To decrease losses, use slower speeds, open the concaves, and harvest only during appropriate hours. The entire plant can be harvested and stacked in a dry, well-ventilated place for drying. Complete drying occurs in 1 to 2 weeks. After drying, shell the beans and store them in refrigerated, air-tight containers.

Sources

Seed

Dr. Yoo Farm, P.O. Box 290, College Park, MD 20740

Hudson Seedsman, P.O. Box 1058, Redwood City, CA 94064

Johnny's Selected Seeds, 305 Foss Hill Road, Albion, ME 04910

Mellinger's Inc., 2340 S. Range Road, North Lima, OH 44452

Redwood City Seed Co., P.O. Box 361, Redwood City, CA 94064

Southern Exposure Seed Exchange, P.O. Box 158, North Garden, VA 22959

Sunrise Enterprises, P.O. Box 10058, Elmwood, CT 06110

Vermont Bean Seed Co., Garden Lane, Fair Haven, VT 05743

More information

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ence. *Grain legumes as alternative crops*, pp. 67–76. The Center for Alternative Crops and Products, University of Minnesota.

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Stephens, James. *Minor vegetables*. 1988. Cooperative Extension Bulletin SP-40, University of Florida, Gainesville, FL.

Whealy, Kent. 1988. *Garden seed inventory: 2d ed.* Seed Saver Publications, Decorah, IA.

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