ADZUKI BEAN

Vigna angularis Fabaceae

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Adzuki Bean has a 2,000-year history of cultivation in eastern Asia. The chief countries of Adzuki Bean production are China, Japan, Taiwan, and South Korea. Its origin from a wild species is unknown but its center of origin has been proposed as within eastern Asia, quite possibly in China. Adzuki Bean is cultivated extensively in the Yangtse River valley in China. Its use has spread to Thailand, New Zealand, the Philippines, and a number of other countries around the globe.

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Adzuki Bean is an important food crop in the Orient. It ranks second only to soybean as a dry bean crop in Japan. The beans of this species are sweeter than other oriental vegetable beans. A major use of Adzuki Bean in Japan, and other Asian countries, is a confection or sweet bean paste called an (or sometimes, ahn). An is used as a filling in pastries and a topping for desserts, especially ice cream. Adzuki Bean also may be cooked and used as additions to rice and sweet soups, used as a flour source, or eaten as candied beans. Pureed beans are eaten as a vegetable and used as an ingredient in baked foods. A mixture of Adzuki Bean flour and wheat flour is used to make noodles. Young tender pods can be eaten like snow peas or cooked like green beans. The beans also may be popped like popcorn, used as a beverage base, or used as a coffee substitute. The sprouts of germinated seeds often are eaten in the United States. Adzuk Bean also has reported uses as a soil improvement crop and an animal forage crop.

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  - Adzuki Bean
  - Azuki Bean
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  - A[redacted]bo[redacted]e
- [redacted]
  - Frijol Adzuki

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Adzuki Bean is a short-day annual species that grows well in northern hemisphere temperate climates from 35 to 48 degrees N latitude. Generally, its climatic requirements and growing conditions are similar to those of soybean. Adzuki Bean is moderately drought tolerant. It can grow well in regions having an annual precipitation ranging from 530 to 1730 mm (20-68 in). It has been grown successfully in a range of soil types including silt loams and sandy soils. It does not tolerate water-logged soils.

Although Adzuki Bean has been grown with few problems in acidic soils within the pH range from 5.8 to 6.4, a neutral to slightly alkaline soil pH is desirable to promote nitrogen fixation by this legume species. Plant seeds in late spring after the soil has warmed. Emergence is slow (up to 20 days) in soils below 13º C (55º F), whereas emergence in 10-14 days is common in warmer soils. Seeds may be broadcast or planted 1.5-4 cm (0.5-1.5 in) deep, 5-8 cm (2-3 in) apart in rows spaced 45-75 cm (18-30 in) apart. Seeds planted in soils not regularly used for Adzuki beans should be inoculated with a *Rhizobium* nitrogen fixation species specific to the crop.

Adzuki Bean competes poorly with weed species. For best yields, plant the crop in a weed-free seedbed and use weed control practices, especially during early growth stages of the crop. Fertilizer applications, particularly phosphates and potash, at young seedling and early flowering stages, may increase crop yields, especially on nutrient-poor soils.

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To harvest Adzuki Bean for use as a pod vegetable, pick the pods as soon as the seeds appear faintly outlined in the pod. Repeated pod harvests every 5-6 days should produce a continuing supply of tender pods. Normally, forty to fifty days after flowering (about 100-140 days after emergence), Adzuki Bean is ready for harvest of dried beans. Stack harvested plants in a well-ventilated dry area for drying. Shell beans 1-2 weeks later. Machine-harvested plants may be pulled or cut and windrowed in the morning and threshed later in the day with a combine equipped with a pick-up header. Alternatively, Adzuki Beans may be direct-combined using machines equipped with row or grain headers.

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Adzuki Bean is susceptible to white mold, *Sclerotinia* sp., bacterial stem rot (*Pseudomonas adzukicola*), and other bean diseases. A program of crop rotation (for example, beans rotated with cereal grains) will help reduce the persistence of plant diseases. If the crop is irrigated, furrow

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irrigation is preferred over spray irrigation to reduce the spread of diseases from plant to plant. Adzuki Beans also are susceptible to aphid-borne legume viruses such as the curly top virus.

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For centuries, Adzuki Bean has occupied a special place in Asian diets due to its usual attractive maroon color, pleasurable texture and sweet taste compared to cereal grains and other food legumes. Food dishes prepared with rice and adzuki, called sekihan, often are served on festive occasions such as weddings or birthdays. An, a favorite food additive and flavoring, is prepared by soaking, boiling, and rinsing Adzuki Bean seeds to remove antidigestive substances; removing the seed coat, crushing, and drying; and sweetening with sugar. It often is used as a filling for steamed breads, dumplings and sweet cakes. Although Adzuki Bean has lower protein and macronutrient contents than soybean, it is a nutritionally beneficial food and a good energy source.

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http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=2147

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