

# Mung Bean

*Vigna radiata* is a member of the Fabaceae (pea) family.

The mung bean plant is 18 to 36 inches tall and produces a cluster of 2 to 8 slender, black pods 3 to 4 inches long. The slightly fuzzy pods contain very small seeds, which are green in the commercial varieties grown in the United States. Each pod may contain as many as 15 small oval seeds, depending on cultural conditions.

The mung bean is an ancient crop of Asia, where the seeds are available in many sizes, shapes, and colors. Domestic mung bean sprouts are produced from green-seeded cultivars. The mung bean's ancestors are annual plants with both short- and long-day cultivars. Most domestic cultivars are sensitive to temperature rather than daylength.

**Other names.** *Nong tao* or *pua sha* (Hmong); *moyashi-mame* (Japanese); *lu tou* (Mandarin Chinese); *look dou* (Cantonese Chinese); *balatung* (Tagalog); and *dau-xanh* (Vietnamese). Mung bean sprouts are known as *kolo taac* (Hmong); *moyashi* (Japanese); *yar tsai* (Mandarin Chinese); and *ngar choy* (Cantonese Chinese).

## Market Information

The production of bean sprouts is the primary domestic use of mung beans. Sprout quality is an important factor in marketability. Whole, bright green seeds are likely to produce good sprouts. Damaging seeds during harvest, leaving mature seeds in the field too long before harvest (either on standing plants or in windrows), and molding associated with rain damage cause seed color to deteriorate. This will impair sprouting quality, rendering a seed lot unusable and unsalable. Early planting and timely harvest improve the chances of getting high-quality seed and sprouts. The marketability of mung beans depends on matching seed qualities to the particular needs of the sprouter, since sprouters differ in their equipment and techniques.

**Current production and yield.** Mung beans are produced in Oklahoma, Texas, and California. Other producers include Australia, India, Thailand, and other Asian countries. Sacramento Milling, Inc., in Ordbend is a major mung bean producer in the Sacramento Valley, producing seed under contract with growers.



The 18- to 36-inch-tall mung bean plant produces clusters of 3- to 4-inch-long pods. Each pod may contain as many as 15 small seeds. (Photo: Imo Fu)

**Use.** The principal domestic use of mung beans is the production of sprouts that are commonly used in Asian cooking. Seeds are germinated in the dark at 65° to 75°F in special germinating containers by wetting the seeds every 4 to 5 hours for 4 or 5 days. Commercial sprouters can expect an eightfold sprout yield (800 lb of sprouts for every 100 lb of seed). East Indian cuisine uses mung beans for *dal* (or *dahl*), a spicy paste made from the dry seed. Mung beans can also be shelled green and used like sweet peas, or the tender immature pods can be cooked whole. The mung bean is a staple legume in many diets around the world.

## Culture

**Propagation and care.** Mung beans, like black-eye peas, are deep-rooted plants. Plants reach maturity in about 120 days. In the Sacramento Valley, growers should plant beans in May so the crop will be harvested before rain. Plant the seed 1 to 2 inches into moist, pre-irrigated ground, on 30-inch rows. Plant 3 or 4 plants per foot of row (15 to 30 pounds of seed per acre). Mung beans grow best with a few deep-penetrating irrigations. This program limits vegetative growth somewhat and forces photosynthetic partitioning to move into the seed. Generally, two or three post-emergence irrigations are adequate.

**Harvest and postharvest practices.** Mung bean pods are thin and brittle when dry, so shattering can be a problem. Harvest conditions and management often determine the success or failure of the crop. Use of a direct combine is the preferred harvest method, since it reduces seed shattering, which can be a significant factor in determining the quality of windrowed mung beans. Direct combining requires that the plant be defoliated and dried down in a timely manner. In the past, defoliant or desiccants have been used to achieve this end, but no registered chemicals are now available in the marketplace. Plants established in May will normally defoliate naturally and dry down in September.

In trials in Solano County, several fields were harvested with axial-flow combines using bean pick-up heads. The growers reported that care should be taken to adjust the cylinder speed (<500 rpm preferred, 300 rpm optimum) and the screen plates to provide as clean a product as possible. Cylinder speed and screen plates appeared to be the main limiting factors; in general, the slower the better.

If you are going to cut and windrow, cut the plants when about half of the pods have turned black. There will still be many green pods, but most will continue to mature and dry. The thick stems retain moisture well even when cut. After cutting, allow the plants to dry undisturbed until harvest. If you cut and rake the plants, take care to handle them only once: additional handling will significantly increase shatter loss. Broken, cracked, or scarred seeds will not germinate properly, and so will result in lower sprout yields.

**Pest and weed problems.** Mung beans are susceptible to many of the same diseases and insect pests as black-eye peas. Mung beans secrete a sticky sweet substance that will attract a host of insects. Lygus, which can damage seed yield and quality, must be controlled during and after flowering. Black nightshade, hairy nightshade, yellow nutsedge, and summer annual grasses create harvest and quality problems if left uncontrolled. Aphids, cucumber beetles, mosquitoes, and several types of worms are also attracted, but they appear to cause little damage.

## Sources

### Seed

W. Atlee Burpee & Co., 300 Park Avenue, Warminster, PA 18974

Park Seed Co., Cokesbury Road, Greenwood, SC 29647-0001

Sacramento Valley Milling, P.O. Box 68, Ordbend, CA 95943

Sunrise Enterprises, P.O. Box 10058, Elmwood, CT 06110-0058

### More information

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