

MUNG BEAN

Mung, Moong, Mungo, Greengram

Vigna radiata

Fabaceae

ECHO® PLANT INFORMATION SHEET

Description

Vigna radiata is an annual, erect or semi-erect legume, reaching heights up to 1.25 m. *V. radiata* produces 4-30 yellow or green flowers per cluster that become pubescent pods. Leaves are alternate and trifoliate.

Uses

V. radiata seeds are an important edible protein source across Asia and lend themselves to various and diverse preparations. Fresh seeds and young pods are often boiled and treated as any other fresh bean or pea. Dry seeds can be boiled and served in numerous ways, or prepared as a paste. Powder from ground dried seeds is used in various pastries and desserts. Noodles made from starch isolated from *V. radiata* are a common preparation in South Asia.

V. radiata is a popular option to intercrop with rice. Mung bean fixes 31-38 kg N/ha (28-34 lbN/acre) and produces 25 tons of fresh weight biomass per ha.

Common Names

- Spanish
 - habichuela mungo
 - judía mungo
- Hindi
 - म ग
 - स्वर्ण चना
- Malay
 - arta ijo
 - kacang hija
 - kacang djong
- Tagalog
 - balatong
 - mongo

Cultivation

- **Elevation** – up to 2000 m
- **Rainfall** – 500-1250 mm; drought-tolerant
- **Soil Types** – well-drained loam to sandy-loam soil; pH 4.5-8.3
- **Temperature Range** – 8-40°C
- **Day Length Sensitivity** – most varieties are short-day sensitive
- **Light** – full sun

In the monsoon tropics and sub-tropics, mung bean is mainly grown as a rainy season crop on dryland farms or as a dry-season crop after the monsoon in rice-based systems in paddy, making use of residual moisture or supplementary irrigation. In some areas where adequate early rains occur, an early-season crop can be grown before the monsoon. Mung beans are a warm season crop requiring 90-120 days of frost-free conditions from planting to maturity (depends on variety).

V. radiata recommended seeding rate is 5-30 kg/ha, depending on whether it will be the sole crop (higher rates) or if it is intercropped (lower rates). If planted in rows, seed spacing should be 25-75 cm between row and 5-25 cm within row. Since *V. radiata* is a short-duration crop, harvest can take place 90-120 days after planting, depending on the variety.

Harvesting and Seed Production

For immature pod consumption, pods should be harvested before seed expansion. Seed pods mature at different times and are prone to shattering, so harvest of *V. radiata* can be more intensive than with other pulse crops. As such, 2-5 harvests are often necessary to collect all mature seeds from crop. Once pods begin to darken, they should be carefully hand-picked to preserve seed and prevent shattering. Seeds should then be shelled and further dried for storage.

Pests and Diseases

Cercospora leaf spot and powdery mildew are common fungal diseases of *V. radiata*, as are bacterial infections by *Xanthomonas* and *Pseudomonas* species. Aphids, thrips, pod borers, and weevils are common insect pests.

High humidity and excess rainfall late in the season can result in disease problems and harvesting losses due to delayed maturity. Mung bean suffers from several virus diseases but they are not well described, except for mung bean yellow mosaic virus (MYMV), which is widespread in South Asia.

Cooking and Nutrition

Like most pulses, *V. radiata* is high in protein, often the major protein source of vegetarian cultures. Seeds contain fewer antinutritive components than most other legumes.

References

Ecocrop. 1993-2007. *Vigna radiata*. Food and Agriculture Organization, Rome, Italy. ecocrop.fao.org/ecocrop/srv/en/dataSheet?id=2150. Accessed 13 June 2019.

Heuzé V., Tran G., Bastianelli D., Lebas F., 2015. Mung bean (*Vigna radiata*). Feedipedia, a programme by INRA, CIRAD, AFZ and FAO. <https://www.feedipedia.org/node/235> Last updated on July 3, 2015

Mogotsi, K.K., 2006. *Vigna radiata* (L.) R.Wilczek. [Internet] Record from PROTA4U. Brink, M. & Belay, G. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands. <http://www.prota4u.org/search.asp>. Accessed 13 June 2019.