**MOONG/MUNG** English name :- Green gram/Golden gram Botanical name :- Vignaradiata / Phaseolus aureus **CLASSIFICATION** Class :- Equisetopsida Order :- Fabales Family :- Leguminoaceae/Fabaceae Genus :- *Vigna* species :- *radiata*

1. Moong is one of the main pulse crop of India. 2. It is a [plant](https://en.wikipedia.org/wiki/Plant) [species](https://en.wikipedia.org/wiki/Species) in the [legume family](https://en.wikipedia.org/wiki/Fabaceae). 3. Mung production is mainly (90%) situated in Asia. 4. India is the largest producer with more than 50% of world production but consumes almost its entire production. 5. China produces large amounts of Mung, which represents 19% of its legume production. 6. Thailand is the main exporter.

**DISTRIBUTION/OCCURRENCE**  1. The mung is thought to have originated from the Indian subcontinent. 2. It is probably native of India. 3. It later spread from India to China and Southeast Asia. Its cultivation in India is widespread. 3. The other mung growing countries are Africa, America and the West Indies. 4. In Indian, the main states producing moong are [Karnataka](https://en.wikipedia.org/wiki/Karnataka), Tamil Nadu, [Telangana](https://en.wikipedia.org/wiki/Telangana), Punjab, Rajasthan, [Andhra Pradesh](https://en.wikipedia.org/wiki/Andhra_Pradesh), Madhya Pradesh, Uttar Pradesh, Maharashtra etc. 5. It is a fast-growing, warm-season legume.

**NUTRITION** 1. It is a rich source of Protein along with starch, fibre, antioxidants, vitamin and a low lipid content. 2. The amino acid profile of mung has a high lysine content. 3. It also contain some minerals, Such as Calcium, Phosphorus, Magnese, Potassium, Magnesium, Copper, Zinc, Iron etc.

**BOTANICAL DESCRIPTION/STRUCTURE** 1. It is a legume cultivated for its  edible seeds. 2. It is a small, herbaceous, [annual growing plant.](https://en.wikipedia.org/wiki/Annual_plant)



**Root** :- 1. It has a well-developed root system. 2. It has a tap root system. 3. The central root is with numerous lateral branches which spread out in all directions. **Stem** :- 1. The mung plant (stem) is an erect or semi-erect, reaching a height of 1 – 3 feet. 2. It is slightly hairy. 3. The stems are many – branched, sometimes twining (tendrils) at the tips. **Leaves** :- 1. The leaves are alternate, trifoliolate. 2. It has elliptical to ovate shape, entire and large leaflets, 5 – 18 cm. long. 3. It is slightly hairy. **Inflorescence/Flower** :- 1. The flowers (4 – 30) are pale yellow or greenish in colour. 2. They are produced in cluster. **Fruit (pod)** :- 1. The fruits are in pod form. 2. The pods are long, slender (thin), cylindrical, hairy and pending. 3. They are about 3 – 4 inches long. 4. The pods contain 7 – 20 small seeds. **Seed** :- 1. The seeds are small, nearly globular, ellipsoid or cube – shaped. 2. The seeds are variable in colour, they are usually green, but can also be yellow, brown, olive (yellow - green), purplish brown or black. 3. Mung seeds are light yellow in colour when their skins are removed. 4. The seeds are mottled (roan) and ridged. 5. Seed colours and presence or absence of a rough layer are used to distinguish different types of mung.

**CULTIVATION/PLANTING** 1. It is a legume cultivated for its  edible seeds. 2. Mung can be sown alone or intercropped with other crops, such as other legumes, sugarcane, maize, sorghum etc. 3. It can be cultivated as Kharif (autumn) as well as summer crop. 4. But Moong is mainly grown as a kharif crop but in some parts of country such as Maharashtra, it is grown as winter crop. 5. Suitable time for kharif autumn moong cultivation is from March to April. 6. Suitable time for kharif summer moong sowing is July. 7. The Kharif crop is sown in June – July and Rabi crop in September – October. 8. The mung is mainly cultivated in [East Asia](https://en.wikipedia.org/wiki/East_Asia), [Southeast Asia](https://en.wikipedia.org/wiki/Southeast_Asia) and the [Indian subcontinent](https://en.wikipedia.org/wiki/Indian_subcontinent). 9. The seedbed preparation is similar to that of other pulses. 10. The soil is ploughed 2 – 3 times and harrowed. 11. Mung seeds are germinated by leaving them in water for four hours of daytime light and spending the rest of the day in the dark. 12The seeds may be sown broadcast and covered by planking or they may be drilled in rows. 13. The seeds sown in rows should have spacing between 22 – 30 cm. and the spacing between plant to plant rows is of 7 – 10 cm. 14. Seeds sown at depth of 4 – 6 cm. 15. There is no need for irrigation for the crop, since it is grown in monsoon season. 16. If needed provide irrigation depending upon the climatic conditions.
17. For summer season crop, 3 – 5 irrigations are required depending upon soil type and climatic condition. 18. For good yield stop irrigation after days 55 of sowing. 19. Flowering starts in about 60 days and the crop matures after 3 – 4 weeks of flowering. 20. It reaches maturity very quickly under tropical and subtropical conditions where optimal temperatures are about 28 – 30°C. and always above 15°C.

**HARVESTING**   1. Best time of harvesting Moong, when 85% of pods get matured. 2. High moisture during maturity may spoil the seeds before harvesting. 3. Over – ripening of pods should be avoided because they destroy the dry pod. 4. Mung crops grown for seeds are generally harvested when pods begin to darken. 5. Harvesting is done with sickle. 6. After harvesting carried out to threshing floor and dried. 7. Once pods have dried, the seeds are removed by bullock or by beating. 8. The seeds are cleaned by winnowing and dried in the sunshine.

**ECOLOGICAL FACTOR Climate** :- 1. It is one of the hardy (tolerate bad weather) pulse crop. 2. It can be grown in both irrigated and rainfed areas. 3. It is sensitive to waterlogging. 4. It grows best in the temperature 25°C - 35°C. 5. It requires a rainfall of 25 – 35 inches. 6. Heavy showers at flowering time cause great damage. 7. Even damp (moist) winds at flowering stage effect the fertilization. **Soil** :- 1. It can be cultivated on wide range of soil. 2. It grows best on well drained loamy to sandy – loam soils. 3. Saline and water logged soils are not suitable for cultivation. 4. The soil having pH 5 – 8 is suitable for moong. 5. It is somewhat tolerant to saline soils

**SOME VARIETIES OF MOONG** 1. Several varieties of moong are cultivated throughout the world.  2. Some of the varieties are :- SSL – 1827, ML – 2056, ML – 818, PS – 7, PS – 10, PS – 16, S – 8,Jawahar – 45, Vishal, Pusa Baisakhi, Mohini etc. 3. Some of the varieties are developed by I.A.R.I., which can be intercropped with Maize, Sorghum and Bajra without affecting productivity any one of them. 4. The varieties PS – 10, PS – 7, and PS – 19 are specially suitable for cultivation during summer month. 5. The variety S – 8 gives good yield during the kharif season.

**USES** 1. It is used as [dal](https://en.wikipedia.org/wiki/Dal). 2. Because of their high nutrient density, mung are considered useful in defending against several chronic (old) and age related diseases including heart disease, diabetes, blood pressure and obesity (fatness). 3. It is used as an ingredient in both salty and sweet dishes. 4. Mung are commonly used in cuisines (restuarant) across Asia. 5. It is used to make a variety of [dosa](https://en.wikipedia.org/wiki/Dosa). 6. It is a staple diet in some parts of the Middle East with rice. 7. Mung is used to make noodles. 8. Several mung products are useful for livestock feeding. 9. It is a high value resource for poultry feeds.

JANARDAN PRASAD SINGH VISTHAPIT MAHAVIDYALAYA, BALIDIH DEPARTMENT OF BOTANY