

COMMON BEAN

Common bean, garden bean, green bean, pole bean, kidney bean

Phaseolus vulgaris

Fabaceae

ECHO® PLANT INFORMATION SHEET

Description

Phaseolus vulgaris is a vining (indeterminate) or bush-type (pseudo-determinate) herbaceous annual. Vining types are perennial and reach 2-5 m in length. Bush-types are annuals and reach heights of 20-60 cm. Pubescent leaves are trifoliate, present alternately on the stem, and range from green to purple in color. Inflorescence can reach 15-35 cm in length and bear white-to-purple flowers. Green or yellow pods reach lengths of 20 cm, can be straight or curved, and contain 4-12 seeds each. Seeds are kidney-shaped, and can be one of many colors: white, red, green, brown, purple, black, or speckled.

Uses

P. vulgaris seeds and young pods are a common edible pulse globally. Young pods can be eaten fresh; mature seeds should be dried for storage. Biomass can be utilized as fresh forage for livestock, or preserved as silage or hay. *P. vulgaris* is a nitrogen-fixing legume, though not as efficient as other species.

Common Names

- Korean
 - 콩
- Malay
 - boncis
 - kacang buncis
 - kacang mérah
 - kacang pendek

Cultivation

- **Elevation** - up to 3000 m
- **Rainfall** - 300-4300 mm
- **Soil Types** - 4-9 pH; well-drained soils
- **Temperature Range** - 15-23°C
- **Day Length Sensitivity** - cultivar dependent: some are insensitive, and some cultivars require day lengths less than 12 hours to flower
- **Light** - prefers full sun

Common beans do particularly well in the tropics when planted at elevations between 1,000-3,000m (3,280-9,842 ft.) and when the soil temperature is over 10°C (50°F). At lower elevations it's best to plant during the cool-dry season.

Seeds should be directly sown 3-4 cm deep in the field at spacings of 20-30 cm within-row and 60-100 cm between-row. Vining cultivars should be allowed greater space if no trellis structures are provided.

Harvesting and Seed Production

Annual, bush-type cultivars mature and are ready to harvest 60-90 days after planting. Perennial, vining cultivars mature and are ready to harvest 250-300 days after planting; they can be grown as annuals, with biomass cut and left in place or used as fodder. Young pods and fresh seeds can be harvested earlier. Harvest yields are generally greater for vining types than for bush cultivars. Fodder can be harvested through regular pruning of vining cultivars.

Pests and Diseases

P. vulgaris is highly susceptible to pest and disease pressure. Fungal diseases include angular leaf spot and anthracnose. Common bacterial blight and halo blight are prevalent bacterial diseases common to *P. vulgaris*. Bean common mosaic virus (BCMV) is common, as are: bean rust, Ascochyta blight, powdery mildew, and web blight. Common pests are bean flies, cutworms, caterpillars, thrips, pod borers, and aphids.

Cooking and Nutrition

Young seeds and pods can be cooked in stir-frys and soups. Mature seeds should be soaked and cooked for utilization in soups and stews, or dry seeds can be made into flour for pastries and porridges. As with most beans, adequate cooking is necessary to eliminate antinutrients.

References

Heuzé V., Tran G., Nozière P., Lebas F., 2015. *Common bean (Phaseolus vulgaris)*. Feedipedia, a programme by INRA, CIRAD, AFZ and FAO. <https://www.feedipedia.org/node/266>. Accessed 8 November 2019.

Wortmann, C.S., 2006. **Phaseolus vulgaris** L. (common bean) 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 8 November 2019.