

ECHO Asia Seed Fact Sheet

Scientific name – *Vigna unguiculata* ssp. *sesquipedalis*

English common name – Asparagus bean, Bodi bean, Chinese long bean, Yard long bean

Asian common names – (from Multilingual Multiscript Plant Name Database

<http://www.plantnames.unimelb.edu.au/Sorting/Vigna.html#unguiculata-sesquipedalis>)

- Cambodian: Sândaèk troeung
- Chinese: 豆角 Dou jiao, 长豇豆 Chang jiang dou (medicinal name), 长青豆角 Chang qing dou jiao
- Indonesia: Kacang panjang, Kacang tolo, Kacang belut
- Japanese: ジュウロクササゲ Juuroku sasage
- Khmer: Sândaèk troeung
- Malay: Kacang bêlut, Kacang panjang
- Tagalog: Sitaw, Sita
- Thai: ถั่วฝักยาวลาย Tua fak yaow lai, Tua phnom
- Vietnamese: Đậu đũa (Dâu dũa, Dâu giai áo)



Variety –

- **Kachin:** A local variety with green and purple-speckled pods and white seeds with black spots, 25 cm long. Preferred for its soft texture and sweet flavor.

General description and special characteristics – Yard long bean most likely originated in southern China. It is a legume closely related to the common cowpea, typically cultivated for its edible immature pods. The pods hang in pairs and can be between 30 and 90 cm in length, although generally not much longer than 30cm. Today it is mostly cultivated in India, Bangladesh, and Southeast Asia. The majority of production in Southeast Asia comes from smallholder farms. Although it can be grown in temperate regions, it will not produce fruit.

Crop uses (culinary) – The young green or purple pods, the ripe seeds, the leaves, and the young stems are all edible. The crisp, tender pods are eaten both fresh and cooked. They are at their best when young and slender and are said to have a ‘melting’ texture, often served fresh alongside spicy dishes. They are sometimes cut into short sections (2.5-5cm) for cooking uses. They should be stir-fried or boiled rather than steamed, which tends to make them soft. They cook rapidly and make excellent bean salads. As a West Indian dish, pods are often stir-fried with potatoes and shrimp. In Malaysia, they are often stir-fried with chili and shrimp paste. In China, the young pods are also pickled.

The leaves and young stems can be steamed and served with dressing. Fresh leaves contain 2-3% protein and traces of calcium, phosphorus, and iron. Dry seeds are cooked with meat or fish.

Crop uses (other) – In hot climates, the yard long bean is also used for green manure, a forage crop, and as a cover crop.

Seasons of production – To germinate well, the soil should be warm at planting (minimum 20-22°C/68-72°F, with an optimum range between 20-35°C). A short-day plant, yard long bean is best planted during the period of decreasing day-length. It will typically flower and form pods after the rainy season.

Length of production and harvest period – Yard long beans begin flower production 5 weeks after planting, and fruit production begins 2 weeks later in warm humid climates. Beans will hang in groups of two or more, and can be picked less than 3 months after sowing.

Pollination – Yard long bean flowers are self-pollinated, although a small proportion of outcrossing occurs, especially in more humid climates.

Plant spacing – Seeding rate is 25-50 kg/ha. Yard long bean is established in rows 75-100 cm apart with hill-to-hill spacing of 20-25 cm. Plant population density is 60,000-70,000 plants/ha.

In backyard production, sow about 2.5 cm deep, spacing 25 cm apart on all sides or 7 cm apart in rows 45 cm apart. Two or three seeds can be sown in each hill, thinning to the two best after germination.

Production methods – The majority of yard long bean varieties are climbing, growing up to 3-4 m high. The Kachin variety will need support, such as climbing frames, canes, or trellises, to allow them to reach their maximum height. Plants should be staked when 25-30 days old.

In China and other parts of Asia, they are often grown on poles straddling an irrigation ditch or rice bund, or as a backyard crop. Similarly to cowpea, yard long bean is sometimes intercropped with maize, sugar-cane, or cassava, which can give them necessary support. Near cities, smallholders may grow it as a sole crop.

Yard long beans fix nitrogen and, in general, require little to no fertilization. It can be a beneficial part of a crop rotation system. Yield of green pods of yard long bean is 6-8 t/ha.

Known environmental conditions for production – Yard long beans thrive in hot humid climates, preferably with full sunlight, with daytime temperatures of 20-35°C. Beans will grow and produce poorly in the mid-elevation tropics or in temperate climates.

Yard long bean can be grown in areas with relatively little rainfall. It can be grown as a rain-fed crop or use residual moisture in the soil after harvest of a rice crop. It is rarely irrigated.

Known soil requirements – Yard long bean will tolerate acidic and relatively poor soils, but prefers deep, fertile, well-drained loam.

Known pests – Serious pests may attack yard long beans and include aphids, leaf hoppers (*Empoasca* spp.), beanfly (*Ophiomyia phaseoli*), red spider mite, and storage weevils. Control measures include cultural control methods and natural pesticides. Some losses also occur from nematodes like root-knot nematodes (*Meloidogyne* spp.) and reniform nematodes (*Rotylenchulus* spp.). Control measures include crop rotation and fallowing the land.

Seed saving – As older pods become tough and unsuitable for eating, they will contain seeds that may be sun-dried on racks for saving. Seeds are usually 8-12 mm long. After threshing and cleaning, seed should be thoroughly dried to a moisture content of 14% or less before being stored.

References -

"Asparagus/Yard long bean." *ECHO Plant Information Sheet* (2006): Web. 28 Mar 2013.
http://c.ymedn.com/sites/www.echocommunity.org/resource/collection/59800F4C-2723-4074-9CA3-DB23AA9F576A/Vigna_unguiculata_YardlongBean.pdf

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