ECHO Asia Seed Fact Sheet

Scientific name – *Vigna unguiculata*

English common name – cowpea, southern pea, black-eyed-pea, crowder, cream or conch

Asian common names – (from Multilingual Multiscript Plant Name Database http://www.plantnames.unimelb.edu.au/Sorting/Vigna.html#unguiculata-unguiculata)

- Chinese: 豇豆 (jiang dou)
- Hindi: लोबिया chauli, Lobia
- Japanese: ササゲ sasage
- Khmer: sândaêk kâng, sândaèk ângkuy
- Lao: thwàx do
- Malay: kacang bol, kacang merah, or kacang toonggak
- Thai: ถั่วดำ, tua dam
- Vietnamese: dôu den, dôu trang, or dôu tua

Varieties –

- **Chiang Dao –** A viney cowpea with pods approximately 20cm (8in.) long and vines shorter than 1 m. It takes four months to grow to maturity, and fixes approximately 80kg N/ha.
- **Lahu/Mae Ai –** A bush variety with a grayish seed that shows good resistance to disease.
- **Samoeng –** A short, creeping vine with black seed. Often intercropped with upland rice, its plump pod is considered better tasting than the Lahu variety by ECHO Asia Seed Bank staff.

General description and special characteristics – Cowpea is an indeterminate, drought-tolerant, bushy annual that is useful for forage and as an edible pulse. A native to central Africa, this legume can be used as a green manure and is a good control for soil erosion due to its rapid growth. Cultivated cowpeas in Asia are of three types: grain, vegetable (yard-long bean and bush sitao), and fodder. The grain and fodder types are prevalent in India, while the vegetable type is prevalent in China and Korea. It is a major component of traditional farming systems, normally planted after rice is harvested from paddies.

Crop uses (culinary) – Cowpea can be eaten as a leafy vegetable and its seeds eaten green or dried. Young pods can also be eaten like green beans. Generally it is best to grow short-duration varieties for grain. In southern India, the beans are called *thatta kaai* and are an integral part of the regional cuisine. In Tamilnadu, cooked and mashed cowpeas are combined with jaggery, ghee and other ingredients to make cake-like sweets.

Crop uses (soil improvement) – In northern Thailand, cowpea is intercropped with upland rice and can be grown to improve very poor acidic soils. In Pakistan, cowpea has tremendous potential as a pre-rice crop in the rice-growing areas of Punjab province. The practice of cereal-cowpea intercropping and crop rotation coupled with effective soil fertility management can increase yields of cereals succeeding cowpea. Cowpea can fix up to 88 kg N/ha (Fatokum; et.al. 2000: pp. 301-318); in an effective cowpea-rhizobium symbiosis, more than 150 kg/ha of N is fixed, which can supply 80-90% of plants' total N requirement.

Crop uses (livestock production) – Long-duration varieties are best grown for fodder.

Seasons of production – Cowpea grows best during both hot and rainy seasons. In rain-fed Southeast Asia, cowpea is usually grown after rice when soil moisture is limited. Early-maturing cultivars are sown in late April to early May, with the harvest at the end of June or early July, before rice is transplanted.

Length of production and harvest period – Cowpea yields mature green peas in 60-90 days. Harvesting of leaves can begin about 30 days after planting.

Production methods – Seed inoculation is advisable only if cowpea is being grown for the first time in the area. In most soils, native rhizobium strains can nodulate the plants. In general, fertilizer application is not employed. With proper crop management, application of compost or farm manure can increase the yield of cowpea.

Plant spacing – Establish seedlings at least 10-15cm apart.

Pollination – Cowpeas are considered self-fertile but a high percentage of cross-pollination occurs. The flowers open early in the morning, close before noon and fall the same day.

Known environmental conditions for production – Cowpeas tolerate hot dry conditions and can be grown with less rainfall and under more adverse conditions than *Phaseolus vulgaris* and *Phaseolus lunatus*.

Known soil requirements – Cowpea is not particular with soil; it will thrive where soil is well drained, properly inoculated, and moderately rich in lime.

Known pests – According to the University of Florida IFAS extension (http://edis.ifas.ufl.edu /in516 and http://edis.ifas.ufl.edu/in380), the primary pests in cowpea production are root-knot nematode (*Meloidogyne incognita*) and cowpea curculio (*Chalcodermus aeneus* Boheman).

Seed saving – Cowpea seed may be harvested when most pods have dried and turned brown. The plants can be pulled up by hand, left in the shade to dry until all pods are brown, then beaten on a tarp to release the seeds. They can also be mechanically harvested. Cowpea seed may be stored up to five years if kept cool and dry. Stored seeds must have a moisture content of 14% or less.

References –

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