Scientific classification

Kingdom: Plantae

Angiosperms

Eudicots

Rosids

Order: Fabales

Family: Fabaceae

Genus: *Cajanus*

Species: ***C. cajan***

Binomial name

Cajanus cajan (L.) Millsp.

Varieties:

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Scientific cultivation of Pigeon Pea (Arhar)

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Technical

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The cultivation of the pigeon pea goes back at least 3500 years. The centre of origin is the eastern part of peninsular India . Pigeon peas are widely cultivated in all tropical and semitropical regions of both the old and the New Worlds. Pigeon peas can be of a perennial variety, in which the crop can last three to five years (although the seed yield drops considerably after the first two years), or an annual variety more suitable for seed production.

Pigeon peas are an important legume crop of rainfed agriculture in the semi-arid tropics. The Indian subcontinent, Eastern Africa and Central America, in that order, are the world's three main pigeon pea-producing regions. Pigeon peas are cultivated in more than 25 tropical and subtropical countries.

Moisture: As a crop, pigeon pea is very drought tolerant, able to grow with a dry season exceeding 6 months, and rainfall <300 mm, but does best with 600–1,000 mm AAR , and where elevated, in excess of 2,000 mm. Less suited to the humid tropics with poor tolerance of wet soils or flooding.

Temperature: Pigeon pea is very tolerant of hot conditions; grows in temperatures >35ºC when soil moisture and fertility are adequate, but generally grown in temperatures of 18–30ºC. It can grow at altitude but growth is slowed by low temperature . Leaf cannot tolerate frost but may escape a light ground frost due to its height.

Fertilizer: Although a nitrogen fixing species, fertiliser is recommended at levels of 20–25 kg/ha N. Phosphorus is the most limiting factor for pigeonpea and applications of 17–26 kg/ha P can increase seed yield by 300-600 kg/ha. Most of the pigeonpea cultivars are susceptible to zinc deficiency. Applications of 2–4 ppm zinc as 0.5% zinc sulphate with 0.25% lime have been effective to over-come zinc deficiencies.

Disease & Pest: Susceptible to *Fusarium* wilt especially on wet soils. Seedpods and developing seed are severely attacked by *Heliothis*, pod borers (*Lycaena boetica*) and other caterpillars. Seeds are relatively soft and attacked by bruchid weevils during storage. Some reported resistance to root-knot nematodes, but resistance varies between cultivars.

Nutritive value: High quality leaf (10–15% crude protein), especially when developing seedpods are mixed with the edible stem fraction. Recent work on leaf fed to sheep in India indicated that older leaves have a higher nutritional value and sheep fed on young foliage did not gain weight as expected. However, threshing waste was an extremely nutritious feed for sheep.