

Harvesting

Most of the seed pods are picked by hand, although mechanical harvesting can be used. The mature crop is harvested by cutting the entire plant with a sickle. The pods may be hand picked at maturity when a second ratoon crop is needed.

Uses

Human uses

It is used primarily as a vegetable food crop that serves as a source of protein, carbohydrates and other minerals. The flavoursome seeds are eaten both in fresh, shelled, dried and flour form.

Animal consumption

Pigeon peas are an excellent form of fodder that can be used for animal feed.

Other uses

Pigeon peas are essential to nitrogen fixation and good for intercropping and crop rotation. The branches and stems can be used for baskets and fuel. It can also be used as a shadow crop, windbreak, cover crop, traditional medicine and green manure for vegetables.

Acknowledgement

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Pigeon peas

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REPUBLIC OF SOUTH AFRICA

Scientific name: *Cajanus cajan*

Common names: Lothlodi, Ndozi, Duiifert, Udali,
Dithlodi

Background

Pigeon peas originated in India and appeared about 2000 BC in West Africa, which is considered their second major centre of origin. Pigeon peas are currently wide spread throughout the tropics and subtropics. They are cultivated in India, Malaysia, Indonesia, the Philippines, Caribbean, East and West Africa.

Production areas

Limpopo Bohlabela district, Mopani district
Mpumalanga Gert Sibande, Enkangala, Ehlanzeni

Agronomic requirements

Climatic requirements

Pigeon peas grow well in temperatures of between 18 and 29 °C. The plants are sensitive to waterlogging and frost.

Soil requirements

The crop grows well in all types of soils, varying from sandy to heavy loams, with well-drained, medium heavy loams being best. It requires a pH ranging from 5,0 to 7,0.

Rainfall

It is one of the most drought tolerant and frost intolerant legume crops, with a wide range of rainfall intolerance, but prefers optimal rainfall ranging between 400 and 750 mm per annum. In dry areas with less than 600 mm annual rainfall, it even produces seed abundantly, as the crop matures early and the incidence of pest damage is low. Pigeon pea prefers moist conditions for the first two growing months, drier conditions during flowering and harvesting.

Cultural practices

Propagation

It is best established by direct seeding in a well prepared field. Seed inoculation is not usually needed but if inoculating, a cowpea group strain of *Rhizobium* can be used.

Soil preparation

It thrives best in seed bed prepared by deep tillage to reduce weeds. Primary tillage in the autumn assists the soil to dry and warm up faster in spring and makes earlier seeding possible.

Planting

Seeds can be sown from 2,5 to 10 cm deep, the deeper figure being in hand dibbling. Seeds can be broadcasted at a seed rate of 45 to 67 kg/ha or at least a maize planter can be used for seeding.

Fertilisation

A plant shows little response to nitrogen fertilisers and usually to phosphorus and requires enough calcium, potash and magnesium. The plant has to be inoculated with *Rhizobium* to enhance nitrogen fixation. Pigeon pea can be used as a green manure crop.

Irrigation

It is one of the most drought tolerant legume crops, with a wide rainfall tolerance. In dry areas with less than 400 mm annual rainfall, water can be supplemented by irrigation for the first two growing months, and during flowering to harvest-

ing the irrigation should cease to reduce damage by pests and diseases.

Weed control

Pigeon pea is very sensitive to weed competition in the first 45 to 60 days of growth because of its slow initial growth rate. Effective weed control at the early growth stages of the crop is one of the most important factors contributing to high yields, especially during the first 4 to 8 weeks.

Pest and disease control

Insect pests and diseases have negative impact on pigeon pea productivity; also leading to poor quality seed. Pests and diseases reduce the plant stand; however, these can be controlled by the use of pest resistant cultivars, crop rotations, weed removal, inoculation with the cow pea group strain of *Rhizobium* and intercropping with cereals.

