

commonly known as Red gram *Cajanus cajan* (L.) Millsp.

Leguminosae family

Predominantly self-pollinating, 2X, 2n=22, 1C=858Mbp

Grown in approximately 50 countries in Asia, Africa and the Americas, mostly as an intercrop with cereals

Pigeonpea (Area, production, productivity)

Pigeonpea ranks sixth in area and production in comparison to other grain legumes such as beans, peas, and chickpeas, it is used in more diverse ways than others

It is now widely grown in the Indian subcontinent that accounts for almost 90% of the world's crops. Other regions where pigeonpea is grown are Southeast Asia, Africa, and the Americas. There is substantial area of pigeonpea in Kenya, Uganda, and Malawi in eastern Africa, and in the Dominican Republic and Puerto Rico in Central America. In most other countries pigeonpea is grown in small areas and as backyard crop. Globally, pigeonpea has recorded a 43% increase since 1970. It is currently grown on 4.3m ha.

Mostly consumed as split dhal, but is also consumed as a green vegetable in many countries. Recently, its use as a fodder crop has increased. Seed and fodder contain approx. 20-22% protein.

In India:

Grown on 3.8M ha (85-90% world's cultivation)

Area increased from 2.2M ha (1.7 tons) in 1950/1 to 3.8M ha (2.9M tons) in 1996/7

Productivity dropped from 780 to 753 kg/ha in same period

Productivity average is 647 kg/ha

Productivity in Andhra Pradesh is 330 kg/ha

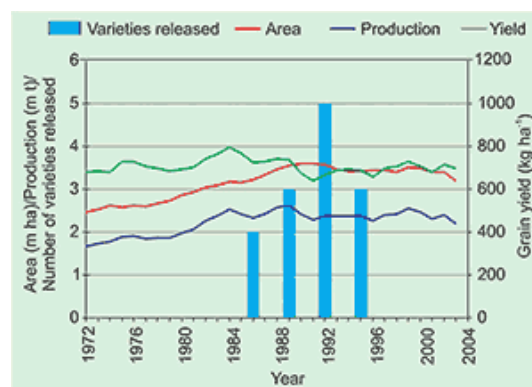
Domestic consumption projected at 3.4M tons

Area, Production, Productivity

Globally, pigeonpea area has recorded a 43% increase since 1970. It is currently grown on 4.3 m ha.

Asia

- India is the largest producer with 3.2 m ha, followed by Myanmar (5,80,000 ha), China (60,000 ha) and Nepal (28,000 ha).



- Adoption of disease-resistant varieties is high in these countries, particularly in India.
- Short-duration pigeonpea varieties fit in well with wheat rotation in northern India, providing greater diversity in the cropping system.
- In Asia, between 1972 and 2003, pigeonpea recorded
 - 57% increase in area (2.44 to 3.81 m ha)
 - 61% increase in production (1.72 to 2.77 m t)

China

- Research was revived in 1998 and at present pigeonpea is grown on 60,000 ha in southern China.
- Pigeonpea is used for soil conservation, food and fodder.
- ICRISAT varieties have shown high adaptation in different agro-ecological zones in China. In 2003 six pigeonpea varieties were released for cultivation.

Africa

- In Africa, pigeonpea is grown on 0.42 m ha.
- It is an important export crop of Kenya, Tanzania, Malawi, Uganda and Mozambique.
- Wilt resistant and short-duration varieties are increasingly becoming popular with farmers.

In Africa between 1970 and 2000, pigeonpea recorded

in Africa between 1972 and 2003, pigeonpea recorded

- 66% increase in area (0.26 m ha to 0.42 m ha).
- 96% increase in production (0.13 m t to 0.26 m t).

Hybrid Technology

- To increase the crop's productivity, hybrid technology was developed by ICRISAT with its partners and the world's first pigeonpea hybrid –ICPH 8 – was released in 1991.
- Cytoplasmic nuclear male-sterility (CMS) systems have been developed at ICRISAT using three wild relatives of pigeonpea.
- A large number of diverse seed parents and fertility restorers with important agronomic traits including disease resistance have been developed.
- New CMS-based hybrids, exhibiting 20-30% yield advantage over pure line cultivars have been identified.
- The CMS-based hybrid cultivars technology has been shared with six private sector seed companies and public sector institutions.

Cultivars Released

Forty-five cultivars based on improved germplasm developed by ICRISAT have been released in several countries of Asia (32), Africa (7) Australia (3) and USA (3). The short-duration types and disease resistant cultivars have made a significant impact in these countries.