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# Pigeonpea Variety ICP 9145

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- **Fusarium wilt resistant**
- **High yielding**
- **Suitable for Malawi and other eastern African countries**
- **Shorter duration than local landraces**
- **Large pods with large white seeds**
- **Suitable for sole cropping and intercropping**
- **Suitable for dry areas**
- **Uniform maturity of pods**



**ICRISAT**

**Plant Material Description no. 48**

International Crops Research Institute for the Semi-Arid Tropics  
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ICP 9145 is a long-duration, fusarium wilt resistant, high-yielding, and dual-purpose pigeonpea variety released in Malawi in 1987. It is the first wilt-resistant pigeonpea variety released in Africa.

## Origin and Development

ICP 9145 is a landrace collected from Kenya during an ICRISAT germplasm exploration in 1976. It was identified as a wilt-resistant accession during a germplasm screening trial in wilt-sick plots at ICRISAT, Patancheru, in the 1979/80 season. It was tested in wilt-sick plots at 20 different locations in India, Kenya, and Malawi during the 1980/81-1992/93 seasons (Table 1).

**Table 1. Fusarium wilt incidence (%) in wilt-resistant pigeonpea cultivar ICP 9145 and the susceptible control ICP 2376 at different locations in India, Kenya, and Malawi, 1980/81-1992/93 cropping seasons.**

Location	No. of seasons tested	Mean wilt incidence (%)	
		ICP 9145	ICP 2376
<b>Kenya</b>			
Katamani	2	0	72 (43-100) <sup>1</sup>
<b>Malawi</b>			
Bvumbwe	2	0	96 (91-100)
<b>India</b>			
Akola	1	23	100
Annigeri	1	73	100
Badnapur	6	24 (3-58)	90 (50-100)
Baruch	1	35	80
Delhi	1	30	100
Dholi	6	24 (13-46)	71 (53-100)
Gulbarga	5	31 (10-68)	95 (82-99)
Gwalior	2	44 (33-55)	98 (96-100)
Jabalpur	1	23	80
Jalna	1	55	90
Kanpur	6	27 (0-72)	76 (48-99)
Patancheru	7	10 (0-20)	91 (72-100)
Pudukkottai	5	22 (6-49)	37 (10-92)
Rahuri	6	29 (7-61)	100
Ranchi	2	5 (0-9)	36 (15-56)
Sehore	3	34 (16-57)	58 (33-86)
Vadodara	2	4 (2-5)	98 (96-100)
Varanasi	1	30	100
Mean across locations		29	83

1. Figures in parentheses indicate the range of wilt incidence (%) in different seasons in a particular location.

## Synonyms

JM 2397, Nandolo wa nsawawa.

## Plant Characters

The plants of ICP 9145 are compact, indeterminate, and tall (215 cm). The stem is green and leaves are large, broad, thick, and dark green. The flowers of ICP 9145 are ivory-colored, pods are long, green with purple streaks, and are borne in clusters at the branch terminals. There are 4-5 seeds in a pod. At Patancheru, India (18°N 78°E), it takes about 160 days to achieve 50% flowering and 250 days to reach maturity.

## Seed Characters

The seeds are large with a 100-seed mass of 15.6 g. They are round and white with mottles on the surface.

## Performance

When the landrace ICP 9145 was first tested at ICRISAT, Patancheru, it showed 8% wilt incidence compared with 98% in the susceptible control ICP 2376. In Kenya and Malawi, it showed no wilt incidence in the two locations where it was tested. Its performance in the Indian locations was variable; while the disease incidence was low at Vadodara (4%), Ranchi (5%), and Patancheru (10%), it was high at Gwalior (44%), Jalna (55%), and Annigeri (73%). Wilt incidence ranged from 23 to 35% in the remaining 12 locations tested.

ICP 9145 has desirable seed and pod characteristics and high consumer acceptability in Malawi. It has become popular in the last 5 years: 20% of the total pigeonpea cropped area in the country is under this cultivar. During surveys carried out in the 1991/92 season, wilt incidence was not observed in ICP 9145 in any of the farmers' fields visited. Because its duration is shorter than the local landraces by about a month, it can escape terminal drought when sown late especially in dry areas. The uniform maturity of its pods makes it convenient for harvesting. It appears to be more susceptible to *Macrophomina stem canker* (*Macrophomina phaseolina*) and root-knot nematode (*Meloidogyne* sp) than local landraces in Malawi.

## **Plant Material Descriptions from ICRISAT**

Leaflets in this series provide brief descriptions of crop genotypes identified or developed by ICRISAT, including:

- germplasm accessions with important agronomic or resistance attributes;
- breeding materials, both segregating and stabilized, with unique character combinations; and
- cultivars that have been released for cultivation.

These descriptions announce the availability of plant material, primarily for the benefit of the Institute's cooperators. Their purpose is to facilitate the identification of cultivars and lines and to promote their wide utilization. Requests should be addressed to the Director General, ICRISAT, or to appropriate seed suppliers. Stocks for research use issued by ICRISAT are sent to cooperators and other users free of charge.

ICRISAT is a nonprofit, scientific, research and training institute receiving support from donors through the Consultative Group on International Agricultural Research. It serves as a world center for the improvement of grain yield and quality of sorghum, pearl millet, finger millet, chickpea, pigeonpea, and groundnut, and acts as a world repository for the genetic resources of these crops. The plant materials announced in these leaflets are end-products of this work, which is aimed at enhancing the agricultural productivity of resource-poor farmers throughout the semi-arid tropics.