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# Chickpea

## Desi Variety ICCV 7

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- **Resistant to pod borer (*Heliothis armigera*)**
- **High-yielding under high pest incidence**
- **Matures in 90-100 days**
- **Excellent donor parent for resistance to *Heliothis* pod borer**



**ICRISAT**

**Plant Material Description no. 13**

International Crops Research Institute for the Semi-Arid Tropics  
Patancheru, Andhra Pradesh 502324, India

1988

## Purpose of Identification

The variety is a very good source for *Heliothis* resistance and was identified as a donor parent for use in breeding programs by the All India Coordinated Pulses Improvement Project (AICPIP) in 1985.

## Origin and Development

ICCV 7 originated from a cross of H 208 (ICC 4954) and BEG 482 (ICC 4923) in 1973/74. A single-plant selection was made in the F<sub>2</sub> generation in 1974/75 and continued by the pedigree selection method up to the F<sub>5</sub> generation in 1977/78, when it was bulked. It was then tested in the unsprayed blocks at ICRISAT Center in 1978/79 and 1979/80, after which it was identified as being resistant to *Heliothis* damage. It was contributed to entomological trials of the All India Coordinated Pulses Improvement Project (AICPIP) in 1980/81 as ICCX 730008-8-1-1P-BP-8EB.

**Synonym.** ICCX 730008-8-1-1P-BP-8EB.

## Performance

In the trials conducted in insecticide-free areas of ICRISAT Center over 7 years from 1979/80 to 1985/86 it showed consistently low borer damage (average 6.1%) as compared with the check cultivar Annigeri (average 17.9%, Table 1). It was thoroughly tested in the AICPIP entomological trials from 1980/81 to 1984/85. On an All India basis, also, it maintained its consistency in low borer damage over years and locations (Table 2). Consequently, it was identified as a source of *Heliothis* resistance for use in the national breeding programs in India. Its yield potential under unsprayed conditions is slightly better than the check cultivar (Table 1).

**Table 1. Pod borer damage by *Heliothis armigera* (%) in ICCV 7 and Annigeri, ICRISAT Center, 1979/80-1985/86.**

	1979/ 80	1980/ 81	1981/ 82	1982/ 83	1983/ 84	1984/ 85	1985/ 86	1985/86		
								Average (t ha <sup>-1</sup> )	DF 50% <sup>1</sup>	
ICCV 7	5.7	7.3	4.9	2.9	11.1	2.3	8.2	6.1	1.05	45
Annigeri (check)	15.8	17.7	15.4	6.1	29.4	15.0	26.0	17.9	0.85	46
SE	±1.34	±1.27	±1.51	±2.30	±3.23	±2.45	±2.67	±0.105		

1. DF 50% = Days to 50% flowering after sowing.

**Table 2. Borer damage to pods (%) and seed yield ( $t\ ha^{-1}$ ) in ICCV 7 and the check cultivar in AICPIP entomological trials at different locations from 1980/81 to 1984/85.**

	1980/81				1981/82				1982/83					
	IC <sup>1</sup>		Coimb. <sup>2</sup>		IC		Coimb.		IC		Badnapur		Kota	
	BD%	Yield	BD%	Yield	BD%	Yield	BD%	Yield	BD%	Yield	BD%	Yield	BD%	Yield
ICCV 7	7.3	1.57	1.9	0.36	4.9	0.69	7.7	-	2.9	0.82	1.6	-	1.3	0.73
Annigeri (check)	17.7	1.51	10.2	0.46	15.4	0.11	9.6	-	6.1	1.24	3.7	-	2.7	1.47
SE	$\pm 1.27$	$\pm 0.061$	$\pm 1.56$	$\pm 0.115$	$\pm 1.51$	$\pm 0.074$	-	-	$\pm 2.3$	$\pm 0.163$	-	-	-	-

*Continued.*

	1983/84				1984/85				Average					
	IC		Badnapur		IC		Badnapur		Akola		Gulbarga			
	BD%	Yield	BD%	Yield	BD%	Yield	BD%	Yield	BD%	Yield	BD%	Yield		
ICCV 7	16.2	0.63	5.7	1.13	4.2	1.31	9.0	0.99	7.1	1.08	2.5	0.59	5.6	0.90
Annigeri (check)	35.0	0.49	6.2	1.06	9.3	0.86	15.0	0.97	6.4	1.67	7.8	0.66	11.2	0.95
SE	$\pm 4.05$	$\pm 0.062$	-	-	$\pm 1.55$	$\pm 0.166$	$\pm 2.55$	$\pm 0.099$	$\pm 1.29$	$\pm 0.236$	-	-	-	-

1. IC = ICRISAT Center, Patancheru.

2. Coimb. = Coimbatore.

## Plant Characters

ICCV 7 is a semispreading variety with moderate plant height (30-40 cm) and predominantly apical branching. Like most desis, the plants are green with anthocyanin pigment present on all aerial parts, and the flowers are pink. It has compound leaves with leaflets of medium size.

It is early maturing and takes 45 days to flower and 90-100 days to mature in peninsular India. ICCV 7, however, is susceptible to wilt (*Fusarium oxysporum*), like most other *Heliothis-resistant* lines.

## Seed Characters

Seeds of this variety are light brown and the 100-seed mass is 14.3 g.

### 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 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.

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