

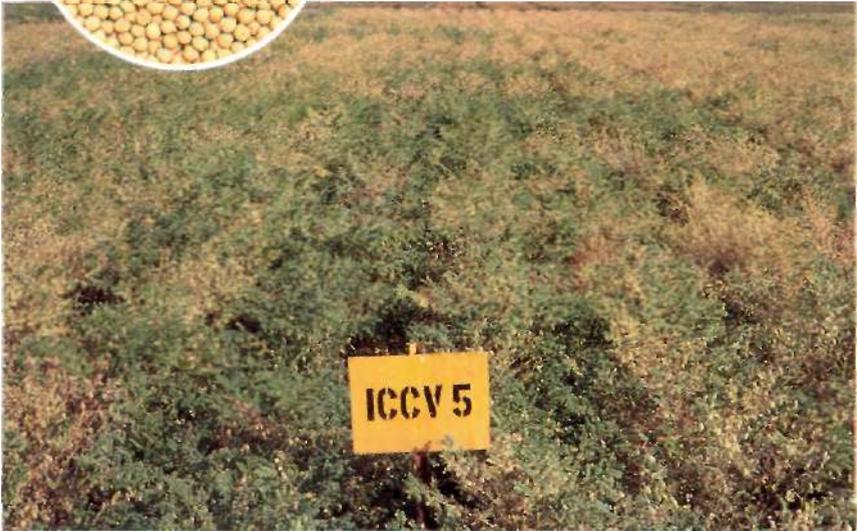
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# Chickpea

## Kabuli Variety ICCV 5

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- High yielding
- Wilt resistant
- Short-duration, matures in 100 days
- Adapted to normal and late sowing
- Medium large seed
- Commands a sales price premium



ICRISAT

**Plant Material Description no.23**

International Crops Research Institute for the Semi-Arid Tropics  
Patancheru, Andhra Pradesh 502 324, India

1990

## **Purpose of Identification**

This is a high-yielding, short-duration, wilt-resistant kabuli variety suitable for peninsular and central Indian environments.

## **Origin and Development**

ICCV 5 was derived from the cross, C 104 x CPS 1. The F<sub>1</sub> generation was sown in the off-season, and the F<sub>2</sub> generation was sown at ICRISAT Center. Single plants were harvested in the F<sub>2</sub> generation and plants without wilt symptoms were selected from wilt-infested fields in the F<sub>3</sub> and F<sub>4</sub> generations. Their F<sub>5</sub> progenies were bulked as ICCX-780168-65P-5P-BP, and numbered ICCL 83009.

**Synonyms.** ICCX-780168-65P-5P-BP; ICCL 83009.

## **Performance**

This variety is equal to Annigeri (desi) in its flowering and maturity durations (Table 1) and about 1 week earlier than long-duration L 550 (kabuli). It has resistance to race 1 of fusarium wilt (*Fusarium oxysporum*). It performed well in farmers' field trials in Andhra Pradesh, Maharashtra, and Orissa (Table 2). At ICRISAT Center, under rainfed conditions, it produced 2.3 t ha<sup>-1</sup> in a 1-ha field. With fertilizer and water inputs higher yields can be obtained.

## **Plant Characters**

ICCV 5 is a white-flowered variety, with no anthocyanin pigmentation. It is taller than Annigeri (about 35 cm compared to 25 cm) and produces profuse and well-developed primary and secondary branches.

## **Seed Characters**

The seed is typical kabuli, larger in size than that of L 550 and Annigeri (Table 1). It has a price premium advantage over Annigeri and L 550.

**Table 1. Agronomic traits of ICCV 5 and control cultivars at ICRISAT Center, 1983/84.**

Cultivar	Days to 50% flowering	Days to maturity	100-seed mass (g)
ICCV 5	51	97	26.6
Controls			
L 550 (kabuli)	59	116	21.0
Annigeri (desi)	52	100	20.1

**Table 2. Seed yield (t ha<sup>-1</sup>) of ICCV 5 and control in trials in three Indian states.**

Cultivar	Andhra Pradesh		Maharashtra	Orissa
	1986/87 (7) <sup>1</sup>	1987/88 (4)	1987/88 (7)	1987/88 (1)
ICCV 5	1.05	0.88	1.01	2.10
Control				
Annigeri (desi)	1.07		0.59	1.79

1. Figures in parentheses indicate number of locations.

**Table 3. Biological value (BV), true digestibility, (TD), net protein utilization (NPU) and utilizable protein (UP) of cooked whole seed samples of ICCV 5 and control cultivars, ICRISAT Center, 1987/88.**

Cultivar	Protein (%)	BV (96)	TD (%)	NPU (%)	UP (%)
ICCV 5	19.5	83.7	85.9	72.0	13.1
Controls					
ICCV 6 (ICCC 32) (kabuli)	19.6	86.6	86.0	74.4	13.5
Annigeri (desi)	19.4	72.7	80.1	58.3	10.5
SE	±0.1	±2.1	±1.2	±2.0	±0.4

## Quality Characters

The seed protein content (%) and other quality characters of ICCV 5 are similar to the kabuli control, ICCV 6 (Table 3). A few characters are better than those of the desi control, Annigeri.

## **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.

ICRISAT is a nonprofit scientific educational institute receiving support from donors through the Consultative Group on International Agricultural Research. Its major mandate is to serve as a world center for the improvement of grain yield and quality of sorghum, millet, chickpea, pigeonpea, and groundnut, and to act 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.