

Registration of 'ICCV 10' Chickpea

'ICCV 10' is a desi type (brown seeded) chickpea (*Cicer arietinum* L.) cultivar (Reg. no. CV-117, PI 578283) developed by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, India. It was approved for release in the central and southern zones of India by the Central Sub-Committee on Crop Standards, Notification and Release of Varieties, Ministry of Agriculture, Government of India, under the popular name of 'Bharati' in 1992, and has also been recently released as 'Barichhola 2' in Bangladesh.

The pedigree of ICCV 10 is (P 1231/P 1265)-32P-BP-1P-1P-1P-BP. Single plants and progenies during F₂ to F₆ were selected for fusarium wilt resistance and for high yield. The F₇ progeny row was bulked in 1982-1983, tested in the International Chickpea Screening Nursery (ICSN) during 1983 to 1985, and submitted for testing in All India Coordinated Pulses Improvement Project (AICPIP) Trials in 1986-1987. It was tested as ICCL 83228.

In the AICPIP Initial Evaluation Trials during 1986-1987 and 1987-1988, ICCV 10 produced an average mean yield of 2.3 t ha⁻¹ across locations in India, compared with the 1.9 t ha⁻¹ yield of the check cultivar BG 244. In AICPIP Coordinated Varietal Trials in the central zone of India during 1988-1989 (14 locations), 1989-1990 (10 locations), and 1990-1991 (13 locations), ICCV 10 produced an average yield of 2.02 t ha⁻¹, compared with the 1.75 t ha⁻¹ of the check cultivar BG 244. ICCV 10 was the highest yielding cultivar in all 3 yr. In the southern zone of India during the same period of testing (2 to 4 locations), ICCV 10 produced a mean yield of 1.8 t ha⁻¹, compared with 1.4 t ha⁻¹ of the check cultivar BDN 9-3. ICCV 10 was the highest yielding cultivar in this zone for five consecutive years (1986-1987 to 1990-1991). The performance of ICCV 10 in both zones indicates its unique wide adaptation from latitudes 10° to 25° N.

ICCV 10 is a short- to medium-duration cultivar maturing in 95 to 100 d at ICRISAT Asia Center, Patancheru, India (southern zone). It is semierect, with long fruiting branches and a purplish green stem. The leaves are dark green, compound, with medium-sized leaflets. The flower is pink, and the pods are light yellow. The seeds are yellowish brown, ram's head shaped, with a 100-seed weight of ≈ 16.3 g.

ICCV 10 is resistant to fusarium wilt [caused by *Fusarium oxysporum* Schlechtend.:Fr. f. sp. *ciceris* (Padwick) Matuo & K. Sato], and moderately resistant to dry root rot [caused by *Macrophomina phaseolina* (Tassi) Goidanich; syn. *Rhizoctonia bataticola* (Taubenhaus) E.J. Butler], in comparison with susceptible checks in disease-sick field screening. It has shown better drought tolerance than the check cultivar Annigeri, and has tolerance to heat.

Breeder seed of ICCV 10 will be maintained at ICRISAT Asia Center, Patancheru, India, where limited quantities of seed can be obtained from the authors.

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References and Notes

1. C.L.L. Gowda, Cereals and Legumes Asia Network, and Onkar Singh, S.C. Sethi, B.V. Rao, and J. Kumar, Legumes Program, ICRISAT, Patancheru, A.P. 502 324, India; K.B. Singh, ICARDA, P.O. Box 5466, Aleppo, Syria; M.M. Rahman and M.A. Rahman, Pulses Res. Ctr., Regional Agric. Res. Stn., Ishurdi, Pabna, Bangladesh. ICRISAT Journal Article no. JA 1629. Registration by CSSA. Accepted 31 May 1994. *Corresponding author (Email: icrisat@cgnet.com).

Registration of 'ICPL 87119' Pigeonpea

'ICPL 87119' pigeonpea [*Cajanus cajan* (L.) Millsp.] (Reg. no. CV-115, PI 578007) was developed at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, India. It was identified for release in India by the All India Coordinated Pulses Improvement Project (AICPIP) in 1992. It has since been approved for notification by the Plant Materials Identification Committee (PMIC) of ICRISAT and by the Central Sub-Committee on Crop Standards, Notification, and Release of Varieties, Ministry of Agriculture, Government of India, in 1993 as 'Asha'. ICPL 87119 is the first known medium-maturity pigeonpea cultivar (maturity ≈ 172 d) which combines resistance to two of the most devastating pigeonpea diseases: wilt (caused by *Fusarium udum* E.J. Butler) and sterility mosaic (causal organism not yet identified).

ICPL 87119 was developed by bulk pedigree from the cross 'C 11'/ICP 1-6-W3⊗W1⊗. One of the parents, C 11, is a high-yielding cultivar, and the other has resistance to wilt and sterility mosaic (SM).

ICPL 87119 is of medium maturity and has an indeterminate growth habit. Its stem color is green, leaves are lanceolate, flowers are yellow with red veins in the back of the vexillum, and pods are green with maroon streaks. Time to 50% flowering ranged from 110 to 124 d at ICRISAT Center and maturity ranged from 141 d at Baroda (Gujarat, India) to 202 d at Vamban (Tamilnadu, India). It has large (10.2-11.2 g 100 seed⁻¹) brown colored seeds. The seeds are attractive to consumers and have a mean protein content of 21.2%, compared with 23.2% for the commonly grown variety C 11.

ICPL 87119 was evaluated for wilt and SM resistance in a combined wilt and SM screening nursery at ICRISAT Center between 1989 and 1991. The mean wilt incidence for ICPL 87119 was 2%, compared with 56% in the control variety C 11 and 97% in the susceptible control, ICP 2376. ICPL 87119 had 2.3% SM incidence, while both C 11 and ICP 8863 controls had 100%. It has shown resistance to both diseases in endemic areas such as the Karnataka, Maharashtra, and Gujarat states of India.

The yield performance of ICPL 87119 was evaluated at ICRISAT Center and other locations in the India multilocation Medium-Duration Pigeonpea Advanced Lines Yield Trial during the 1987-1988 season. Because of its superior performance, it was entered in the Arhar Coordinated Trial (ACT 2) of All India Coordinated Pulses Improvement Project in 1989. It was tested in central and south zones between 1989 and 1991. In the central zone, the weighted mean yield of ICPL 87119 over 16 locations was 20% higher (1514 kg ha⁻¹) than that of C 11 (1261 kg ha⁻¹). Similarly, in the south zone the weighted mean yield of ICPL 87119 over five locations was 20% higher (1541 kg ha⁻¹) than that of C 11 (1281 kg ha⁻¹). ICPL 87119 was further tested in adaptive research minikit trials at five locations in Andhra Pradesh, India, during the 1990-1991 crop season. Its mean grain yield (1764 kg ha⁻¹) was 17% greater than LRG 30 (1508 kg ha⁻¹). These yield trials were conducted mainly under disease-free conditions.

Breeder seed of ICPL 87119 has been supplied to the AICPIP, State Farms Corporation of India, and other institutions in India. Breeder seed will be maintained by the Legumes Program, ICRISAT.

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