

REGISTRATION OF 'ICMS 7703' PEARL MILLET

'ICMS 7703' grain cultivar of pearl millet [*Pennisetum glaucum* (L.) R. Br.] (Reg. no. CV-3, PI 548968) was developed by intermating seven downy mildew-resistant inbred lines at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), near Hyderabad, India. These inbred lines were derived from the crosses (Souma D2 × Ex Bornu)-2, (J 25-1 × 700515-9)-2-3, (B 282 × J 804)-1-3, (J 25-1 × 700797)-5-3, (J 260-1 × 700557-1)-4-9, (J 1798 × 700594)-2, and (700250 × Ex Bornu)-6. The J- numbers are selections from Indian breeding lines, others are of West African origin. The inbreds were selected for their phenotypic performance. After intermating, in 1977, equal quantities of random-mated seed on each parental inbred were harvested and mixed to form ICMS 7703. This mixture of half-sibs was used to plant an isolation plot to produce seed for All-India tests starting with the rainy season 1978. ICMS 7703 was tested in India by the All-India Coordinated Millets Improvement Project (AICMIP) and released for cultivation by the Ministry of Agriculture, Government of India, as ICMS 7703 in November 1985 (1). ICMS 7703, also named as ICMV 4 by ICRISAT, averaged 101.7% of the grain production of the then widely grown hybrid 'BJ 104' in 155 replicated tests conducted by AICMIP from 1978 to 1983. ICMS 7703 matures in 85 to 90 d after planting and gives 16.4% more dry fodder than BJ 104. ICMS 7703 has good resistance to downy mildew caused by *Sclerospora graminicola* (Sacc.) J. Schröt. (3.0% incidence in the 1978-1983 trials, compared with 10.0% incidence in BJ 104). ICMS 7703 is of medium height (195-215 cm) with three to five tillers per plant, and flowers in 48 to 50 d after planting. Anther color is mixed cream and purple; heads are compact, short-bristled, cylindrical in shape, medium long (23-27 cm), with straw-colored glumes. Grains are of medium size (6-9 g 1000⁻¹ seed), obovate in shape, and shiny slate-gray in color.

Since its development in 1978, ICMS 7703 has been maintained in isolation by random mating for six subsequent generations. The variety is adapted to most of the pearl millet-growing areas of India.

Breeder seed has been made available to the National Seeds Corporation and many other government and private institutions in India, and will be maintained by the Cereals Program, ICRISAT. A sample of the original seed is permanently preserved in the ICRISAT gene bank.

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References and Notes

1. Government of India. 1985. Handbook on Cultivars. Central Seed Committee, Ministry of Agriculture, New Delhi [S.O. 832 (E) November 18, 1985].
2. R.P. Jain, Global 2000, P O Box 32072, Lusaka, Zambia (formerly Pearl Millet Improvement Program, ICRISAT); S.B. Chavan and B.S. Talukdar, Cereals Program, ICRISAT, Patancheru P.O., A.P. 502 324, India, D.J. Andrews, Dep. of Agronomy, Univ. of Nebraska, Lincoln, NE 68583 (formerly Pearl Millet Improvement Program, ICRISAT). Registration by CSSA. Accepted 31 Mar. 1991. *Corresponding author.