

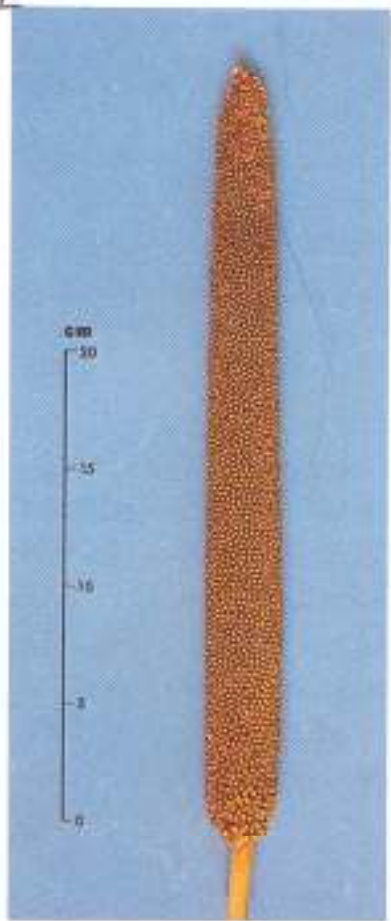
0XB+000431

04228

100129

Pearl Millet Variety ICMV 1

RP



- Medium height (1.9-2.1 m)
- Matures in 85-90 days
- Resists downy mildew disease
- Produces high fodder yields
- Particularly recommended for: Indian dryland farming zones



ICRISAT

Plant Material Description no. 1

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



Purpose of Description

ICMV 1 was released for general cultivation in India, in May 1982, by the Ministry of Agriculture, Government of India, as variety WC-C75.

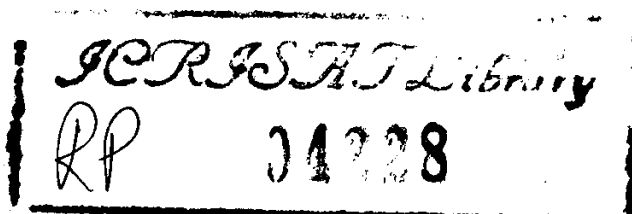
Origin and Development

ICMV 1 was bred at ICRISAT from the 'World Composite' of pearl millet from Nigeria. The World Composite random mating population was constituted in 1971 at the Institute for Agricultural Research, Ahmadu Bello University, Nigeria, from derivatives of numerous crosses between worldwide sources of pearl millet germplasm and Nigerian early-maturing landraces, locally known as Gero millets. Full-sib recurrent selection was conducted on the World Composite at ICRISAT. During this selection 441 full-sib families, derived from selected, heterozygous plants in the previous generation, were tested at Coimbatore (southern India), Hisar (northern India), and ICRISAT Center. Seven superior full-sib families were selected at Coimbatore, with supporting data from the other two locations. In the same season, disease-free plants from the seven full-sib families were selfed in a downy mildew screening nursery at ICRISAT Center. The resulting S₁ bulk was sown in the next season's downy mildew nursery, and bulk pollen was used to enforce intermating. The variety produced by this intermating was tested as WC-C75 in the All India Coordinated Millets Improvement Project (AICMIP) trials. In the five subsequent generations, before the production of breeder seed, a small proportion of the plants in this variety, which was naturally intermated in isolation, were discarded for poor agronomic characters.

Synonym. WC-C75.

Performance

As WC-C75 it was tested in India over a number of years and the results of the tests are shown in the table opposite.



Grain yield, fodder yield, and downy mildew resistance of pearl millet variety ICMV 1 in All India tests¹ in 1977-83.

Cultivar	1977	1978	1979	1980	1981	1982	1983	% of	
								Mean	BJ 104
Grain yield (kg ha⁻¹)									
	(27) ²	(33)	(23)	(27)	(30)	(24)	(30)		
ICMV 1	1631	2073	1758	1850	1989	1849	1787	1884	100.6
BJ 104 ³	1794	1971	1813	1806	2089	1876	1683	1873	100.0
Local	1364	1916	1605	1467	1422	1863	na	1606	85.7
Trial Mean	1540	1945	1683	1727	1924	1784	1694	1757	93.8
Fodder yield (kg ha⁻¹)									
	(23) ²	(27)	(20)	(24)	(26)	(22)	(27)		
ICMV 1	8988	8000	6500	5700	6800	5400	5200	6665	114.5
BJ 104	6844	6600	5700	7000	6000	4500	4100	5820	100
Downy mildew (%)⁴									
ICMV 1	2.2	2.5	0.9	3.6	na	2.2	0.0	1.6	15.9
BJ 104	8.3	9.8	13.7	8.6	8.1	14.9	8.5	10.3	100.0
HB 3	93.5	72.3	42.1	na	na	na	na	69.3	na

1. Data from the All India Coordinated Millets Project annual reports.
2. Number of test locations.
3. The most widely grown *hybrid* in India (used as a check in variety trials).
4. Percentage of downy mildew incidence from AICMIP pathology nurseries where HB 3 (or NHB 3) is the susceptible check.

Plant Characters

ICMV 1 is medium-tall (1.9–2.1 m). It flowers in 48–51 days and matures in 85–90 days. Anther color is mixed, heads are medium-long (22–28 cm), semicylindrical, slightly tapering, compact, and nonbristled. The variety has good resistance to downy mildew and is less susceptible to ergot than any presently cultivated hybrid.

Seed Characters

The grain is bold, 7–8 g 1000⁻¹, obovate, slate gray in color with a vitreous endosperm. Seed dormancy, and tolerance of mold damage when ripening, is equivalent to BJ 104.

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.