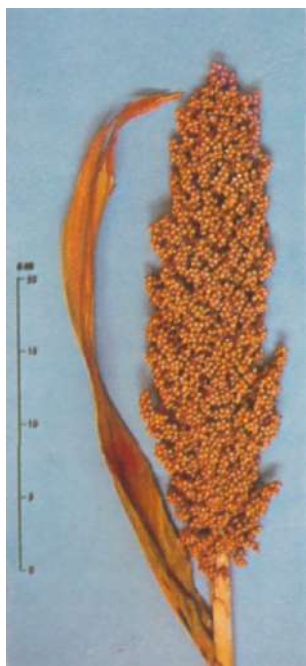

Sorghum Variety ICSV 1



- Medium height (1.6-1.9 m)
- Matures in 110-115 days
- Resistant to several leaf diseases
- Particularly recommended for:
 - a. intermediate and low altitudes
 - b. intercropping with legumes in Indian dryland farming zones



ICRISAT

Plant Material Description no. 8

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

Purpose of Description

ICSV 1 was released (as CSV 11) in 1984 by the Central Subcommittee on Crop Standards, Notification and Release of Varieties for cultivation in all areas in India where rainy-season (kharif) sorghum is grown. It can be cultivated as a rainfed crop in the rainy season and as an irrigated crop in the post-rainy and dry (summer) seasons.

Origin and Development

ICSV 1 was developed by pedigree selection from a cross of SC 108-3 and CS 3541 made in 1975. The parent SC 108-3 is a converted zera-zera line bred by Texas A&M University, USA, while CS 3541 is another zera-zera converted by the All India Coordinated Sorghum Improvement Project (AICSIP). Pedigree selection in self-pollinated progenies of the F₂, F₃, F₄, and F₅ generations was done alternately at ICRISAT Center, Patancheru, and Bhavanisagar, India. The F₆ bulk was evaluated in 1978 in multilocal yield trials, and was observed to be a stable high-yielder. During 1979-82 the pure line was tested in AICSIP trials as SPV 351.

Synonyms. ICSV 107; SPV 351; CSV 11.

Performance

ICSV 1 ranked first for grain yield among the varieties tested in the AICSIP Advanced Variety Trials in 1980 and 1981. ICSV 1 continued to exhibit superior and stable grain yield performance in the AICSIP trials (see table). Overall ICSV 1 mean grain yield performance was 3297 kg ha⁻¹ compared with 2934 kg ha⁻¹ and 1948 kg ha⁻¹ for the commercial Indian sorghum hybrid (CSH 1) and a local variety, respectively. ICSV 1 also yields good quantities of fodder (up to 12,400 kg ha⁻¹). It was evaluated in All India Minikit Tests on farmers' fields for 2 consecutive years (1982 and 1983) with favorable yield results. Performance data for ICSV 1 were presented during the 1983 AICSIP Workshop, and then discussed by participant scientists.

Mean grain yield performance (kg ha⁻¹) of ICSV 1 in AICSIP trials, 1980-83.

Cultivar	1980 (33) ¹	1981 (33)	1982 (38)	1983 (39)	Mean
ICSV 1	3403	3446	3380	2958	3297
CSH 1	3267	2725	3148	2595	2934
Local ²	1898	1926	2150	1817	1948

1. Numbers in parentheses indicate the number of locations over which the data were averaged.

2. The local farmers' variety was included in the trials as a check. However, it frequently represented a released improved variety or hybrid.

Plant Characters

ICSV 1 is a photoperiod-insensitive medium-maturing (110-115 days) variety that grows to a height of 1.6-1.9 m. It has a tan color and its leaves are of medium size. The stalk is moderately juicy. The panicle is spindle-shaped, semicompact, and well exerted. The glumes are short, straw-colored, and free-threshing. ICSV 1 responds favorably to nitrogenous fertilizers and can be planted to a population of 180000 ha⁻¹ at a spacing of 45 x 15 cm. The variety is particularly suitable for intercropping with legumes. It resists several leaf diseases. However, like several other commercial sorghum cultivars it is susceptible to shoot fly and stem borer attack and requires protection with carbofuran in very late plantings.

Seed Characters

ICSV 1 has pear-shaped medium-size grains (2.7 g 100⁻¹) of light creamy color. The pericarp is thin and lustrous. The grain contains about 9.5% protein and 2.4% lysine (per 100 g protein). Roti and porridge quality of ICSV 1 is good and comparable with that of CSH 5, a popular commercial sorghum hybrid in India.

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.