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# Sorghum Variety ICSV 112

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- **Medium height (1.5 - 1.8 m)**
- **Matures in 110-120 days**
- **Recommended for its high and stable grain yield in low and intermediate altitudes**
- **Suitable for intercropping**



**ICRISAT**

**Plant Material Description no. 16**

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

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## Purpose of Description

ICSV 112 is a sorghum variety bred at ICRISAT Center. It was released (as SV 1) in Zimbabwe. It was ranked first among varieties for grain yield in All India Coordinated Sorghum Improvement Project (AICSIP) trials from 1982 to 1985. ICSV 112 was recommended for release as CSV 13 in India during the 1987 AICSIP workshop at Parbhani. It can be cultivated as a rainfed crop in the rainy season and as an irrigated crop during the postrainy season.

## Origin and Development

ICSV 112 was developed by pedigree selection from a multiple cross involving IS 12622C, 555, IS 3612C, 2219B, and E 35-1. Pedigree selection in self-pollinated progenies of the F<sub>2</sub>, F<sub>3</sub>, F<sub>4</sub>, and F<sub>5</sub> generations was done alternately at ICRISAT Center, Patancheru and Bhavanisagar, India. The F<sub>6</sub> bulk was evaluated in 1979 in ICRISAT's multilocational yield trials and was observed to be a stable high yielder. From 1981 to 1986 the pure line was tested in AICSIP trials as SPV 475.

**Synonyms:** ICSV 112, ICSV 112 IN, SPV 475, SV 1, M 39335, UNAL-1 187

## Performance

ICSV 112 ranked first for grain yield among varieties in the AICSIP Advanced Variety Trials from 1982 to 1987. It has since continued to exhibit superior and stable grain yield performance in AICSIP trials (Table 1).

**Table 1. Mean grain yield performance (kg ha<sup>-1</sup>) of ICSV 112 in AICSIP trials, 1982-87.**

Cultivar	1982 (37) <sup>1</sup>	1983 (42)	1984 (39)	1985 (41)	1986 (32)	1987 (31)	Mean
ICSV 112	3476	3198	3642	3364	3275	3636	3432
ICSV 1	3380	2958	3430	3224	3217	3423	3272
Local <sup>2</sup>	2150	1817	2245	2583	2413	-	2242

1. Numbers in parentheses indicate the number of locations over which the data was averaged.
2. The local farmers' variety was included in the trials as a control.

Overall ICSV 112 mean grain performance was 3432 kg ha<sup>-1</sup> compared with 3272 kg ha<sup>-1</sup> for ICSV 1 (released as CSV 11 by AICISP) and 2242 kg ha<sup>-1</sup> for a local variety. ICSV 112 also yields good quantities of fodder (11.4 t ha<sup>-1</sup>). It was evaluated in All India Minikit Tests in farmers' fields for 2 consecutive years (1985 and 1986) with favorable yield results.

## **Plant Characters**

ICSV 112 is a medium-maturing (110-120 days), photoperiod-insensitive, rainy-season variety. It grows to a height of between 1.5 and 1.8 m. The plant has tan-colored pigment and its leaves are of medium size. The panicle is elliptic in shape, semi-compact, and exserted. The stalk is moderately juicy. The glumes are straw-colored, short, and free-threshing. ICSV 112 responds well to nitrogen fertilizers and can be sown to a population of 180 000 plants ha<sup>-1</sup> at a spacing of 45 x 15 cm. The variety is suitable for intercropping with legumes in the rainy season. If sown late ICSV 112 should be protected from shoot fly and stem borer attacks.

## **Seed Characters**

ICSV 112 has light cream-colored, medium-sized grains (2.5 g 100<sup>-1</sup>) The pericarp is thin and lustrous. The grain contains about 9.6% protein and 2.6% lysine (100 g<sup>-1</sup> protein). The quality of *roti* and porridge made from this variety 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.