

Sorghum Hybrid ICSH 153



- **Medium height (1.6 - 1.9 m)**
- **Matures in 105-115 days**
- **Particularly recommended for:**
 - a) intermediate and low altitudes**
 - b) rainfed cropping during the rainy season and irrigated cropping during the postrainy season**
 - c) intercropping with legumes.**



ICRISAT

Plant Material Description no.15

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

1988

Purpose of Description

ICSH 153 is a hybrid bred at ICRISAT Center. It was released (as CSH 11) in 1986 by the Government of India Central Subcommittee on Crop Standards, Notification, and Release of Varieties, for cultivation in all areas in India where rainy-season sorghum is grown. It can also be cultivated as an irrigated crop in the postrainy season.

Origin and Development

ICSH 153 was bred using 296A (AICSIP) as the female and MR 750 as the male parent. The latter was developed at ICRISAT by pedigree selection from a cross between SC 108-3 and CS 3541 made in 1975 with the selection number 27-2. SC 108-3 is a Zerazera sorghum converted by Texas A&M University, USA, while CS 3541 is another Zerazera, converted by the All India Coordinated Sorghum Improvement Project (AICSIP).

Synonyms: ICSH 153, ICSH 153 IN, SPH 221, CSH 11.

Performance

ICSH 153 is high-yielding and stable across several locations in India (Table 1). Its overall mean grain yield performance was 4146 kg ha⁻¹ compared with 3539 kg ha⁻¹ for CSH 5 and 4029 kg ha⁻¹ for CSH 9, both these are commercial Indian sorghum hybrids. It also yields good quantities of fodder, up to 12 t ha⁻¹. It was evaluated in All India Minikit Tests in farmers' fields in the 1984 rainy season when it gave favorable yields.

Table 1. Mean grain yield performance (kg ha⁻¹) of ICSH 153 in AICSIP Trials 1981-1987.

Cultivar	1981 (30) ¹	1982 (41)	1983 (41)	1984 (38)	1985 (41)	1986 (27)	1987 (31)	Mean
ICSH 153	4578	4100	3885	4209	4170	3765	4316	4146
CSH 5	4278	3491	3130	3434	3407	3151	3885	3539
CSH 9	4349	4139	3691	4123	3889	3962	4049	4029

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

Plant Characters

ICSH 153 is a photoperiod-insensitive, medium-maturing (105-115 days) hybrid, it grows to a height of 1.6-1.9 m. The plant has tan-colored pigment and its leaves are of medium size. The stem is medium thick, moderately juicy, and the internodes are fully enclosed in the leaf sheath. The panicle is semi-open and well exerted. The glumes are short, free-threshing, awnless, and dark straw color. ICSH 153 responds well to fertilizers and can be sown to a population of 180 000 plants ha⁻¹ with 45 x 15 cm spacing for higher yields. It fits well into intercropping systems with pulses. If sown late in the season ICSH 153 should be protected from shoot fly and stem borer attacks.

Seed Characters

ICSH 153 has oval-shaped, medium-sized grain (3.5 g 100⁻¹), light cream in color with a thin pericarp. The grain is lustrous, and contains about 9.4% protein and 2.19% lysine (100 g⁻¹ protein). The quality of *roti* and porridge made from grain harvested in the rainy season is acceptable and comparable to that from the commercial sorghum hybrids CSH 5 and CSH 9 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.