
Groundnut Variety

ICGS 11 (ICGV 87123)



- A high-yielding spanish-type variety
- Matures in 120 days in the postrainy season
- Tolerant of bud necrosis disease
- Tolerant of end-of-season drought
- Photoperiod insensitive
- Released for postrainy-season cultivation in the states of Andhra Pradesh, Karnataka, Maharashtra, and parts of Madhya Pradesh in India
- Recommended for rainy-season adaptive trials in northern Indian states.
- Shelling turnover of 70%
- Oil content of 49%
- Oleic/linoleic ratio of 0.98



ICRISAT

Plant Material Description no.20

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

Purpose of Description

ICGS 11, also known as ICGV 87123, was released in 1986 by the Central Sub-Committee on Crop Standards, Notification, and Release of Varieties, Ministry of Agriculture, Government of India for postrainy-season cultivation in Andhra Pradesh, Karnataka, Maharashtra, and parts of Madhya Pradesh in India.

It was also recommended in 1986 by the All India Coordinated Research Project on Oilseeds (AICORPO) for rainy-season adaptive trials in the states of Uttar Pradesh, Bihar, Rajasthan, Haryana, and Punjab. A release proposal was submitted to Uttar Pradesh State Varietal Release Committee in May 1989.

Origin and Development

ICGS 11 was bred and developed at ICRISAT Center, Patancheru, India. It derives its origin from a single plant selection made in a natural hybrid population of an Indian variety Robut 33-1 (now known as Kadiri 3) in 1977/78. It was grown in progeny rows for two seasons following the pedigree method and later advanced to uniformity by the bulk pedigree method. Its pedigree is (Robut 33-1)-18-8-B₁-B₁-B₁-B₁-B₁. Kadiri 3 is an early-maturing virginia-type variety. The other parent of ICGS 11 is unknown, but may have been a spanish-type variety since the natural hybrids were identified by the presence of flowers on the main axis, and sequentially branched Spanish forms were subsequently observed in the segregating generations.

Performance

ICGS 11, after 3 years of testing in AICORPO trials during postrainy seasons 1980/81 to 1982/83, was recommended for adaptive trials in Zone III (parts of Maharashtra and Madhya Pradesh) and Zone V (Andhra Pradesh, Karnataka, and parts of Maharashtra). In subsequent trials, it produced a mean pod yield of 1.5 t ha⁻¹ in Zone III and 2.6 t ha⁻¹ in Zone V, outyielding the local variety SB XI by 25.5% and 33.3%, respectively (Table 1). In demonstrations carried out jointly by ICRISAT and state Departments of Agriculture during the 1987/88 postrainy season in Karnataka and Maharashtra, the pod yield superiority of ICGS 11 ranged from 15% to 69% under improved cultivation practices and from 36% to 43% under state-recommended practices (Table 2).

In the rainy-season AICORPO trials during 1982-85 in Zone I (Uttar Pradesh, Bihar, Rajasthan, Haryana, and Punjab), ICGS 11 showed a mean pod yield advantage of 23% over J 11, 25% over JL 24, and 53% over AK 12-24.

Table 1. Performance of ICGS 11 (ICGV 87123) and local variety SB XI in postrainy-season adaptive trials in Zone III (parts of Madhya Pradesh and Maharashtra) and Zone V (Andhra Pradesh, Karnataka, and parts of Maharashtra), 1983/84 and 1984/85.

Zone	Variety	Mean pod yield (t ha ⁻¹)	Increase over SB XI (%)
Zone III (1983/84, 1984/85)	ICGS 11	1.5	25.5
	SB XI	1.2	
Zone V (1984/85)	ICGS 11	2.6	33.3
	SB XI	2.0	

Source:

AICORPO. 1984. Annual progress report, rabi/summer groundnut, 1983/84. Rajendranagar, Hyderabad, A.P. 500030, India: Directorate of Oilseeds Research. 7pp.

AICORPO. 1985. Annual progress report, rabi/summer groundnut, 1984/85. Rajendranagar, Hyderabad, A.P. 500030, India: Directorate of Oilseeds Research. 27pp.

Table 2. Mean pod yield (t ha⁻¹) of ICGS 11 (ICGV 87123) and local varieties in joint demonstrations by ICRISAT and state Departments of Agriculture, postrainy season, 1987/88.

State	Cultivation practices					
	ICRISAT			States		
	ICGS 11	Local variety ¹	Increase over local variety (%)	ICGS 11	Local variety ¹	Increase over local variety (%)
Karnataka (1 location)	3.85	3.35	15	4.31	3.17	36
Maharashtra (3 locations)	4.29	2.54	69	3.22	2.25	43

1. TMV 2 in Karnataka, SB XI in Maharashtra.

Source: ICRISAT 1988. Report of Work (December 1987 - June 1988). Legumes On-Farm Testing and Nursery Unit (LEGOFTEN). Patancheru, A.P. 502 324, India: ICRISAT. 81 pp. (Limited distribution).

Plant Characters

ICGS 11 has decumbent 2 growth habit with sequential flowering and medium to small dark green elliptic leaves. It has between six and nine primary branches and two and three secondary branches. Its height (main axis) is 21.2 cm and its canopy (breadth) is 40.2 cm. It matures in 120 days in the postrainy season and has a shelling turnover of 70%.

ICGS 11 has above-average tolerance of end-of-season drought and field tolerance of bud necrosis disease. It is photoperiod insensitive.

Pod/Seed Characters

ICGS 11 has smooth two-seeded medium-size pods with no beak, and slight to moderate constriction. Its seeds are tan in color, with a 100-seed mass of 60 g. They contain 49% oil and 22% protein and the oleic/linoleic acid ratio is 0.98.

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.