Groundnut Variety ICGV 87128 (ICGS 44)

- **A high-yielding spanish-type variety**
- **Matures in 120 days in the postrainy season**
- **Tolerant of bud necrosis disease**
- **Has good recovery from mid-season drought**
- **Released for postrainy-season cultivation in Gujarat state in India**
- **Has wide adaptability**
- **Shelling turnover of 70%**
- **Oil content of 49%**
- **Oleic/linoleic ratio of 1.34**

ICRISAT

Plant Material Description no.21

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

1989

Purpose of Description

ICGV 87128, also known as ICGS 44, was released in 1988 by the Central Sub-Committee on Crop Standards, Notification, and Release of Varieties, Ministry of Agriculture, Government of India for postrainy-season cultivation in Gujarat state in India. The variety has wide adaptability and has become very popular with farmers in Andhra Pradesh, Karnataka, Orissa, and Tamil Nadu.

ICGV 87128 is also registered with the National Seed Registration Department, National Agriculture Research Center, Islamabad, Pakistan. It forms a component line together with ICGS 37 (ICGV 87187), another ICRISAT groundnut selection, of a recently released groundnut variety BARD-699 in Pakistan.

Origin and Development

ICGV 87128 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. This plant 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-l)-l-5-B_1-B_1-B_1-B_1-B_1. Kadiri 3 is an early-maturing virginia-type variety. The other parent of ICGV 87128 is unknown but might 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

ICGV 87128, after initial 3-year testing in the All India Coordinated Research Project on Oilseeds (AICORPO) trials during postrainy seasons from 1982/83 to 1984/85, was recommended for adaptive trials in Zone II (Gujarat). It was tested during the 1986/87 postrainy season in Gujarat along with local variety GG 2. The pod-yield superiority of ICGV 87128 over GG 2 ranged from 7.2% to 42.8% in these trials. It recorded a maximum pod yield of 3.51 t ha^{-1} compared with 2.57 t ha^{-1} of GG 2 with full irrigation (Table 1).

In demonstrations carried out jointly by ICRISAT and state Departments of Agriculture in Andhra Pradesh, Karnataka, Tamil Nadu, Orissa, and Maharashtra during the 1987/88 postrainy season, the pod-yield superiority of ICGV 87128 ranged from 21.0% to 101.3% under improved cultivation

Table 1. Performance of ICGV 87128 and local variety GG 2 in postrainy-season adaptive trials in Zone II (Gujarat), 1986/87.[1]

District	Number of locations	Mean pod yield (t ha^{-1})		Increase over GG 2 (%)
		ICGV 87128	GG 2	
Junagadh	3	1.34(1.74)[2]	1.25 (1.51)[2]	7.2
Kutch	3	1.83 (3.51)	1.67(2.57)	9.5
Amreli	7	1.01 (1.30)	0.78 (1.24)	29.5
Bhavnagar	4	1.02(1.28)	0.72(1.02)	41.6
Kaira	4	1.20(2.10)	0.84(1.25)	42.8

1. At many locations crop suffered due to shortage of well water for irrigation.
2. Figures in the parentheses give maximum yield recorded in the district.

Source: AICORPO. 1987. Annual progress report, rabi/summer groundnut, 1986/87. Rajendranagar, Hyderabad, A.P. 500 030, India: Directorate of Oilseeds Research. 14 pp.

Table 2. Mean pod yield (t ha^{-1}) of ICGV 87128 and local varieties in joint demonstrations by ICRISAT and state Departments of Agriculture, postrainy season, 1987/88.

State	Number of locations	Local varieties	Cultivation practices					
			ICRISAT			States		
			ICGV 87128	Local variety	Increase over local variety (%)	ICGV 87128	Local variety	Increase over local variety (%)
Andhra Pradesh	2	TMV 2	3.44	2.69	27.9	2.52	1.90	32.6
Karnataka	1	S 206	3.60	2.27	58.6	2.93	2.51	16.7
	1	KRG 1	4.77	2.37	101.3	1.99	0.97	105.2
Tamil Nadu	3	CO 2	3.00	2.48	21.0	2.73	2.31	18.2
Orissa	2	AK 12-24	4.06	2.76	47.1	3.06	2.38	28.6
Maharashtra	1	SB XI	4.34	3.30	31.5	3.09	2.59	19.3

Source: ICRISAT. 1988. Report of work (December 1987-June 1988). Legumes On-Farm Testing and Nursery Unit (LEGOFTEN). Patancheru, A.P. 502324, India: ICRISAT. 81 pp. (Limited distribution.)

practices, and from 16.7% to 105.2% under state-recommended practices (Table 2).

In the National Uniform Groundnut Yield Trials in Pakistan, ICGV 87128 produced 54.4% more pod yield than the local variety Banki in 1987, and 23.5% more in 1988.

Plant Characters

ICGV 87128 has decumbent 2 to decumbent 3 growth habit with sequential flowering, and small to medium dark green elliptic leaves. Primary branches number between four and six and secondary branches number between two and four. Plant height (main axis) is 16.2 cm and canopy (breadth) is 35.0 cm. It matures in 120 days in the postrainy season and has a shelling turnover of 70%.

ICGV 87128 has field tolerance of bud necrosis disease. It is relatively photoperiod insensitive, has good recovery from mid-season drought, and is average in its response to end-of-season drought.

Pod/Seed Characters

ICGV 87128 has smooth two-seeded small- to medium-size pods with no or little 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 25% protein, and the oleic/linoleic acid ratio is 1.34.

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.

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