Groundnut Variety ICGV 87141 (ICGS 76)

- **High-yielding Virginia bunch variety**
- **Matures in 120 days in the rainy season**
- **Tolerant to bud necrosis disease**
- **Good recovery from mid-season drought**
- **Shelling turnover 73%**
- **Oil content 43%**
- **Good oil quality (oleic/linoleic acid ratio of 1.69)**
- **Released for rainy-season cultivation in southern Maharashtra, Andhra Pradesh (excluding northern coastal districts), Karnataka, Tamil Nadu, and Kerala, India.**

ICRISAT
Plant Material Description no.24

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

1990

Purpose of Description

ICGV 87141, tested under the name of ICGS 76 in All India Coordinated Research Project on Oilseeds (AICORPO) trials, was released in 1989 by the Central Sub-Committee on Crop Standards, Notification and Release of Varieties, Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India for rainy-season cultivation in Zone V i.e., southern Maharashtra, Andhra Pradesh (except northern coastal districts), Tamil Nadu, Karnataka, and Kerala, India.

It has also performed very well in the Sudan where it produced 17% more pods and 44% more seed than the best control, Ashford. It may soon be considered for release in the Sudan.

Origin and Development

ICGV 87141 was bred and developed at ICRISAT Center, Patancheru, India. It was selected by the bulk pedigree method, from a cross between an adapted variety, TMV 10 and an early-maturing source line, Chico. Its pedigree is (TMV 10 x Chico) F_2B_2-NIB_1-B_1-B_1-B_1-B_1-B_1-B_1-B_1-B_1-B_1. It is adapted to low-input rainfed cultivation.

Performance

ICGV 87141 has shown on an average 30% pod yield and 36% seed yield superiority over the control variety Kadiri 3 in 4 years of testing in AICORPO trials in India (Table 1). It has also shown pod and seed yield advantages over such other control varieties as Kadiri 2, TMV 10, and M 13. It has pod yield potential of 2.5 to 3.5 t ha^{-1} under good management conditions.

Plant Characters

ICGV 87141, which belongs to the Virginia botanical group, has decumbent 3 growth habit with alternate flowering, and medium to small elliptic dark green leaves. It has 4 to 6 primary, and 4 to 7 secondary branches. The main axis is 17.5 cm high with a 39.1 cm broad canopy. It matures in the 120 days in the rainy season, and has a shelling turnover of 73%.

ICGV 87141 has shown good recovery for pod yield from mid-season drought and field tolerance of bud necrosis disease.

Pod/seed Characters

ICGV 87141 has mainly 2-seeded (occasionally 3-seeded), medium-sized attractive pods with moderate to prominent reticulation, slight to moderate constriction, and beak. Its seeds are tan in color, with a 100-seed mass of 44 g. Seeds contain on average 43% oil and 20% protein. The oil quality is good with an oleic/linoleic acid ratio of 1.69.

Table 1. Performance of ICGV 87141 and control varieties, in AICORPO trials, Zone V [Southern Maharasthra, Andhra Pradesh (excluding northern coastal districts), Karnataka, Tamil Nadu and Kerala], rainy seasons 1985-88.

Trials[1]	Year	Variety	Mean yield ($t\ ha^{-1}$)[2]	Increase over control varieties (%)				
				Kadiri 3	C 198	Kadiri 2	TMV 10	M 13
IET (VB)	1985	ICGV 87141	P 1.33	16.0	-[3]	47.8	24.3	20.8
			K 0.97	20.3	-	63.5	33.6	61.1
CVT (VB)	1986	ICGV 87141	P 2.63	59.4	2.7	-44.2	-	-
			K 2.05	68.0	11.3	48.0	-	-
NET (VB)	1987	ICGV 87141	P 1.20	7.2	-1.4	3.4	-	23.6
			K 0.85	13.9	13.6	20.1	-	29.5
NET (VB)	1988	ICGV 87141	P 1.27	39.1	16.3	-	-	-
			K 0.92	41.3	24.0	-	-	-
Average % increase in pod yield				30.4	5.8	31.8	24.3	22.2
Average % increase in seed yield				35.8	16.3	43.8	33.6	45.3

1. IET = Initial Evaluation Trial, CVT = Coordinated Varietal Trial, NET = National Elite Trial, VB = Virginia bunch.
2. P = pod yield, K = kernel yield.
3. - = Not tested.

Source:

Annual Progress Report, Groundnut, 1985. XXVIII Annual Kharif Oilseeds Workshop, 1986, AICORPO, Directorate of Oilseeds Research, Rajendranagar, Hyderabad, p. 169-170.

Annual Progress Report, Groundnut, 1986. XXX Annual Kharif Oilseeds Workshop, 1987, AICORPO, Directorate of Oilseeds Research, Rajendranagar, Hyderabad, p. 145.

Annual Progress Report, Groundnut, 1987. XXXII Annual Kharif Oilseeds Workshop, 1988, AICORPO, Directorate of Oilseeds Research, Rajendranagar, Hyderabad, p. 111.

Annual Progress Report, Groundnut, 1988. XXXIV Annual Kharif Oilseeds Workshop, 1989, AICORPO, Directorate of Oilseeds Research, Rajendranagar, Hyderabad, p. B-156.

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, research and training 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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