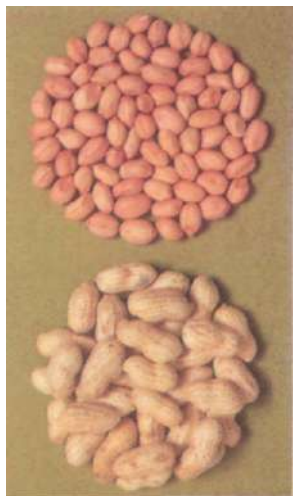

Groundnut Elite Germplasm ICGV 86143



- High-yielding Spanish variety
- Released as BSR 1 for cultivation in the Western Zone of Tamil Nadu, India
- Suitable for rainy and postrainy-season cultivation in Tamil Nadu
- Matures in 100-105 days in the rainy season in Tamil Nadu
- Average shelling percentage 66
- Average oil content 47%
- Average protein content 25%



ICRISAT

Plant Material Description no. 68

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

Purpose of Description

ICGV 86143 is a high-yielding Spanish variety, released as BSR 1 for cultivation in the Western Zone of Tamil Nadu, India.

Origin and Development

ICGV 86143 was developed at ICRISAT Asia Center, India. It originated from a cross made in the 1983 rainy season between ICGS 44 and an F₈ Spanish breeding line derived from the cross Robut 33-1 x NC Ac 2821. ICGS 44 (ICGV 87128) is an ICRISAT-bred, high-yielding, medium-duration cultivar that was released in 1988 for postrainy-season cultivation in India. Robut 33-1 (also known as Kadiri 3) is a short-duration Virginia cultivar released in India. NC Ac 2821 is a Virginia germplasm line from North Carolina State University, USA.

From an F₃ plant progeny of a high-yielding F₂ plant of the cross, phenotypically similar plants were selected and bulked at harvest. This process of bulking phenotypically similar plants was repeated until the F₈ generation, when the bulk became homogeneous. The pedigree of ICGV 86143 is ICGS 44 x (Robut 33-1 x NC Ac 2821-F₈) F₂-P₂₃-B₁-B₁-B₁-B₁-B₁.

Synonym

BSR 1

Table 1. Performances of ICGV 86143 and control cultivar JL 24, ICRISAT Asia Center, India, rainy and post-rainy seasons.

Genotype	Pod yield (t ha ⁻¹)											Increase over JL 24 (%)	Shelling percentage ¹	Oil content ² (%)	Protein content ² (%)	100-seed mass ³ (g)
	Rainy					Postrainy					Average					
	1986	1987	1989	1990	1986/87	1987/88	1989/90	1990/91	1990/91							
ICGV 86143	3.34	1.95	1.51	1.58	3.68	2.78	2.07	2.47	2.42	18	47	25	56			
JL 24	2.64	1.42	1.75	1.91	2.89	2.15	1.53	2.04	2.04	66	45	28	52			
SE	±0.202	±0.127	±0.100	±0.110	±0.124	±0.161	±0.110	±0.140								
Trial mean	2.72	1.71	1.59	1.69	3.30	2.51	2.06	2.20								
CV (%)	13	13	11	12	7	11	10	11								

1. Average of 6 locations.

2. Average of 5 locations.

3. Estimated from a sample of sound mature seeds, ICRISAT Asia Center, 1993/94 post-rainy season.

Performance

ICGV 86143 matures in 100-105 days in the rainy season in Tamil Nadu. In trials conducted by the All India Coordinated Research Project on Oilseeds at 10 locations during the 1992/93 postrainy season, ICGV 86143 produced a pod yield of 2.55 t ha⁻¹, 40% higher than the popular cultivar JL 24. In 43 rainy- and postrainy-season trials in Tamil Nadu, it produced 2.39 t ha⁻¹ of pods, 28% more than the local control cultivar Co 2. In yield trials at ICRISAT Asia Center and elsewhere, ICGV 86143 produced an average of 2.42 t ha⁻¹ of pods, 18% more than JL 24 (Table 1).

ICGV 86143 also outyielded local cultivars in the fourth International Early-maturing Groundnut Varietal Trial (1991/92). It gave pod yields 9% higher than the best local control in Bangladesh, 47% higher in Myanmar, and 23% higher in Sri Lanka.

Plant Characters

ICGV 86143 belongs to the Spanish botanical group and has an erect growth habit, sequential branching, and medium-sized, dark green, elliptic leaves. It has 4-5 primary and 2-5 secondary branches. The main axis is 14 cm high and the canopy 25 cm broad.

Pod/Seed Characters

ICGV 86143 has small to medium sized pods, mainly 2-seeded, with none to slight beak and constriction, and smooth to slight reticulation. The average shelling percentage is 66. The seeds are tan in color, with a 100-seed mass of 56 g, and contain 47% oil and 25% protein.



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**Plant Material Descriptions
from the
International Crops Research Institute for the Semi-Arid Tropics**

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
- 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 breeding lines and to promote their wide utilization. Requests for seed should be addressed to the Director General, ICRISAT, or to appropriate seed suppliers. Materials for research are sent by ICRISAT to cooperators and other users free of charge.