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# Groundnut Elite Germplasm

## ICGV 86015

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- Early-maturing, widely adapted, high-yielding breeding line
- Under consideration for release as Hung Loc 25 (HL 25) in Vietnam
- Under consideration for release as BARD 92 in Pakistan

At ICRISAT Asia Center

- Matures in 100-105 days in rainy season
- Shelling turnover 69%
- 100-seed mass 48 g
- Oil content 48%
- Protein content 24%



**ICRISAT**

**Plant Material Description no. 50**

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

## **Purpose of Description**

ICGV 86015 is an early-maturing, high-yielding breeding line. It is under consideration for release as Hung Loc 25 (HL 25) in Vietnam where it was found to be most suitable for intercropping with cassava and maize. It is also proposed for release as BARD 92 in Pakistan for double-cropping with wheat.

## **Origin and Development**

ICGV 86015 was developed at ICRISAT Asia Center, Patancheru, India. It was selected following the bulk-pedigree method from a cross between ICGS 44 and TG 2E made in 1981/82 postrainy season. The pedigree of ICGV 86015 is (ICGS 44 x TG 2E) F<sub>2</sub>-B<sub>1</sub>-B<sub>2</sub>-B<sub>1</sub>-B<sub>1</sub>-B<sub>1</sub>-B<sub>1</sub>. ICGS 44 (ICGV 87128) is an ICRISAT-bred, high-yielding, medium-duration cultivar released in 1988 for postrainy season cultivation in India. TG 2E is an early-maturing breeding line developed at the Bhabha Atomic Research Centre, Bombay, India, from a cross involving Dwarf Mutant and TG 3.

## **Synonyms**

ICGS(E) 56, BARD 92, Hung Loc 25 (HL 25).

## **Performance**

ICGV 86015 takes 100-105 days to mature in the rainy season at ICRISAT Asia Center, India. In Pakistan, it matures in 120-130 days, i.e., 50-60 days less than the local cultivar

**Table 1. Performance of ICGV 86015 and control cultivar JL 24 in 1984, 1985, and 1986 rainy and 1984/85, 1986/87, and 1987/88 post-rainy seasons, ICRISAT Asia Center, Patancheru, India.**

Variety	Pod yield (t ha <sup>-1</sup> )										Increase over JL 24 (%)	Shelling turnover <sup>1</sup> (%)	Oil content <sup>2</sup> (%)	Protein content <sup>2</sup> (%)	100-seed mass <sup>3</sup> (g)
	Rainy					Post-rainy									
	1984	1985	1986	1984/85	1986/87	1987/88	Average								
ICGV 86015	4.28	3.46	1.26	3.30	2.59	2.38	2.88	21	69	48	24	47.5			
JL 24	3.21	2.82	1.90	1.62	2.34	NT <sup>4</sup>	2.38		61	49	25	38.0			
SE	±0.251	±0.223	±0.121	±0.218	±0.176	±0.120									
Trial mean	3.43	2.74	1.19	2.40	2.79	2.27									
Number of varieties	31	49	36	25	36	25									
CV (%)	13	14	18	15	11	9									

1. Estimate from a bulk sample of 1985 rainy season trial.

2. Estimate from a bulk sample of 1992/93 post-rainy season crop.

3. Estimate from a bulk sample of 1992 rainy season crop.

4. Not tested.

Banki. In Vietnam, like the local cultivars, Giay and Ly, ICGV 86015 matures in 92-98 days in the rainy or summer-autumn season and in 88-93 days in the winter-spring season. In other countries, its maturity duration ranges from 85 days in Ghana to 134 days in Mozambique. ICGV 86015 has performed well in many countries. In Vietnam, it produced, on average, 2.0 to 2.8 t pods ha<sup>-1</sup>, outyielding the local cultivar Giay by 17-25%. In Pakistan, it gave, on average, 18% more pod yield than the local cultivar Banki (1.36 t ha<sup>-1</sup>). In yield trials at ICRISAT Asia Center, ICGV 86015 produced, on average, 2.88 t pods ha<sup>-1</sup> (21% more than the popular cultivar JL 24) (Table 1). In Nepal, ICGV 86015 produced an average pod yield of 2.67 t ha<sup>-1</sup> outyielding the local cultivar B 4 by 57% in 51 sets of farmers' field trials. It produced a pod yield of 2.93 t ha<sup>-1</sup> in Bangladesh, 3.18 t ha<sup>-1</sup> in Sri Lanka, 2.95 t ha<sup>-1</sup> in the Philippines, 3.76 t ha<sup>-1</sup> in Haiti, 3.32 t ha<sup>-1</sup> in Gabon, and 4.29 t ha<sup>-1</sup> in Ghana, outyielding the best local cultivar in these countries by 15-66%.

## **Plant Characters**

ICGV 86015 belongs to the Spanish botanical group and has an erect growth habit, sequential branching, and medium-sized, dark green elliptic leaves. It has 4-8 primary and 0-4 secondary branches. Its main axis is 22 cm high with a 43-cm broad canopy.

## **Pod/Seed Characters**

ICGV 86015 has mainly 2-seeded, small to medium-sized pods with none to slight beak and constriction, and smooth to slight reticulation. It has a shelling turnover of 69%. The seeds are tan-colored, with a 100-seed mass of 48 g, and contain 48% oil and 24% protein.



**ICRISAT**

**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.