Registration of ICGV 86143 Peanut Germplasm

ICGV 86143, a spanish peanut (*Arachis hypogaea* L. subsp. *fastigiata* Waldron var. *vulgaris* Harz) germplasm (Reg. no. GP-87, PI 596359) was bred at the Asia Center of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, Andhra Pradesh, India. It was released in 1994 by the Tamil Nadu Agricultural University, Tamil Nadu, India, as BSR 1 for rainfed cultivation in the western zone of the state. It was identified and released by the Plant Materials Identification Committee of ICRISAT in 1995.

ICGV 86143 originated from a cross made in the 1983 rainy season between 'ICGS 44' and an F_8 spanish breeding line derived from a cross between 'Robut 33-1' and NC Ac 2821. ICGS 44 (ICGV 87128, PI 537112) is a medium-duration spanish cultivar and Robut 33-1 (also known as 'Kadiri 3') is a short-duration virginia cultivar; both were released in India (4,1). NC Ac 2821 is a virginia germplasm line from North Carolina State University at Raleigh. Phenotypically similar plants in an F_3 progeny row of a high-yielding F_2 plant were selected and bulked at harvest. This process of bulking phenotypically similar plants was repeated each generation until the F_8 generation, when the bulk was phenotypically homogeneous. The pedigree of ICGV 86143 is ICGS 44/(Robut 33-1/NC Ac 2821-F_8)F_2-P_{23}-B_1-B_1-B_1-B_1-B_1.

ICGV 86143 averaged 2.55 t ha^{-1}, 40% more pod yield than the national control cultivar JL 24, in AICORPO (All India Coordinated Research Project on Oilseeds) trials conducted in the 1992–1993 postrainy season at 10 locations in the major groundnut growing regions of India. In 43 trials in the rainy and postrainy seasons in Tamil Nadu, ICGV 86143 averaged 2.39 t ha^{-1}, 28% more than the local cultivar Co 2 (3). In international trials organized by ICRISAT, it had 8 to 47% advantage in pod yield over the respective best local control cultivar in Bangladesh, Myanmar, and Sri Lanka.

ICGV 86143 matures in 100 to 105 d during the rainy season in Tamil Nadu. It has erect growth habit and elliptical, medium-sized dark green leaves (2). The number of primary branches ranges between four and five; and of secondary branches, between two and five. Its main stem is approximately 14 cm long, with a canopy width of approximately 25 cm, when measured at 85 d after planting during the postrainy season at the ICRISAT Asia Center. Its pods are mainly two-seeded, small to medium in size (27 mm average length, 14 mm average breadth), with no or slight beak and constriction and smooth to slight reticulation. The meat content of ICGV 86143 averages 66%. Its seeds have tan testa, weigh 56 g 100 seed^{-1}, and contain, on average, 469 g kg^{-1} oil and 250 g kg^{-1} protein (3).

Breeder seed of ICGV 86143 is maintained by the Genetic Resources Division, ICRISAT Asia Center, Patancheru P.O., Andhra Pradesh 502 324, India. Limited quantities of seed are available upon request. Seeds of ICGV 86143 are also deposited with the National Seed Storage Laboratory, 1111 S. Mason St., Fort Collins, CO 80523-4500.

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Published in Crop Sci. 37:1986 (1997).

Registration of Camp-lx$_2$ Soybean Germplasm Line with Small Seed and Null for Lipoxygenase-2

Soybean [*Glycine max* (L.) Merr.) germplasm line Camp-lx$_2$ (Reg. no. GP-184, PI 596540) was developed by the Kentucky Agricultural Experiment Station and released in 1996. Camp-lx$_2$ has the small seed size common in food-type soybean used in natto production, combined with the elimination of the enzyme lipoxygenase-2, which, when present, can produce off-flavors in soybean products (4).

Camp-lx$_2$ is a backcross derived line with the pedigree 'Camp'^{2} × ('Vance'^{2} × L_2-3). Vance was released in 1986 by the Virginia Agricultural Experiment Station for its small seed size, approximately 90 mg seed^{-1}. The parents of Vance were 'Essex' (6) and an unknown *Glycine soja* (Sieb. & Zucc.) accession (G. Buss, personal communication, 1996). Camp (PVP no. 8900271), released in 1989 by the Virginia Agricultural Experiment Station, was a reselection out of Vance for less green coloration on the seed coats and smaller seed size, approximately 75 mg seed^{-1} (G. Buss, personal communication, 1996). L_2-3 (2) was the donor of the *lx$_2$* lipoxygenase null allele which conditions the absence of lipoxygenase-2 (1). During backcrossing, the tight linkage between *Lx$_1^b$* and *lx$_2$* allowed *Lx$_2$lx$_2$* heterozygotes to be selected by electrophoretically identifying *Lx$_1^a$Lx$_1^b$* heterozygotes (5). Homozygous *lx$_2$lx$_2$* BC_3F_2 plants were identified using the lipoxygenase-2 spot test (3). The BC_3F_2-derived lines were compared with Camp in field tests at Lexington, KY, during 1994 and 1995.

Camp-lx$_2$ is similar to Camp in morphological and agronomic characteristics. It has narrow leaflets, purple flowers, gray pubescence, tan pods at maturity, determinate stem termination, and yellow seeds with yellow hila. Camp-lx$_2$ is relative maturity 5.3. Seeds have an average size of 72 mg seed^{-1}, with approximately 420 g kg^{-1} protein and 160 g kg^{-1} oil on a dry weight basis. Seed yield of Camp-lx$_2$ was equal to that of Camp in the 1994 and 1995 tests. Camp-lx$_2$ is expected to be lower yielding than standard Maturity Group V cultivars, as its recurrent parent Vance was approximately 15% lower yielding than Essex in multiple Kentucky environments (7). Camp-lx$_2$ is adapted to soybean producing regions at latitudes where Maturity Group V cultivars are grown.

Small quantities of seed for research and breeding purposes can be obtained from the corresponding author for at least 5 yr.

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