REGISTRATION OF GERMPLASM

Registration of ICGV 86564 Peanut Germplasm

'ICGV 86564' (Reg. no. GP-65, PI 573007) is a large-seeded virginia peanut (*Arachis hypogaea* L. subsp. *hypogaea* Krap. & Rig. var. *hypogaea* Greg.), developed at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, India. It was released in 1992 by the Plant Material Identification Committee of ICRISAT because of its large virginia pod and seed size, high oil content, and wide adaptability.

ICGV 86564 was bred following the bulk pedigree method. It originated from the cross Ah 114/NC Ac 1107. Ah 114 (ICG 4170) belongs to subsp. *hypogaea* var. *hypogaea* and originated in India. NC Ac 1107 (ICG 2296), which also belongs to subsp. *hypogaea* var. *hypogaea*, is an improved breeding line derived from the cross NC Bunch/PI 121067 at North Carolina State University. Selected phenotypically similar plants in the F_2 were bulked together. The first selected bulk was designated as B_1. The bulk was again grown, and the process of bulking of selected phenotypically similar plants was repeated until the F_{10} generation, when the selected bulk stabilized. The pedigree of ICGV 86564 is (Ah 114/NC Ac 1107) F_2-B_1-B_1-B_1-B_1-B_1-B_1-B_1-B_1.

ICGV 86564 has a Decumbent 3 growth habit, with alternate-branching, elliptic, dark green medium-sized leaves, and light purple pigmented pegs (1). There are 5 to 10 primary and 11 to 22 secondary branches. It matures in 120 to 130 d in the rainy (June–October) season, and in 140 to 150 d in the postrainy (November–April) season at Patancheru, India. It has mainly two-seeded large virginia pods, with slight-to-moderate pod beak and constriction, and an average meat content of 69%. Pod reticulation and ridges are moderate. The seeds are tan, with an average 100-seed mass of 91 g. The average seed composition is 51% oil, 22% protein, 1.9 oleic/linoleic fatty acid ratio, 1.2 polyunsaturated/saturated fatty acid ratio, and an iodine value of 90 (2).

ICGV 86564 is a dual-purpose improved germplasm line suitable for direct consumption as seed and oil. It performs well under high-input management. In international trials during the 1987 to 1989, it outyielded the local cultivars in Burundi (76% more than 'G18'), Nepal (25% over 'B4'), Pakistan (61% more than 'Banki'), and Zambia (16% more than 'MGS 2'). In India, it averaged 7% more pod yield than 'Chandra' in various replicated yield trials (2). It is becoming very popular among farmers in Tamil Nadu and Maharashtra states of India. Farmers in Maharashtra call ICGV 86564 'AP kaju 49'. Sri Lanka is considering its possible release for cultivation under irrigated high-input conditions in System B in the Mahaweli project area.

The Genetic Resources Division, ICRISAT Center, Patancheru, Andhra Pradesh 502 324, India, maintains the seed of ICGV 86564.

S. L. Dwivedi,* S. N. Nigam, G. V. S. Nagabhushanam, Y. L. C. Rao, and R. W. Gibbons (3)

References and Notes

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Registration of D92-6487 Soybean Germplasm Line Resistant to Phytophthora Rot and Soybean Cyst Nematode Races 3 and 14

Soybean [*Glycine max* (L.) Merr.] germplasm line D92-6487 (Reg. no. GP-160, PI 573188) was developed by the USDA-ARS, Stoneville, MS, in cooperation with the Mississippi Agricultural and Forestry Experiment Station, Stoneville, and released June 1993. This line has value as a parent line because of its resistance to phytophthora rot, caused by *Phytophthora sojae* (J.J. Kaufmann & J.W. Gerdemann), and Races 3 and 14 of the soybean cyst nematode (*Heterodera glycines* Ichinohe).

The line D92-6487 was developed by backcrossing to transfer the gene *Rps1-k* into a Bedford (2) genetic background. It was selected in the F_5 generation from the cross 'Bedford'*7/L77-2015. The line L77-2015 is from 'Clark'*6/'Kingwa' (1,3). The reaction of 12 F_3 plants was used to identify lines uniformly resistant to phytophthora rot. Selected resistant lines were used as pollen parents for each crossing cycle. Seedlings were inoculated by the hypocotyl puncture method (4). Because only one gene was being transferred, Race 1 of the pathogen was used in all inoculations. After the sixth backcross, the F_3 line uniform for resistance to phytophthora rot was increased, and 100 F_4 plants were inoculated with Race 1. Evaluation for the soybean cyst nematode (SCN; *Heterodera glycines* Ichinohe) Races 3 and 14 was conducted by L.D. Young at Jackson, TN (5). The F_3 line that became D92-6487 had the same level of resistance to Races 3 and 14 as Bedford. D92-6487 was retested for resistance to SCN Races 3 and 14 after the F_5 generation to verify earlier results.

D92-6487 is a Maturity Group V germplasm line, and is very similar to its recurrent parent Bedford for all other observable traits. In a replicated yield test on clay soil at Stoneville in 1992, D92-6487 yielded 2217 kg ha^{-1}, compared with 2040 kg ha^{-1} for Bedford.

A sample of 50 seeds for research purposes will be available for at least 5 yr from the corresponding author.

T. C. Kilen* and L. D. Young (6)

References and Notes

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