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- B. A. McBlain, R. J. Fioritto, J. K. Hacker, and M. M. Zimmerly. Dep. of Agronomy; A. F. Schmitthenner and S. J. Carson, Dep. of Plant Pathology; R. L. Cooper and R. J. Martin, Dep. of Agronomy and USDA-ARS, Ohio Agric. Res. and Development Ctr., The Ohio State Univ., Wooster, OH 44691. Research supported in part by gifts from the Ohio Seed Improvement Association. Salaries and research support provided by state and federal funds appropriated to the Ohio Agric. Res. and Development Ctr., The Ohio State Univ. Manuscript 43.92. Registration by CSSA. Accepted 31 Oct. 1991. \*Corresponding author.

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#### REGISTRATION OF ICGV 87157, AN ELITE PEANUT GERMPLASM WITH MULTIPLE RESISTANCE TO DISEASES

ICGV 87157, a spanish-type peanut breeding line (*Arachis hypogaea* L. subsp. *fastigiata* var. *vulgaris*) (Reg. no. GP-56, PI 556992) that possesses resistance and/or tolerance to multiple diseases and insect pests, was released by the ICRISAT Plant Material Identification Committee (PMIC) in 1990. ICGV 87157 was tested experimentally as ICG(FDRS)4.

ICGV 87157 originates from a single plant selection made in an F<sub>3</sub> population of a cross between a spanish cultivar, Argentine, and a rust (*Puccinia arachidis* Speg.) and late leaf spot [*Phaeoisariopsis personata* (Berk. & M.A. Curtis) Arx] resistant parent, PI 259747 (1) in the foliar diseases screening nursery. The single-plant progeny was further advanced following bulk selection in the foliar diseases nursery. ICGV 87157 has an erect growth habit, sequential flowering, and medium to medium-large elliptic light green leaves. It matures in ≈110 d in the rainy season in India and has 64% meat, two-seeded pods with slight to prominent ridges, and moderate reticulation. Its seeds are tan in color, with a 100-seed weight of 42 g, and contain 48% oil and 25% protein (2). ICGV 87157 possesses better pod shape, acceptable seed color, and higher shelling percentage than its parent PI 259747.

ICGV 87157 is resistant to rust and tolerant to late leaf spot (2). When scored in replicated trials using a scale of 1 to 9 (where 1 = no disease and 9 = 50-100% foliage destroyed), it maintained its rust resistance superiority over the popular cultivars in India (2.7 score, vs. 7.5 for 'JL 24'), Thailand (2.5 score, vs. 4.7 for 'Tainan 9'), Bangladesh (2.0 score, vs. 4.0 for 'Dacca-1'), and Republic of Guinea (4.2 score vs. 7.4 for 'Local'). Similarly, it showed higher levels of tolerance to late leaf spot than popular cultivars at several locations in India (5.2 score, vs. 7.6 for JL 24), Republic of Guinea (3.1 score, vs. 5.6 for Local), and Sudan (2.1 score, vs. 3.8 for 'Kiriz'). ICGV 87157 showed less incidence of bud necrosis disease caused by tomato spotted wilt virus under field conditions compared with JL 24, in replicated trials conducted in three locations

in India. The incidence of stem and pod rots caused by *Sclerotium rolfsii* Sacc. is also low in this elite germplasm line (2).

ICGV 87157 suffers less leaf miner (*Aproaerema modicella* Deventer) and leaf hopper (*Empoasca kerri* Pruthi) damage than the popular Indian cultivar JL 24 (2). It shows better recovery for pod yield and total biomass from mid-season drought compared with the mean values of 121 erect bunch genotypes tested in a line-source sprinkler screening technique at ICRISAT Center (2).

ICGV 87157 has averaged 23.5% higher pod yield than JL 24 and 12.1% than J 11, another popular cultivar in India. The average pod yield of ICGV 87157 in these trials was 2100 kg ha<sup>-1</sup>. It has also outyielded the local cultivars in Myanmar, Swaziland, Malawi, and the Philippines, and outyielded its parent, PI 259747, in trials at ICRISAT Center.

The ICRISAT Center, Patancheru, maintains breeder seed of this germplasm.

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