Registration of ICGV 88438, ICGV 89214, and ICGV 91098 Peanut Germplasm

Three large-seeded peanut (*Arachis hypogaea* L.) germplasm lines, ICGV 88438 (Reg. no. GP-84, PI 596514), ICGV 89214 (Reg. no. GP-85, PI 596515), and ICGV 91098 (Reg. no. GP-86, PI 596516), were released in 1996 by the ICRISAT Plant Material Identification Committee because of their high yield, high 100-seed weight, and greater oleic/linoleic (O/L) fatty acid ratio. Earlier, after 3 to 6 yr (1990–1995) of evaluation in Cyprus, they had also been released in 1995 by the Agricultural Research Institute at Nicosia, Ministry of Agriculture, Natural Resources and Environment, for cultivation in the summer season with irrigation in the coastal region of Paphos; ICGV 88438 was released as 'Nikoklia', ICGV 89214 as 'Kouklia', and ICGV 91098 as 'Gigas'.

An advanced breeding line introduced in 1987 at ICRISAT Center, Patancheru, India, from North Carolina State University (NCSU) at Raleigh was designated, after initial multiplication, as ICGV 88438. Its pedigree is GP NC 343/NC Ac 17367. Both GP NC 343 (PI 565479) and NC Ac 17367 belong to the Virginia botanical group and originated from NCSU. GP NC 343 is resistant to southern corn rootworm (*Diabrotica undecimpunctata howardi* Barber) (2), thrips (*Thrips palmi* Karny), leaf hopper (*Empoasca kerri* Pruthi), and termites (*Odontotermes* spp.) (1). ICGV 89214 and ICGV 91098 were developed at ICRISAT. Beginning in the F$_2$ generation, high-yielding, large-seeded plants were selected and bulked into phenotypically similar groups. The process of bulking and selection of phenotypically similar plants, based on plant type and pod and seed characteristics, continued in later generations until the selected bulks stabilized. Pedigrees of these two genotypes are as follows: ICGV 87123/ICG 6150 F$_2$-B$_2$-B$_2$-Bi for ICGV 89214 and ICGV 87164/ICG 89214 F$_2$-B$_2$-B$_2$-Bi for ICGV 91098. ICGV 87123 ('ICGS 11', PI 478788) has been released in India (6), and in Sri Lanka as 'ANKG 2'. ICGV 6150 (PI 269698) is a germplasm line that originated in Argentina (7), ICGV 86564 (PI 573007) has been released as ‘Walawe’ in Sri Lanka (3). ICGV 87164 is a high-yielding, large-seeded breeding line developed at ICRISAT.

ICGV 88438, ICGV 89214, and ICGV 91098 belong to the Virginia botanical group (subsp. *hypogaea* var. *hypogaea*), but they differ in other characteristics. Growth habit, primary and secondary branches, plant height, and canopy width of these genotypes were recorded 1 wk before harvest at Acheleia, Cyprus, during the 1995 crop season.

ICGV 88438 has a Decumbent 3 growth habit (4) and medium-sized green to light green ovate leaves. It has 7 primary and 7 secondary branches. Plant height and canopy width are 30 cm. It has large, two-seeded pods with moderate beak and constriction. Pod reticulation is moderate to prominent. It has 71% meat content and a 103 g 100 seed$^{-1}$ weight (averaged over 10 locations in Cyprus, 6 yr). Seeds of ICGV 88438 are pale tan and contain 27% protein and 52% oil, with an O/L ratio of 2.2.

ICGV 89214 has an erect growth habit (4) and large, dark green, obovate leaves. It has 8 primary and 4 secondary branches. Plant height and canopy width are 30 cm. It has mainly large, two-seeded pods characterized by moderate beak and constriction. One-seeded pods also occur. Pod reticulation is more prominent than the latter. ICGV 89214 is tolerant of lime-induced iron chlorosis (5).

Limited quantities of seed of these germplasm lines can be obtained from the Agricultural Research Institute, Ministry of Agriculture, Natural Resources and Environment, P.O. Box 2016, Nicosia, Cyprus (fax +357 2 316770). Seed has also been deposited with the National Seed Storage Laboratory, 11111 Collins, CO 80521-4500.

A. HADJICHRISTODOULOU, S. L. DWIVEDI, S. N. NIGAM, G. ALEXANDROU, C. THEODORIDES, AND M. MOUZOURIS

References and Notes


