

Table 1. Plant introductions used in developing Tifrust-5 through Tifrust-12, their ICRISAT accession (ICG) number, and testa color of the released line.

Germplasm no.	ICG no.	Sel. from PI no.	Testa color†
Tifrust-5 (GP 22)	7894	393641	lt. tan with purple stripes (174C/79A)
Tifrust-6 (GP 23)	7895	393643	light tan (173D)
Tifrust-7 (GP 24)	7896	393646	purple (59B)
Tifrust-8 (GP 25)	7888	393516	white with red blotches (155D/42A)
Tifrust-9 (GP 26)	7889	393517	off white (158A)
Tifrust-10 (GP 27)	7890	393526	purple (79A)
Tifrust-11 (GP 28)	7893	393531	tan with purple stripes (174B/79C)
Tifrust-12 (GP 29)	7891	393527	red (53A)

† R. H. S. Colour Chart, The Royal Horticultural Society, London, 1966.

Tifrust-8 (GP 25) plants are large and tall (ca. 90 cm), with sparse branching, green stems, dark green foliage, orange flowers, late maturity (150 to 160 days), and small seed (412 mg). The germplasm has good resistance to both leafspots.

Tifrust-9 (GP 26) has small plants with short (49 cm) mainstems, medium branching, and medium-late maturity (145 to 150 days). Stems are green, foliage light green, flowers orange, and seed are small (415 mg). Plants are susceptible to both leafspots.

Tifrust-10 (GP 27) plants average 85 cm tall, are vigorous, have purple-green stems and dark green foliage, and mature late (> 150 days). Inflorescences have 1 to 3 flowers, whose standards are deeply pigmented. Seed average 455 mg. Resistance to both leafspotting fungi is moderate.

Tifrust-11 (GP 28) has large (76 cm) plants that mature in 145 to 155 days. The stems are green, the foliage is medium green, and the standards orange. Plants are productive and seeds average 487 mg. The genotype has moderate resistance to early leafspot but is susceptible to late leafspot.

Tifrust-12 (GP 29) is a virginia-type (ssp. *hypogaea* var. *hypogaea*) peanut: the branching pattern is alternate and inflorescences do not occur in leaf axils of the mainstem. Plants average 59 cm in height, branching is profuse and coarse, stems are green and foliage medium green, and standards orange. Fruit set is good, pods are large with medium constriction, and seeds average 810 mg. The testa is often split. Maturity is medium late (145 to 150 days), and plants are susceptible to both leafspots.

Limited quantities of seed (up to 25) will be made available upon written request and agreement to appropriately recognize the source as a matter of open record when these germplasms contribute to the development of a new cultivar or genetic information.

Seed stocks will be maintained and distributed by the Dep. of Agronomy, Univ. of Georgia, Coastal Plain Stn., Tifton, GA 31793, and by the International Crops Research Institute for the Semi-Arid Tropics, Patancheru P.O., Andhra Pradesh 502 324, India.

REGISTRATION OF PEANUT GERmplASMS TIFRUST-1 TO TIFRUST-4¹ (Reg. No. GP18 to GP21)

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Four lines of peanut (*Arachis hypogaea* L.) were released by USDA-ARS, the Univ. of Georgia Agric. Exp. Stn., Coastal Plain Station, and the Int. Crops Res. Inst. for the Semi-Arid Tropics (ICRISAT) in August 1981. These lines provide resistance to peanut rust caused by *Puccinia arachidis* Speg. The disease is now established in most peanut-producing areas of the world and causes major economic loss in crop yield and quality.

In field trials with a collection of 700 peanut accessions exposed to a natural epiphytotic at Tifton, Ga., in 1976, we identified several good sources of resistance to the rust fungus. Resistance was confirmed in the winter nurseries at Isabella, Puerto Rico in 1977, 1978 and 1979. Selection to minimize phenotypic variation within lines was practiced at both Tifton and Isabella. Progeny of the selected lines were among 6,000 peanut accessions evaluated for rust reactions in field tests where intermittent spreader rows of susceptible cultivars, or supplemental inoculation with collected uredospores, were used to insure uniformity of disease pressure.

Levels of resistance for the four selected genotypes were greater than those in any standard commercial cultivar evaluated in these collections. They classify botanically as *A. hypogaea* ssp. *fastigiata* var. *fastigiata*, and share these traits: an erect (bunch) growth habit, a sparse and sequential branching pattern, the occurrence of inflorescences in some mainstem leaf axils, and little fresh-seed dormancy. They differ in maturity or seed size and/or in flower or testa color (Table 1). As a group the rust resistant selections mature later and are less productive than currently grown cultivars.

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Table 1. Plant introductions used to develop Tifrust-1 to Tifrust-4, their ICRISAT accession (ICG) number, country of origin, and seed color of the released germplasm.

Germplasm No.	ICG No.	Sel. from P.I. No.	Country of origin	Seed color†
Tifrust-1 (GP18)	7881	215696	Peru	purple (59A)
Tifrust-2 (GP19)	7886	390593	Peru	light tan (173D)
Tifrust-3 (GP20)	7887	390595	Peru	purple (79A)
Tifrust-4 (GP21)	7898	407454	Ecuador	tan (174D)

† Royal Horticultural Society Colour Chart (RHS), London, U.K.

Each of the lines was derived from germplasm collected in South America as documented in Table 1. Their maturity rating when grown at Tifton, Georgia (31°27' N, 83°35' W) and other characteristics are briefly described.

Tifrust-1 (GP18) plants mature late at 145 to 155 days, have medium green leaves, and have inflorescences that frequently elongate to several cm. The standard petals are deeply pigmented, and the seeds average 0.5 g. This germplasm has exhibited appreciable resistance at Tifton, Ga., to the leafspot caused by *Cercospora arachidicola* Hori and at ICRISAT to the leafspot caused by *Cercosporidium personatum* (Berk. & Curt.) Deighton.

Tifrust-2 (GP19) plants mature at about 140 days, have light green foliage, orange standard petals, small seeds (ca. 0.4 g), and moderate resistance to *C. personatum*.

Tifrust-3 (GP20) plants average 140 days to mature, have light green foliage and deeply pigmented standard petals. Seeds are comparatively large (0.6 g). Resistance to *C. personatum* was observed at ICRISAT.

Tifrust-4 (GP21) plants are tall and coarse, very sparsely branched, and mature in 140 days. They have light green foliage, orange standard petals, and medium small (0.45 g) seeds. The genotype is susceptible to *C. personatum*.

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