Seed has been submitted to the National Plant Germplasm System (NPGS) for post-PVP expiration distribution. Further inquires on small quantities of seed for research purposes should be directed to the author.

**References**


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**Registration of ‘AP-3’ Peanut**

D. W. Gorbet*

"A" P-3’ peanut (*Arachis hypogaea* L. subsp. *hypogaea* var. *hypogaea*) (Reg. No. CV-99, PI 633912) cultivar was developed by the University of Florida Agricultural Experiment Station and was approved for release in 2003. AP-3 is a medium maturity (137–140 d), runner market-type peanut cultivar with excellent resistance to spotted wilt caused by *Tomato spotted wilt virus* (TSWV), a *Tospovirus*, and it has good to excellent resistance to stem rot or white mold, caused by *Sclerotium rolfsii* Sacc. AP-3 was selected from a cross made in 1990 between the breeding line OKFH15 and the germplasm line NC3033 (Beute et al., 1976) and was tested experimentally as UP98116 or 90x7-3-5-1-b2-B. The breeding line OKFH15 is a sister line of ‘Okrun’ (Banks et al., 1989), which has ‘Florunner’ (Norden et al., 1969) as a parent and is phenotypically very similar to Florunner. NC3033 is a germplasm line released by North Carolina State University and has resistance to Cylindrocladium black rot (CBR) (caused by *Cylindrocladium parasiticum* Crous, Wingfield & Alfenas, teleomorph: *Calonectria ilicicola* Boedijn & Reitsma) and stem rot. The cross that produced AP-3 was made primarily to produce material to select for resistance to stem rot and CBR in a runner market-type peanut. AP-3 is a sister line of ‘Carver’ (Gorbet, 2006b), which has some resistance to CBR and TSWV.

AP-3 was developed by pedigree selection under good spray management for control of leaf spot [*Cercosporidium personatum* (Berk. & M.A. Curtis) Deighton], but no fungicides were applied to control stem rot and CBR. Single plant selections were made in the F₁ through F₅ generations in space-planted nurseries under good production management 3-yr rotation. Fields had low to moderate pressure from CBR and stem rot. Seeds from two F₅ plants were bulked and tested in field tests at Marianna, Florida, and were evaluated in yield tests in Florida through 2003 with a pod yield and TSWV resistance advantage over the dominant commercial runner check, ‘Georgia Green.’

AP-3 has shown excellent resistance to TSWV and stem rot in Florida and Georgia field tests. Data from mostly in Florida, showed a 31% pod yield advantage over Georgia Green (5196 vs. 3960 kg ha⁻¹), has a prostrate to semiprostrate growth habit, lighter green foliage color than Georgia Green, prominent main stem. The pods and seed were somewhat later than for Georgia Green or other tests. AP-3 has lower total sound mature kernel (TSMK) grade than Georgia Green with more extra-large kernels. TSMK grade is normal with an oleic to linoleic ratio of 2.8 with 48% oil content in the seed, compared with 51% for Georgia Green.

In Florida studies (2001–2004) to evaluate the F₁ through F₅ generations in space-planted nurseries under good production management 3-yr rotation. Fields had low to moderate pressure from CBR and stem rot. Seeds from two F₅ plants were bulked and tested in field tests at Marianna, Florida, and were evaluated in yield tests in Florida through 2003 with a pod yield and TSWV resistance advantage over the dominant commercial runner check, ‘Georgia Green.’

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