Registration of ‘Georgia Greener’ Peanut

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‘G'orgia Greener’ (Reg. No. CV-95, PI 644219) is a new high-yielding, *Tomato spotted wilt virus* (TSWV)-resistant, runner-type peanut (*Arachis hypogaea* L. subsp. *hypogaea* var. *hypogaea*) cultivar that was released by the Georgia Agricultural Experiment Stations in 2006. It was developed at the University of Georgia, Coastal Plain Experiment Station, Tifton, GA.

Georgia Greener originated from a cross made in 1996 between ‘Georgia Green’ (Branch, 1996) and ‘C-99R’ (Gorbet and Shokes, 2002). Pedigree selection was practiced within the F$_2$, F$_3$, and F$_4$ populations for TSWV resistance, desirable pod shape, runner seed size, testa color, growth habit, maturity, high yield, and grade characteristics. Performance testing began in the F$_4$ generation with the advanced pure-line selection, GA 011568.

During three years (2003–2005) in 16 multilocation Georgia tests planted in mid-May, and eight multilocation Georgia tests planted in mid-April, Georgia Greener had among the lowest TSWV incidence and the greatest total disease resistance, as well as among the highest pod yield (4638 kg ha$^{-1}$), total sound mature kernel (TSMK) grade (75%), and dollar value return per hectare ($1863 ha$^{-1}$), when compared to other runner-type peanut cultivars. In these same Georgia tests, the check cultivar Georgia Green had an average yield, grade, and dollar value of 4026 kg ha$^{-1}$, 72%, and $1584 ha$^{-1}$, respectively.

When tested in the 2005 Uniform Peanut Performance Tests (UPPT), Georgia Greener was also found to be among the highest in pod yield (3643 and 5572 kg ha$^{-1}$) and TSMK grade (72 and 77%) averaged across the southeast (GA, FL, and AL) and southwest (TX and OK) UPPT locations, respectively (Branch et al., 2006). At these same 2005 UPPT locations, the check cultivar ‘Florunner’ (Norden et al., 1969) had an average yield of 1071 and 5286 kg ha$^{-1}$ and an average grade of 55 and 74%, respectively.

Georgia Greener has an intermediate or decumbent runner growth habit and medium maturity similar to Georgia Green. However, Georgia Greener, as the name implies, has a darker green foliage. Seeds of Georgia Greener have tan testa color; whereas seeds of Georgia Green have pink testa color.

Georgia Greener has a typical runner seed size similar to the Georgia Green cultivar. In three years (2003–2005) of shelling outturn distribution, Georgia Greener averaged significantly higher percentage of jumbo runner seed than Georgia Green (31 vs. 18%, $P < 0.05$), but significantly fewer medium size seed (30 vs. 40%, $P < 0.05$) and No. 1 seed (6 vs. 8%, $P < 0.05$). Georgia Greener is very similar to Georgia Green in blanchability, protein content, oil content, and roasted flavor. Oleic (O) to linoleic (L) fatty acid ratio are slightly higher (2.5 vs. 1.9), and iodine values are slightly lower (90 vs. 94), respectively for Georgia Greener compared to Georgia Green but neither are high-oleic cultivars.

U.S. Plant Variety Protection (PVP) is pending for Georgia Greener. Breeder seed of Georgia Greener will be maintained by the University of Georgia, Coastal Plain Experiment Station at Tifton, GA. Foundation seed stock will be available from the Georgia Seed Development Commission, 2420 S. Milledge Avenue, Athens, GA 30605. Small quantities of seed may be obtained from the corresponding author for at least five years. Recipients of seeds are asked to make appropriate recognition of the source if Georgia Greener is used in the development of a new cultivar or germplasm line.

References