

APPLICATION FOR APPROVAL OF X CULTIVARS ___ ASSOCIATE CULTIVARS
(Please check appropriate type of application)

1. Crop: Peanut (Arachis hypogaea L.)
2. Experimental no. or name: GA 011557 and GA 011568
3. Pedigree and history: Both GA 011557 and GA 011568 were developed from the same cross made in 1996 between Georgia Green X C-99R. Pedigree selection was practiced within the early segregating populations. However, each was derived from different F₃ plants. Yield tests have been conducted for the past three years (2003-05).
4. Description: GA 011557 is being proposed for release as a new large-seeded runner-type peanut cultivar; whereas, GA 011568 is being proposed for release as a new regular runner seed size peanut cultivar. Both have an intermediate runner growth, high levels of tomato spotted wilt virus resistance, and medium maturity.
5. Station(s) where developed: Coastal Plain Experiment Station
6. Participating scientist(s): Wm. D. Branch

Copy of the appropriate and adequate data comparing proposed release to standard cultivar must be attached to this form. *Waller-Duncan's T-test (k-ratio = 100) was used for mean separation in all tables (1-16).

7. In what respect is the new cultivar superior to the cultivar now in use? Or reasons for proposing release as an associate cultivar:
 - A. During the past three-years (2003-05) when averaged over the Georgia Official Statewide Variety Tests (Tables 1-3), GA 011557 and GA 011568 were found to be among the lowest in TSWV incidence and total disease (TD) incidence, highest in pod yield, TSMK grade, and dollar value return per acre compared to all of the other runner and virginia genotypes tested each and every year.
 - B. During the past two-years (2004-05) at multilocations in Georgia when planted early in mid-April to increase TSWV disease pressure (Tables 4 and 5), GA 011557 and GA 011568 were again found to be among the lowest in TSWV incidence and total disease (TD) incidence, highest in pod yield, TSMK grade, and dollar value return per acre compared to all of the other runner genotypes tested both years.
 - C. Also during the past three-years (2003-05) when grown without any fungicide or insecticide to assess for disease and insect resistance (Tables 6, 7, and 8), GA 011557 and GA 011568 were each found to have among the highest levels of TSWV resistance, but were more susceptible to both early and late leafspot compared to the resistant parent, C-99R.

- D. During 2004 for GA 011557 (Table 9) and during 2005 for GA 011568 (Table 10) when averaged across all U.S. test locations, both GA 011557 and GA 011568 were among the highest in pod yield compared to other advanced breeding lines and newly released cultivars. Thus, GA 011557 and GA 011568 have very good yield stability and a wide range of adaptability.
- E. Both GA 011557 and GA 011568 have excellent shelling outturn and shelling rate or efficiency as well (Tables 11 and 12). GA 011557 has significantly more jumbo runner seed than GA 011568 and Georgia Green. GA 011568 has a similar proportion of jumbo and medium runner size, and both GA 011557 and GA 011568 have few No. 1's compared to Georgia Green.
- F. The major difference between GA 011557 and GA 011568 is in pod and seed size (Tables 13 and 14). GA 011557 is a larger runner-type than GA 011568.
- G. GA 011557 and GA 011568 have each been found to be similar in blanchability and roasted flavor, and slightly higher in O/L ratio and iodine values compared to the U.S. peanut industry leading runner cultivar, Georgia Green. (Tables 15 and 16).

8. Method of propagation: Seed
9. Amount of breeder seed stocks available (if applicable): 50 lbs.
10. Amount of foundation seed stocks available (if applicable): 2000 lbs (GA 011557) and 100 lbs (GA 011568)
11. Amount of cutting or bud material available for vegetatively propagated material for nursery distribution (if applicable): n/a
12. Is there likely to be unusual difficulty encountered in the production of any class of seed stocks: None
13. Three suggested names for the cultivar: (Names preferred by the breeder:)
'Georgia-06G' for GA 011557 and
'Georgia Greener' for GA 011568
14. Name approved by plant cultivar and germplasm release committee:
15. Form of intellectual property protection: U. S. Plant Variety Protection.
16. Is a royalty assessment recommended: Yes.

RECOMMENDED BY:

A. Wm. D. Branch
Originating Scientist

B. Lynn Halley
Department Head

C. Allyson Anna
Chairperson, GAES Plant Cultivar and
Germplasm Release Committee

D. Steve A. Tyson
Assistant Dean
Appropriate Station

E. R. A. Shubert
Associate Dean for Research

F. _____

APPROVED:

[Signature]
Dean and Director
College of Agricultural and Environmental Sciences