

APPLICATION FOR RELEASE

APPLICATION FOR RELEASE OF (check one):

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| <input checked="" type="checkbox"/> CULTIVAR | <input type="checkbox"/> PARENTAL LINE |
| <input type="checkbox"/> ASSOCIATE CULTIVAR | <input type="checkbox"/> GENETIC STOCK |
| <input type="checkbox"/> GERMPLASM | |

1. Crop: Peanut (*Arachis hypogaea* L.)
2. Experimental no. or name: GA 082522
3. Pedigree and history: GA 082522 was developed from a cross made in 2003 between Georgia-02C x F₄ (Georgia-01R x COAN). Pedigree selection was practiced within the early segregating populations (F₂-F₅). Yield tests have been conducted for the past five years total and three-years (2011-13) compared to other check cultivars.
4. Description of plant material: GA 082522 is being proposed for release as a new medium small-seeded, high-oleic, runner-type peanut cultivar. It has an intermediate runner growth habit, medium maturity, and tan testa color. It also has a high level of resistance to tomato spotted wilt virus (TSWV) and root-knot nematode (RKN). For these past five years (2009-2013), field observations and data indicate that the characteristics of GA 082522 are very uniform and stable, and no off-types or variants have been found.
5. Need for and potential users of plant material: This potential new cultivar has very good stability and a wide range of adaptability throughout the southeast U.S. peanut production area. Possibly several peanut seed companies, manufacturers, and growers should be interested in the use of this plant material, especially for field areas with high RKN populations.
6. Justification for release:
 - A. During the past three-years (2011-13) averaged over 29 multilocation tests in Georgia, GA 082522 was found to have significantly less TSWV and total disease incidence, higher yield, grade, and higher dollar value return per acre compared to Tifguard (Table 1). GA 082522 also has a smaller seed size (more number per pound) compared to Tifguard which should save growers in seed cost at planting.
 - B. During the past three-years (2011-13), GA 082522 was also found to be comparable to many of the other runner-type cultivars in yields, grade, and dollar value returns per acre (Tables 2-7). GA 082522 also has moderate leafspot, CBR and white mold resistance (Tables 10-13).
 - C. GA 082522 has a very high level of root-knot nematode (RKN) resistance (Table

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- 9). It is similar to Tifguard, another TSWV and RKN-resistant cultivar with low gall ratings and high pod yields. However, GA 082522 also has the desirable high-oleic trait (Table 16); whereas, Tifguard does not.
- D. During 2012 when averaged across all U.S. test locations (Table 8), GA 082522 was likewise found to be among the highest in pod yield compared to other advanced breeding lines and newly released cultivars, especially in the S.E. Thus, GA 082522 has very good yield stability and a wide range of adaptability.
- E. GA 082522 has a significantly smaller runner-type pod and seed size compared to Tifguard (Tables 14 and 15). It has a lower percentage of fancy pods and jumbo runner seed size during the shelling outturn and a higher percentage of the smaller runner seed size (medium and No. 1).
- F. During 2012 when averaged across all test locations in the UPPT, GA 082522 was found to be similar in roasted peanut flavor to the past U.S. peanut industry leading cultivar, Florunner (Table 16). However, GA 082522 also has a significantly higher oleic (O) to linoleic (L) fatty acid or O/L ratio and lower iodine value for longer shelf-life of peanut and peanut products, and it also has significantly lower saturated fatty acid content (% saturation) compared to Florunner (Table 16).
7. Participating scientists: W. D. Branch
8. Location(s) at which plant material was developed: Coastal Plain Experiment Station
9. Recommended form of intellectual property protection and royalty:
U.S. Plant Variety Protection (PVP) with royalty
- Cultivar and associate cultivar applications only provide the following information:**
10. Method of propagation: Seed
11. Amount of breeder seed stocks available (if applicable): 50 lbs
12. Amount of foundation seed stocks available if applicable: 10,000 lbs
13. Amount of cutting or bud material available for vegetatively propagated material for nursery distribution (if applicable): N/A
14. Describe any unusual difficulty anticipated in the production of any class of seed stocks:
None
15. Suggest up to three names for the cultivar, if appropriate:
'Georgia-14N' (Name preferred by the breeder).
16. Name approved by plant cultivar and germplasm release committee:

GA 082522

Georgia-02C x F₄ (Georgia-01R x COAN)
(2003)



Pedigree Selection
(F₂ – F₅)



Yield Tests
(F₆ – F₁₀)

2014 = F₁₁ Foundation Seed



Table 1. THREE-YEAR (29 TESTS) AVERAGE DISEASE INCIDENCE, POD YIELD, TSMK GRADE, SEED COUNT, AND DOLLAR VALUES OF GA 082522 VS. TIFGUARD AT MULTILOCATIONS IN GEORGIA, 2011-13.

Peanut Genotype	TSWV[†] (%)	TD[‡] (%)	Yield (lb/a)	TSMK[¶] (%)	Seed (no./lb)	Value (\$/a)
GA 082522	4 b*	10 b*	4696 a**	76 a*	796 a*	882 a*
Tifguard	8 a	14 a	4515 b	74 b	634 b	816 b

* Within columns, means followed by the same letter are not significantly different at P≤0.05.

** Yields within the column followed by the same letter are not significantly different at P≤0.10.

† Percentage of tomato spotted wilt virus (TSWV) incidence at about mid-season.

‡ Percentage of total disease (TD) incidence prior to digging, primarily TSWV and some soilborne diseases.

¶ Percentage of total sound mature kernel (TSMK) grade equals all sound splits (SS) plus sound mature kernels (SMK) that ride a minimum slotted screen size of 16/64 x 3/4 inch for runner types.

Table 2. FOUR-TEST AVERAGE PERFORMANCE WITH IRRIGATED MAXIMUM-INPUTS AND NONIRRIGATED MINIMUM-INPUTS OF 21 RUNNER AND 7 VIRGINIA-TYPE PEANUT GENOTYPES AT MULTILOCATIONS IN GEORGIA WHEN PLANTED IN MID-APRIL, 2011.

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
<u>Runner Types:</u>						
Georgia-12Y	3.1 d-h*	7.8 kl	4522 a	72.7 f-l	710 f-i	810 a
Georgia-06G	1.6 jkl	10.0 jkl	4458 ab	73.8 d-h	628 m	807 a
Georgia Greener	2.0 g-l	12.6 g-k	4361 abc	73.3 e-l	691 h-k	785 ab
Georgia-07W	1.7 i-l	11.7 i-l	4298 a-d	74.6 a-e	678 ijk	782 ab
GA 072515	1.8 h-l	10.2 jkl	4241 a-e	75.4 a-d	703 g-j	778 abc
Georgia-13M	2.3 f-l	8.5 jkl	4196 a-f	73.9 d-h	833 bcd	764 a-d
GA 092539	3.2 d-g	9.6 jkl	4211 a-f	74.1 c-g	742 f	759 a-d
Georgia-10T	1.1 l	6.7 l	4020 b-g	76.4 a	670 jk	758 a-d
Florida-07	4.9 bc	17.8 d-g	4222 a-f	70.8 jk	637 lm	726 a-e
GA 072523	1.5 kl	8.4 jkl	4037 a-g	73.5 d-l	673 jk	721 a-f
GA 082549	3.0 d-j	11.2 i-l	3902 c-h	75.1 a-e	851 bc	718 a-f
GA 072514	1.8 g-l	9.7 jkl	3855 d-i	76.2 ab	740 f	714 a-f
Georgia-09B	2.8 e-k	15.5 e-l	3881 c-i	74.4 b-f	730 fg	708 a-g
FloRun™ '107'	4.2 cde	19.6 cde	3881 c-i	74.0 c-h	723 fgh	705 a-g
Tifguard	4.8 bc	13.5 f-j	3974 b-g	71.9 ij	664 kl	705 a-g
GA 082522	3.0 d-l	11.6 i-l	3737 f-j	75.8 abc	821 cd	697 b-h
GA 082546	3.6 c-f	10.7 i-l	3734 f-j	75.0 a-e	844 bcd	687 b-h
Georgia Green	4.4 cd	19.8 cde	3738 f-j	74.4 b-f	816 d	686 b-h
GA 082524	3.6 c-f	10.2 jkl	3600 g-j	72.2 hij	860 b	647 e-h
Georgia-02C	3.9 a	16.9 e-h	3460 hij	74.6 a-f	781 e	628 e-h
GA 082548	3.8 cde	10.8 i-l	3284 j	74.7 a-e	918 a	599 gh
<u>Virginia-Types:</u>						
Georgia-08V	4.1 cde	18.4 c-f	4241 a-e	72.3 g-j	449 q	794 ab
Georgia-11J	4.3 cd	15.7 e-l	3882 c-h	70.8 jk	436 q	695 b-h
Bailey	3.5 c-f	12.2 h-k	3832 d-i	67.7 l	531 op	672 c-h
Florida Fancy	6.1 ab	22.5 bcd	3780 e-i	67.5 l	502 p	659 d-h
CHAMPS	6.7 cde	23.1 bc	3622 g-j	67.6 l	499 p	628 e-h
Perry	6.8 a	32.8 a	3392 ij	70.0 k	550 no	615 fgh
Gregory	7.0 a	26.4 b	3429 hij	67.1 l	577 n	589 h

* Within columns, means followed by the same letter are not significantly different at $P \leq 0.05$.

Table 3. FIVE-TEST AVERAGE PERFORMANCE WITH AND WITHOUT IRRIGATION OF 21 RUNNER AND 9 VIRGINIA-TYPE PEANUT GENOTYPES AT MULTILOCATIONS IN GEORGIA WHEN PLANTED IN MID-MAY, 2011.

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
<u>Runner Types:</u>						
Georgia-13M	4.3 h-k*	8.7 e-l	5649 a	71.3 ghi	861 bc	1013 a
Georgia-12Y	2.4 l	5.8 jkl	5557 ab	71.4 ghi	755 f-i	996 ab
Georgia-07W	3.3 kl	7.6 g-l	5333 abc	74.7 b-e	682 jkl	988 ab
Georgia-06G	2.3 l	7.9 g-k	5352 abc	74.5 b-e	694 jkl	985 ab
Georgia Greener	3.9 kl	6.7 i-l	5099 b-e	75.1 bcd	717 h-k	948 a-d
GA 082522	4.2 ijk	8.2 g-k	5114 a-e	74.6 b-e	826 cde	945 a-d
GA 072515	3.3 kl	8.0 g-k	4990 c-f	76.3 ab	773 e-h	939 a-d
FloRun™ '107'	8.0 de	18.0 bc	5158 a-d	72.1 fgh	763 f-i	924 a-e
GA 072514	3.2 kl	5.6 jkl	4719 d-i	77.7 a	776 efg	908 a-f
Georgia-09B	3.7 kl	9.6 d-h	4956 c-f	73.8 c-f	731 g-j	908 a-f
GA 072523	3.1 kl	5.4 kl	4848 c-g	75.9 abc	715 ijk	904 b-f
Florida-07	9.2 cd	15.4 c	5206 a-d	70.2 hij	656 l	903 b-f
GA 082546	4.0 jk	6.8 h-l	4888 c-g	73.3 d-g	856 bcd	895 b-f
Georgia-10T	2.2 l	5.2 l	4686 d-i	75.7 abc	684 jkl	875 c-g
TUFRunner™ '727'	10.5 bc	16.8 bc	4741 d-i	73.2 d-g	669 kl	862 c-h
GA 082549	6.2 fg	10.1 d-g	4667 d-i	74.5 b-e	910 ab	860 c-h
Tifguard	5.8 fgh	11.7 d	4770 d-h	72.5 efg	662 kl	857 c-h
GA 082524	4.4 h-k	8.2 g-k	4609 e-i	73.7 c-f	872 bc	849 d-h
Georgia-02C	5.5 g-j	8.3 f-j	4705 d-i	72.8 efg	827 cde	849 d-h
GA 082548	5.8 f-l	9.0 d-l	4481 f-i	73.4 d-g	963 a	820 e-h
Georgia Green	6.2 fg	15.6 c	4454 f-i	73.1 d-g	802 def	814 fgh
<u>Virginia-Types:</u>						
Georgia-08V	5.7 f-l	10.3 d-g	5137 a-e	71.4 ghi	479 mn	961 abc
Georgia-11J	7.2 ef	11.5 de	4889 c-g	71.8 f-l	457 n	927 a-e
CHAMPS	9.9 c	16.8 bc	4409 ghi	69.7 ij	473 mn	805 fgh
Bailey	6.4 efg	11.1 def	4402 ghi	69.7 ij	519 m	804 fgh
Gregory	9.8 c	17.9 bc	4483 f-i	66.7 k	495 mn	787 gh
Sugg	11.6 b	18.4 b	4253 hij	70.2 hij	493 mn	784 ghi
Florida Fancy	14.3 a	18.7 b	4200 ijk	68.0 jk	512 mn	758 hi
Perry	14.8 a	22.7 a	3700 k	70.0 hij	523 m	679 ij
Titan	14.8 a	24.3 a	3814 jk	63.2 l	474 mn	637 j

Table 4. FOUR-TEST AVERAGE PERFORMANCE WITH IRRIGATED MAXIMUM-INPUTS AND NONIRRIGATED MINIMUM-INPUTS OF 22 RUNNER AND 8 VIRGINIA-TYPE PEANUT GENOTYPES AT MULTILOCATIONS IN GEORGIA WHEN PLANTED IN MID-APRIL, 2012.

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
Runner Types:						
Georgia-13M	6.1 f-k*	11.8 lm	5164 ab	76.2 cde	766 b	971 a
Georgia-06G	5.1 h-k	13.8 jkl	5100 abc	77.1 bcd	590 ij	966 a
Georgia-07W	6.6 f-j	14.9 i-l	4914 a-d	76.8 bcd	612 ghi	927 ab
Georgia-12Y	4.8 ijk	11.5 lm	5171 a	72.2 gh	676 e	926 ab
Georgia-10T	4.0 jk	9.5 m	4777 a-f	78.6 ab	641 efg	909 abc
Georgia Greener	8.1 d-g	17.2 hij	4797 a-e	76.9 bcd	650 ef	908 abc
GA 072515	6.4 f-k	16.1 h-k	4765 a-f	77.0 bcd	663 ef	901 abc
GA 072523	5.1 h-k	13.8 jkl	4626 a-g	77.4 bcd	600 hi	876 a-d
GA 072514	5.0 ijk	13.2 j-m	4444 a-h	79.9 a	657 ef	865 a-e
FloRun™ '107'	13.9 c	28.4 de	4540 a-h	76.2 cde	606 ghi	850 a-e
Tifguard	8.9 def	17.1 hij	4522 a-h	75.7 def	583 ij	840 a-e
GA 082522	5.6 g-k	14.4 i-l	4330 c-j	78.2 abc	761 bc	838 a-e
Georgia-09B	9.0 def	19.6 gh	4390 c-i	76.8 bcd	656 ef	833 a-e
GA 082546	6.4 f-k	12.0 lm	4394 b-i	77.2 bcd	750 bcd	826 a-e
GA 082524	6.6 f-j	14.2 jkl	4263 d-k	76.4 bcd	766 b	805 b-f
Florida-07	14.4 c	24.9 ef	4482 a-h	72.9 g	558 jk	801 b-f
GA 082549	8.1 d-g	13.0 klm	4210 d-k	77.7 a-d	770 ab	800 b-f
Georgia-02C	9.6 de	18.4 hi	4150 d-k	77.1 bcd	725 cd	797 b-f
TUFRunner™ '727'	18.4 b	34.2 bc	4245 d-k	74.0 efg	636 fgh	779 b-g
GA 082550-MS ₁₀	7.0 e-l	11.1 lm	4080 e-k	76.8 bcd	805 a	757 c-g
Georgia Green	9.8 de	30.5 cd	3956 g-k	75.4 def	721 d	744 d-g
Florida-EP '113'	3.5 k	12.9 klm	4050 e-k	73.0 g	635 fgh	742 d-g
Virginia-Types:						
Georgia-08V	10.5 d	20.0 gh	4692 a-g	73.6 fg	446 no	878 a-d
Georgia-11J	10.9 d	19.8 gh	4678 a-g	72.6 g	414 o	854 a-e
Bailey	8.0 d-h	16.2 h-k	4014 f-k	68.8 ij	530 kl	716 efg
GA 092709	9.8 de	23.2 fg	4081 e-k	70.0 hi	473 mn	714 efg
Gregory	17.8 b	35.1 b	3800 h-k	67.4 j	500 lm	664 fg
CHAMPS	17.9 b	35.2 b	3643 ijk	68.8 ij	505 lm	650 fg
Florida Fancy	16.8 bc	30.2 cd	3579 jk	68.4 ij	461 n	638 g
Perry	21.9 a	46.9 a	3495 k	69.8 i	533 kl	635 g

* Within columns, means followed by the same letter are not significantly different at $P \leq 0.05$.

Table 5. SIX-TEST AVERAGE PERFORMANCE WITH AND WITHOUT IRRIGATION OF 21 RUNNER AND 9 VIRGINIA-TYPE PEANUT GENOTYPES AT MULTILOCATIONS IN GEORGIA WHEN PLANTED IN MID-MAY, 2012.

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
Runner Types:						
Georgia-06G	2.8 n*	8.2 n	5353 a	74.3 bcd	661 h	979 ab
Georgia-12Y	3.1 lmn	8.6 n	5306 ab	73.1 d-g	726 fg	960 abc
Georgia-07W	3.0 lmn	8.6 n	5156 abc	75.0 abc	673 h	950 a-d
Georgia-13M	3.9 k-n	11.7 k-n	5100 a-d	73.2 d-g	846 bc	928 a-e
GA 082522	2.9 mn	9.5 mn	4987 a-g	75.0 abc	838 c	927 a-e
Georgia Greener	4.5 j-n	12.8 j-m	4922 a-h	74.8 bc	709 g	912 b-f
Georgia-09B	3.7 lmn	14.5 h-k	4922 a-h	73.9 cd	725 fg	906 b-g
Florida-07	11.2 c-f	23.3 de	5047 a-e	71.5 h	660 h	894 b-h
GA 082524	3.2 lmn	10.1 lmn	4659 c-k	75.4 ab	845 bc	873 c-i
Georgia-10T	4.5 j-n	11.2 k-n	4597 d-k	76.3 a	714 fg	868 d-i
Georgia Green	5.0 j-m	22.2 ef	4753 c-j	73.2 d-g	796 d	861 e-i
TUFRunner™ '727'	12.9 bc	29.4 c	4801 b-i	72.1 gh	674 h	855 e-j
FloRun™ '107'	12.6 bcd	26.6 cd	4769 c-j	71.9 gh	770 de	853 e-j
GA 072514	3.8 k-n	11.6 k-n	4485 g-k	76.3 a	765 de	841 e-k
GA 072523	4.0 k-n	9.4 mn	4526 f-k	74.2 bcd	670 h	829 f-k
Tifguard	8.3 gh	15.0 h-k	4520 f-k	72.3 e-h	657 h	808 h-l
GA 082549	4.8 j-n	10.4 lmn	4411 i-l	73.6 c-f	845 bc	806 h-l
GA 082546	4.2 k-n	9.4 mn	4355 i-l	73.9 cd	874 b	803 i-l
GA 072515	5.1 jkl	13.3 i-l	4376 i-l	73.9 cd	744 ef	803 i-l
Georgia-02C	6.6 hij	16.8 ghi	4174 kl	73.7 c-f	764 de	761 kl
GA 082550-MS ₁₀	5.8 ijk	11.9 k-n	3956 lm	74.0 bcd	931 a	728 l
Virginia-Types:						
Georgia-08V	7.3 hi	19.0 fg	5305 ab	72.2 fgh	487 j	1011 a
Georgia-11J	7.4 hi	17.3 gh	5022 a-f	73.8 cde	415 k	978 ab
Bailey	7.4 hi	16.2 g-j	4575 e-k	69.1 i	515 ij	825 f-k
Florida Fancy	14.1 b	29.8 c	4608 d-k	68.1 i	510 ij	820 g-k
CHAMPS	10.4 efg	28.6 c	4437 h-l	68.1 i	482 j	791 i-l
Gregory	10.8 def	26.6 cd	4479 h-k	66.4 j	488 j	787 i-l
Perry	12.3 b-e	35.5 b	4275 jkl	69.0 i	542 i	770 jkl
Sugg	10.2 fg	29.0 c	4295 i-l	68.2 i	513 ij	768 jkl
Titan	18.7 a	40.6 a	3566 m	61.9 k	494 j	578 m

* Within columns, means followed by the same letter are not significantly different at P≤0.05.

Table 6. FOUR-TEST AVERAGE PERFORMANCE WITH IRRIGATED MAXIMUM-INPUTS AND NONIRRIGATED MINIMUM-INPUTS OF 22 RUNNER AND 8 VIRGINIA-TYPE PEANUT GENOTYPES AT MULTILOCATIONS IN GEORGIA WHEN PLANTED IN MID-APRIL, 2013.

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
Runner Types:						
Georgia-13M	3.6 k*	13.5 f-j	5253 a	78.0 ab	793 a	996 a
GA 102720	4.6 g-k	8.8 ij	5154 a	75.4 c-g	589 jk	943 ab
Georgia-12Y	3.5 k	10.4 hij	5166 a	75.5 c-f	712 bc	934 abc
Georgia-06G	4.1 jk	8.4 ij	4940 abc	76.7 a-d	637 f-i	917 a-d
Georgia-07W	4.5 h-k	10.6 hij	4888 a-d	76.2 bcd	629 g-j	904 a-e
GA 082522	5.1 g-k	11.9 g-j	4428 c-g	77.9 ab	804 a	844 b-f
Georgia-09B	7.2 e-j	17.0 c-g	4566 b-e	75.9 cd	692 b-e	839 b-f
Georgia-10T	4.2 ijk	9.8 hij	4497 b-g	78.4 a	697 b-e	832 c-g
TUFRunner™ '727'	12.1 bcd	21.8 cd	4453 b-g	76.6 bcd	652 e-h	832 c-g
Florida-07	12.2 bcd	21.2 cde	4514 b-f	73.1 hi	630 g-j	798 e-h
Georgia-02C	6.9 e-k	11.4 g-j	4339 d-h	75.4 c-g	780 a	796 e-h
GA 102719	3.5 k	9.8 hij	4281 e-h	76.0 cd	709 bcd	790 f-i
FloRun™ '107'	13.2 bc	21.6 cd	4241 e-i	75.3 c-g	682 c-f	779 f-i
GA 082524	4.8 g-k	11.2 g-j	4140 e-j	75.7 cde	784 a	751 f-k
Georgia Greener	5.9 f-k	14.2 f-j	4096 e-j	75.2 d-g	695 b-e	743 f-k
GA 072523	5.1 g-k	12.2 g-j	4004 e-j	77.0 a-d	617 h-k	740 f-k
GA 082546	4.1 jk	8.1 j	4002 e-j	77.2 abc	803 a	737 f-k
Tifguard	7.9 e-h	14.6 f-i	3963 f-k	73.9 e-h	643 fgh	708 h-l
GA 072514	6.4 e-k	15.8 d-h	3810 h-k	76.8 a-d	732 b	698 h-l
Florida-EP '113'	5.0 g-k	10.6 hij	3930 g-k	73.8 fgh	670 c-g	695 h-l
GA 102716	5.9 f-k	15.2 e-h	3680 ijk	78.5 a	667 d-g	693 h-l
Georgia Green	9.5 de	22.0 cd	3802 h-k	73.8 fgh	802 a	682 i-l
Virginia-Types:						
Georgia-11J	8.1 efg	13.1 f-j	4999 ab	73.6 gh	365 n	934 abc
Georgia-08V	7.8 e-l	19.4 c-f	4465 b-g	73.8 e-h	448 m	824 d-g
GA 092709	9.1 def	17.2 c-g	4405 c-g	70.9 j	485 lm	800 e-h
Florida Fancy	11.8 cd	22.4 c	4227 e-i	71.0 j	481 m	755 f-j
Bailey	8.8 def	19.1 c-f	4022 e-j	71.2 j	576 k	723 g-l
CHAMPS	15.4 ab	30.1 b	3617 jk	71.3 ij	528 l	651 jkl
Gregory	15.4 ab	29.5 b	3676 ijk	69.0 k	597 ijk	643 kl
Perry	17.1 a	36.5 a	3430 k	71.0 j	597 ijk	615 l

* Within columns, means followed by the same letter are not significantly different at P≤0.05.

Table 7. SIX-TEST AVERAGE PERFORMANCE WITH AND WITHOUT IRRIGATION OF 21 RUNNER AND 9 VIRGINIA-TYPE PEANUT GENOTYPES AT MULTILOCATIONS IN GEORGIA WHEN PLANTED IN MID-MAY, 2013.

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
Runner Types:						
Georgia-13M	4.9 l*	7.4 jk	5778 ab	75.5 c-f	769 ab	1062 ab
GA 102720	4.6 l	7.1 k	5791 a	75.9 c-f	601 jk	1058 abc
Georgia-12Y	4.7 l	7.3 jk	5745 ab	74.0 fgh	713 cde	1045 a-d
Georgia-06G	4.5 l	7.4 jk	5421 a-f	76.3 b-e	618 ijk	1003 a-f
Georgia-07W	5.8 jkl	9.1 ijk	5332 b-g	77.2 abc	634 hij	999 a-f
TUFRunner™ '727'	19.1 c	23.5 bc	5441 a-e	74.6 e-h	612 jk	994 b-f
Georgia Greener	6.2 i-l	8.5 jk	5255 c-g	76.4 b-e	678 efg	975 b-g
GA 082524	7.9 g-j	9.6 hij	5284 c-g	75.3 c-g	729 cd	975 b-g
Georgia-10T	7.4 ijk	8.3 jk	5108 d-j	78.2 ab	671 fg	974 b-g
Florida-07	15.7 de	20.4 d	5386 a-f	73.3 h	611 jk	964 b-g
GA 082522	5.5 jkl	8.1 jk	5117 d-j	76.9 a-d	733 cd	962 c-g
Georgia-09B	6.6 i-l	11.9 gh	5249 c-h	75.0 d-h	665 gh	956 d-h
Georgia-02C	7.8 hij	13.0 fg	5209 d-i	74.9 e-h	704 def	953 d-i
Georgia Green	8.2 ghi	14.5 ef	5051 d-k	75.7 c-f	740 bc	934 e-j
Tifguard	10.3 fg	12.7 fg	5020 e-k	75.2 c-h	598 k	921 f-j
GA 072514	5.0 kl	9.0 ijk	4769 i-l	78.1 ab	658 gh	906 f-k
FloRun™ '107'	13.6 e	21.7 bcd	4968 f-k	74.3 fgh	685 efg	905 f-k
GA 102719	4.5 l	7.1 k	4797 h-l	75.5 c-f	670 fgh	884 g-l
GA 072523	6.2 i-l	8.1 jk	4663 j-m	75.4 c-f	652 ghi	859 h-l
GA 082546	6.2 i-l	7.8 jk	4634 klm	75.2 d-h	792 a	856 i-l
GA 102716	7.5 hij	11.0 ghi	4244 m	78.8 a	619 ijk	809 klm
Virginia-Types:						
Georgia-11J	9.8 fgh	12.4 fg	5702 abc	73.4 gh	390 n	1095 a
Georgia-08V	8.6 ghi	13.4 efg	5479 a-d	73.3 h	428 m	1030 a-e
Bailey	11.0 f	15.5 e	5273 c-g	70.2 i	485 l	971 b-g
Sugg	15.4 de	22.4 bcd	4972 f-k	70.1 i	458 lm	920 f-j
Florida Fancy	17.4 cd	23.0 bc	4915 g-k	69.9 i	476 l	876 g-l
CHAMPS	14.4 e	21.3 cd	4603 klm	71.0 i	473 l	847 jkl
Gregory	18.4 c	24.1 b	4780 i-l	65.7 j	459 lm	818 klm
Perry	21.7 b	29.4 a	4381 lm	70.2 i	491 l	797 lm
Titan	25.2 a	31.1 a	4294 m	65.3 j	435 m	730 m

* Within columns, means followed by the same letter are not significantly different at $P \leq 0.05$.

Table 8. POD YIELD OF 8 RUNNER (RU) AND 5 VIRGINIA (VA) MARKET TYPE PEANUT GENOTYPES IN THE 2012 UPPT AVERAGED ACROSS ALL U.S. TEST LOCATIONS.

Peanut Genotype	Pod Yield (lb/a)			
	SE†	SW‡	VC¶	Mean
UF 11301 (Ru)	5931 a*	5578 ab	4797 a	5320 a
UF 12302 (Ru)	5738 ab	5675 a	4894 a	5308 a
UF 12303 (Ru)	5776 ab	5481 ab	4676 ab	5189 ab
N08070oIJC (Va)	5599 ab	3703 h-k	4610 ab	4867 abc
TX071304 (Ru)	4919 bc	4574 c-f	4550 abc	4692 bcd
GA 082522 (Ru)	5755 ab	4368 d-h	3941 def	4675 cd
N08082oIJCT (Va)	5475 ab	3473 jk	4371 a-d	4673 cd
TX071305 (Ru)	4950 bc	4453 c-g	4450 a-d	4638 cd
N09053oICSm (Va)	5219 abc	4513 c-g	4192 b-e	4617 cd
GA 082524 (Ru)	5806 ab	4538 c-f	3699 ef	4594 cde
GA 082546 (Ru)	5470 ab	4271 d-i	3549 f	4360 cde
NC 7 (Va)	5036 abc	3497 jk	3977 def	4314 de
Florunner (Ru)	4363 c	4356 d-h	3896 c-f	4052 e

* Means within the columns followed by the same letter do not differ significantly at $P \leq 0.05$.

† Pod yield for SE = mean of Georgia, Florida, and Alabama (3 tests).

‡ Pod yield for SW = mean of Oklahoma (1 test).

¶ Pod yield for VC = mean of Virginia, North Carolina, and South Carolina (4 tests).

Table 9. TWO-YEAR (3 TESTS) ROOT-KNOT NEMATODE GALL RATING AND POD YIELD AMONG PEANUT GENOTYPES WHEN GROWN IN HEAVILY INFECTED FIELD TRIALS, 2011-12.

Peanut Genotype	2011 Rigdon Farm		2012 Rigdon Farm		2012 Blackshank Farm	
	Gall Rating	Yield	Gall Rating	Yield	Gall Rating	Yield
	(%)	(lb/a)	(%)	(lb/a)	(%)	(lb/a)
GA 082511	0.0 c*	2952 a	0.0 e	4656 a	-	-
GA 082545	0.0 c	2565 ab	0.8 de	4646 a	-	-
GA 082521	0.0 c	2556 ab	0.0 e	4646 a	-	-
GA 082513	1.0 c	2546 ab	0.0 e	4646 a	-	-
GA 082549	21.7 b	2536 ab	9.2 cd	4269 abc	-	-
GA 082514	0.0 c	2526 ab	0.7 e	5343 a	-	-
GA 082546	0.7 c	2420 abc	0.0 e	4579 ab	0.0 e	2898 b
GA 082519	0.0 c	2391 abc	0.0 e	4976 a	-	-
GA 082524	1.7 c	2304 abc	0.0 e	4850 a	0.0 e	3880 a
GA 082522	0.0 c	2255 abc	0.8 de	5024 a	0.0 e	3421 ab
GA 082550	31.7 b	2226 abc	22.9 b	3272 cde	5.8 d	2538 bcd
Tifguard (ck)	0.0 c	2149 abc	4.6 cde	4182 abc	1.2 de	2730 bc
GA 082548	23.3 b	1955 abc	12.9 c	3398 bcd	-	-
Georgia Greener (ck)	56.7 a	1500 bc	76.7 a	2110 e	-	-
Georgia-07W (ck)	51.7 a	1258 c	74.2 a	2798 de	35.0 b	1963 cde
Georgia-07W (ck)	-	-	-	-	34.7 b	1922 cde
Georgia-07W (ck)	-	-	-	-	27.9 c	1783 de
Georgia-07W (ck)	-	-	-	-	30.6 bc	1609 e
Georgia-07W (ck)	-	-	-	-	40.9 a	1580 e

*Within columns, means followed by the same letter are not significantly different at $P \leq 0.05$.

Table 10. LATE LEAFSPOT DISEASE ASSESSMENT AND POD YIELD PERFORMANCE AMONG 18 PEANUT GENOTYPES WHEN PLANTED AT THREE DIFFERENT PLANTING DATES AND GROWN WITH IRRIGATION AND WITHOUT FUNGICIDES AND INSECTICIDES, 2012.

Peanut Genotype	April 20		May 11		June 1	
	LLS Rating†	Yield	LLS Rating†	Yield	LLS Rating†	Yield
	(0-9)	(lb/a)	(0-9)	(lb/a)	(0-9)	(lb/a)
Georgia-12Y	4.4 def*	6426 a	6.6 ef	4149 a-d	7.4 f	4185 a
GA 072523	3.0 h	5902 bc	5.4 g	4818 a	7.8 def	3212 b
GA 072515	3.8 fgh	5876 cd	7.2 cde	4621 ab	8.8 ab	2940 b-e
TUFRunner™ '727'	4.2 d-g	5889 cd	7.4 b-e	4495 abc	7.6 ef	3016 bc
GA 072514	4.6 c-f	5628 cd	7.4 b-e	3877 a-e	8.8 ab	2961 bcd
Georgia-10T	4.8 cde	4816 fg	8.0 a-d	4523 abc	8.0 c-f	2745 b-g
Tifguard	4.2 d-g	5452 cde	7.0 de	3139 d-g	7.8 def	3107 b
Georgia-06G	4.6 c-f	6228 ab	8.4 ab	3142 d-g	8.6 abc	2192 g
Georgia-07W	4.6 c-f	5422 cde	7.2 cde	3734 b-f	8.2 b-e	2300 efg
GA 082522	4.0 efg	5552 cd	7.2 cde	3456 c-g	9.0 a	2261 fg
Georgia-13M	6.0 ab	5523 cd	8.2 abc	3186 d-g	8.6 abc	2361 d-g
Florida-07	4.2 d-g	5846 cd	8.2 abc	3061 efg	8.8 ab	2143 h
Georgia Greener	5.0 cd	5740 cd	8.4 ab	2793 fgh	8.4 a-d	2366 c-g
Georganic	3.4 gh	4986 efg	5.8 fg	2677 fgh	6.2 g	2883 b-f
GA 082524	3.8 fgh	4482 g	5.8 fg	2688 fgh	7.8 def	2445 c-g
FloRun™ '107'	6.8 a	5515 cd	8.6 a	2534 ghi	9.0 a	1522 hi
GA 082546	3.4 gh	4487 g	7.8 a-d	1515 i	7.6 ef	3185 b
Florida-EP™ '113'	5.4 bc	5143 def	8.4 ab	1729 hi	9.0 a	1167 i
Mean	4.5	5495	7.4	3341	8.2	2611
% CV	17.3	7.7	12.7	26.1	7.4	20.8

*Means within the columns followed by the same letter do not differ significantly at P≤0.05.

† LLS Rating = Predominantly late leafspot rating prior to harvest on a 0-9 scale; where 0 = no leafspot and 9 = died defoliated plants.

Table 11. TSWV AND CBR DISEASE INCIDENCE AND POD YIELD AMONG 16 PEANUT GENOTYPES IN A HEAVILY INFECTED FIELD TRIAL, 2011.

Peanut Genotype	TSWV Mid-Season	TSWV + CBR Mid-Season	CBR + TSWV Late Season	CBR After Digging	Pod Yield
	(%)	(%)	(%)	(%)	(lb/a)
Perry	13.8 a*	17.1 c-f	30.4 b-f	10.4 fg	4321 a
Georgia-12Y	5.4 fg	14.2 d-h	25.8 e-h	36.2 ab	4200 ab
Georgia-06G	5.0 g	13.3 e-l	19.6 ghi	10.0 fg	4011 abc
Georgia-07W	5.8 efg	12.9 f-l	19.6 ghi	2.5 g	3868 bcd
GA 082522	9.2 bc	15.8 c-g	25.8 e-h	27.9 bcd	3867 bcd
Georgia Greener	5.8 efg	10.8 hi	18.8 hi	6.2 fg	3821 bcd
Carver	10.8 b	19.2 c	36.7 bc	8.8 fg	3779 bcd
Georgia-08V	9.2 bc	15.8 c-g	35.0 bcd	11.7 fg	3746 cd
Georgia-10T	4.2 g	9.2 l	16.7 l	25.8 b-e	3734 cd
GA 072514	7.1 def	11.7 ghi	21.7 f-l	14.6 ef	3650 cde
GA 072523	5.0 g	25.0 b	33.3 b-e	16.2 def	3524 def
Georgia-02C	8.3 cd	16.2 c-g	32.1 b-e	34.2 abc	3271 efg
Tifguard	9.2 bc	30.4 a	47.5 a	40.0 a	3103 fgh
GA 082524	7.1 def	18.8 cd	26.7 d-h	37.1 ab	2916 ghi
GA 082546	7.5 cde	17.9 cde	27.9 c-g	24.2 cde	2669 hi
Georgia-11J	8.3 cd	20.4 bc	37.9 b	32.1 abc	2522 i

* Means within the column followed by the same letter do not differ significantly at P≤0.05.

Table 12. TSWV AND CBR DISEASE INCIDENCE AND POD YIELD AMONG 16 PEANUT GENOTYPES IN A HEAVILY INFECTED FIELD TRIAL, 2012.

Peanut Genotype	TSWV Mid-season (%)	TSWV + CBR Mid-Season (%)	CBR + TSWV Late Season (%)	CBR After Digging (%)	Pod Yield (lb/a)
Perry	12.1 a*	24.6 a	29.6 b	7.9 efg	4135 a
Georgia-12Y	2.9 gh	8.3 de	16.2 cde	9.2 d-g	3996 ab
Georgia-10T	3.3 fgh	7.5 e	10.0 e	9.2 d-g	3781 abc
Georgia-06G	3.3 fgh	8.3 de	14.6 cde	7.9 efg	3693 abc
Georgia-07W	4.2 d-h	9.2 de	11.2 de	2.5 g	3655 abc
GA 082522	3.8 e-h	8.3 de	14.6 cde	16.2 cd	3648 abc
Georgia-13M	4.2 d-h	10.4 de	17.5 cd	23.8 bc	3642 abc
GA 072514	6.2 bcd	11.2 de	18.8 c	7.5 fg	3641 abc
Georgia Greener	2.5 h	8.3 de	16.2 cde	2.5 g	3626 a-d
GA 072515	5.0 d-h	12.5 cd	15.8 cde	30.0 ab	3453 bcd
Carver	8.3 b	16.7 bc	27.5 b	5.0 g	3368 cde
Georgia-02C	5.8 cde	12.1 d	19.6 c	15.4 de	3336 cde
GA 082524	5.4 def	8.8 de	15.8 cde	13.8 def	3220 cde
GA 072523	4.2 d-h	8.8 de	15.4 cde	33.3 a	3043 def
Tifguard	7.9 bc	19.6 b	37.5 a	30.8 ab	2848 ef
GA 082546	3.8 e-h	8.8 de	15.0 cde	15.4 de	2551 f

*Means within the column followed by the same letter do not differ significantly at P≤0.05.

Table 13. TSWV AND WM DISEASE INCIDENCE AND POD YIELD AMONG 10 PEANUT GENOTYPES IN A HEAVILY INFECTED FIELD TRIAL, 2013.

Peanut Genotype	TSWV Mid-Season	TSWV + WM Mid-Late Season	WM + TSWV Late Season	WM After Digging	Pod Yield
	(%)	(%)	(%)	(%)	(lb/a)
Georgia-12Y	0.8 cd*	10.4 de	11.7 e	11.7 d	4435 a
Georgia-13M	0.4 cd	7.1 e	15.4 de	30.0 c	4087 ab
Georgia-07W	2.1 c	10.4 de	13.3 de	13.8 d	3862 b
Georgia-10T	2.1 c	12.5 cd	19.2 cd	16.2 d	3719 b
GA 082522	2.1 c	7.9 de	15.0 de	15.0 d	3138 c
Georgia Greener	2.1 c	10.8 de	24.6 bc	47.1 b	3107 c
Georgia-06G	0.0 d	10.4 de	24.6 bc	45.4 b	2987 c
TUFRunnerTM '727'	5.4 ab	17.9 ab	31.7 ab	47.9 b	2870 cd
Florida-07	7.1 a	22.9 a	32.5 a	67.1 a	2853 cd
Tifguard	4.2 b	17.1 bc	28.3 ab	45.8 b	2453 d

* Means within the column followed by the same letter do not differ significantly at P≤0.05.

Table 14. THREE-YEAR (12 TESTS) AVERAGE POD PRESIZER DISTRIBUTION OF GA 082522 VS. TIFGUARD, 2011-13.

Peanut Genotype	Fancy Pods† (%)	+38/64" (%)	-38+34/64" (%)	-34/64" (%)
GA 082522	4 b*	0 b	4 b	96 a
Tifguard	37 a	4 a	33 a	63 b

* Within columns, means followed by the same letter are not significantly different at P≤0.05.

† Fancy pods = +38/64 and +34/64 inches summed together.

Table 15. THREE-YEAR (12 TESTS) AVERAGE SHELLING OUTTURN OF GA 082522 VS. TIFGUARD, 2011-13.

Peanut Genotype	Jumbo[†] (%)	Med.[‡] (%)	No. 1[¶] (%)	SMK (%)	SS (%)	OK (%)	DK (%)	Meat (%)	Hull (%)
GA 082522	35 b*	32 a	5 a	72 a	5 a	2 a	1 a	80 a	20 b
Tifguard	43 a	23 b	4 b	70 b	4 a	2 a	1 a	77 b	23 a

*** Within columns, means followed by the same letter are not significantly different at P≤0.05.**

† Jumbo = +21/64 inch screen.

‡ Medium = -21/64 + 18/64 inch screen.

¶ No. 1 = -18/64 + 15/64 inch screen.

Table 16. ROASTED FLAVOR SENSORY, OIL CONTENT, AND SHELF-LIFE PROPERTIES OF GA 082522 AND 12 OTHER PEANUT GENOTYPES WHEN AVERAGED ACROSS ALL TEST LOCATIONS IN THE 2012 UPPT.

Peanut Genotype	Roasted Flavor	Oil (%)	O/L Ratio	Iodine Value	Saturation (%)
N08070oIJC	5.36 a*	47.4 g	18.1 e	78.9 c	11.2 j
GA 082524	5.34 ab	47.7 efg	25.6 bcd	75.9 ef	12.4 de
TX 071305	5.34 ab	48.7 bcd	23.8 cd	76.7 def	11.7 hi
TX 071304	5.31 ab	48.4 c-f	22.2 de	76.8 def	11.9 gh
UF 12303	5.28 ab	48.5 c-f	27.0 abc	75.9 ef	12.6 cd
N08082oIJCT	5.24 abc	47.6 fg	24.5 cd	77.6 cd	11.6 i
GA 082522	5.21 abc	47.4 g	30.6 a	75.7 f	12.3 ef
GA 082546	5.21 abc	48.0 d-g	29.1 ab	75.8 f	12.2 ef
UF 11301	5.18 abc	49.9 a	26.5 bc	76.9 def	12.2 ef
N09053oICSm	5.15 abc	48.6 b-e	27.2 abc	76.9 def	12.0 fg
UF 12302	5.14 abc	49.3 abc	18.7 e	77.1 de	12.6 c
Florunner (ck)	5.11 bc	49.5 ab	1.7 f	97.2 a	16.3 a
NC7 (ck)	5.03 c	49.9 a	3.2 f	89.8 b	15.6 b

* Within columns, means followed by the same letter are not significantly different at $P \leq 0.05$.

GA 082522

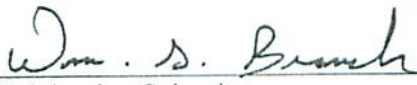


- * High-Yielding, High-Oleic, TSWV and Root-Knot Nematode Resistant, Runner-Type Cultivar.**
 - * Intermediate Runner Growth Habit with Medium⁺ Maturity and Medium Green Leaf Color.**
 - * High Levels of TSWV Resistance and Root-Knot Nematode Resistance.**
 - * Moderate levels of CBR Resistance.**
 - * Good Performance and Stability across Many Different Environments in the S.E.**
 - * Excellent High-Oleic Runner-Type with a Medium Small Runner Seed Size for Field Areas with High RKN Populations.**
-

APPLICATION FOR RELEASE


(Please keep this as a separate page)

Application for the cultivar release of the advanced peanut breeding line, GA 082522.

Recommended:

- A.  5/2/14
Originating Scientist Date
- Donn Shilling**
Digitally signed by Donn Shilling
DN: cn=Donn Shilling, o=University of
Georgia, ou=Department of Crop and Soil
Sciences, email=dgs@uga.edu, c=US
Date: 2014.07.07 08:02:32 -04'00'
- B. _____ July 3, 2014
Department Head Date
- C.  5/27/14
For Griffin and Tifton, Assistant Dean Date
- D. **Peggy Ozias-Akins**
Digitally signed by Peggy Ozias-Akins
DN: cn=Peggy Ozias-Akins, o=University of
Georgia, ou=Institute of Plant Breeding,
Genetics & Genomics and Horticulture,
email=pozias@uga.edu, c=US
Date: 2014.08.20 17:27:32 -04'00'
- Chair, GAES PCGRC _____ Date
- E.  8-21-14
Associate Dean for Research Date

Approved:

- F.  8/21
Dean and Director Date