

APPLICATION FOR RELEASE

APPLICATION FOR RELEASE OF (check one):

- | | |
|--|--|
| <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 072531
3. Pedigree and history: GA 072531 was developed from a cross made in 2002 between Georgia-09B x Georganic. 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 (2007-09) compared to Georgia-10T, the most similar cultivar.
4. Description of plant material: GA 072531 is being proposed for release as a new high-yielding, high-TSWV and white mold resistant, runner-type peanut cultivar. It has a runner growth habit with prominent mainstem, medium-late maturity (155-160 DAP same as the most similar cultivar Georgia-10T), dark green leaf color, and bright pods. It also has a very high level of resistance to tomato spotted wilt virus (TSWV) and white mold or stem rot. For these past five years (2007 - 2011), field observations and data indicate that the characteristics of GA 072531 are very uniform and stable, and no off-types or variants have been found, except for an occasional red seed.
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 and growers should be interested in the use of this plant material for planting early in April, since many of the other late maturing runner cultivars are no longer available, ie Georgia-01R, C-99R, etc. It could also help to spread-out harvest.
6. Justification for release:
 - A. During the past three-years (2007-09) averaged over 24 multilocation tests in Georgia, GA 072531 was found to have significantly higher yield and dollar value return per acre compared to Georgia-10T (Table 1). GA 072531 also has significantly more seed per pound compared to Georgia-10T and other larger-seeded runner-types which should save growers in seed cost at planting.
 - B. GA 072531 has among the lowest incidence of TSWV and total disease (TD) of all runner-type cultivars (Tables 2-5). GA 072531 is also among the highest in yield and dollar value when planted early in mid-April (Tables 2 and 4) as well

APPLICATION FOR RELEASE

as later in mid-May (Tables 3 and 5).

C. During 2011 when averaged across the Southeast, Southwest, and Virginia-Carolinas, U.S. test locations (Table 6), GA 072531 was likewise among the highest in pod yield compared to other advanced breeding lines. Thus, GA 072531 has very good yield stability and a wide range of adaptability in the SE, SW, and VC peanut production regions.

D. During the past two-years (2010-11), GA 072531 was also found to have among the lowest TSWV and white mold (WM) incidence and highest yield compared to several other genotypes including Georgia-01R and Georganic when grown without any fungicide and insecticides (Table 7 and 8).

D. GA 072531 has a smaller pod size compared to Georgia-10T (Table 9). However, it has a similar percentage of jumbo, medium, and No. 1 runner seed size during the shelling outturn compared to Georgia-10T (Table 10), but larger percentage jumbo and smaller percentage of medium and No. 1 seed size compared to Georgia Green (Table 11).

E. During the past two years (2010–11), GA 072531 has been found to be similar in unblanchability and roasted peanut flavor to Georgia Green, the U.S. peanut industry flavor standard (Tables 12-13). GA 072531 also has a significantly lower oil content, iodine value, and tocopherol content and similar O/L ratio and total sugar compared to Georgia Green (Table 13).

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: 1200 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-12Y' (Name preferred by the breeder).

APPLICATION FOR RELEASE

(Please keep this as a separate page)

Application for the cultivar release of the advanced peanut breeding line, GA 072531.

Recommended:

A. Wm. D. Branch April 23, 2012
Originating Scientist Date

B. [Signature] 6/4/2012
Department Head Date

C. [Signature] 4-23-12
For Griffin and Tifton, Assistant Dean Date

D. Peggy Ozias-Akins [Blank]
Chair, GAES PCGRC Date

Digitally signed by Peggy Ozias-Akins
DN: cn=Peggy Ozias-Akins,
o=University of Georgia, ou=PRCG
INSTITUTE, email=pozias@uga.edu, c=US
Date: 2012.06.10 14:34:32 -0400

E. [Signature] 8/17/12
Associate Dean for Research Date

Approved:

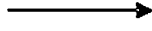
F. [Signature] 8/12
Dean and Director Date

GA 072531

**Georgia-09B x Georganic
(2002)**



**Pedigree Selection
(F₂ - F₅)**



**Yield Tests
(F₆ - F₁₀)**

2012 = F₁₁ Foundation Seed



GA 072531



GA 072531

Table 1. THREE-YEAR (24 TESTS) AVERAGE DISEASE INCIDENCE, POD YIELD, TSMK GRADE, SEED COUNT, AND DOLLAR VALUES OF GA 072531 VS. GEORGIA-10T AT MULTILOCATIONS IN GEORGIA, 2007-09.

Peanut Genotype	TSWV[†] (%)	TD[‡] (%)	Yield (lb/a)	TSMK[¶] (%)	Seed (no./lb)	Value (\$/a)
GA 072531	4 a*	10 a	4935 a	72 b	726 a	877 a
Georgia-10T	4 a	9 a	4390 b	76 a	690 b	818 b

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

† 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 9 VIRGINIA-TYPE PEANUT GENOTYPES AT MULTILOCATIONS IN GEORGIA WHEN PLANTED IN MID-APRIL, 2010

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
Runner Types:						
Georgia-10T	5.1 i-m*	8.0 jk	3939 a-f	77.2 a	674 f-i	744 ab
Georgia-07W	3.6 m	7.8 k	4119 ab	74.0 bc	638 ij	739 abc
Georgia-06G	4.8 klm	10.2 g-k	4044 abc	73.0 c-f	638 ij	733 a-d
GA 072531	3.9 lm	8.1 jk	4060 abc	71.7 efg	708 efg	727 a-e
Georgia-09B	5.0 j-m	11.7 g-k	3960 a-e	74.1 bc	720 de	723 a-f
GA 072515	4.1 lm	9.8 g-k	4043 abc	73.1 cde	714 ef	722 a-f
Georgia Greener	5.2 i-l	9.5 h-k	3868 a-g	72.9 c-f	708 efg	696 a-g
Tifguard	8.2 g	12.5 ghi	3862 a-g	72.0 d-g	642 ij	692 a-g
Florida-07	9.8 f	16.8 def	3989 a-d	70.1 ghi	599 jk	683 a-h
GA 072523	4.4 lm	8.4 ijk	3788 b-h	73.8 bcd	701 e-h	678 b-i
GA 072514	5.5 i-l	10.4 g-k	3583 d-j	75.3 ab	722 de	664 b-j
McCloud	11.4 b-f	16.8 def	3708 b-i	72.0 d-g	614 j	660 b-j
Georgia Green	6.5 g-j	13.6 efg	3577 d-j	73.8 bcd	794 bc	651 c-j
Exp. 27-1516	11.2 c-f	17.2 de	3710 b-i	70.4 ghi	700 e-h	651 c-j
GA 072716	5.4 i-l	8.3 jk	3585 d-j	73.7 bcd	812 b	651 d-j
Georgia-02C	6.7 ghi	11.0 g-k	3534 e-j	74.4 bc	758 cd	648 d-j
GA 062711	7.4 gh	9.7 g-k	3620 c-j	72.9 c-f	866 a	644 e-k
Georgia-03L	6.1 h-k	11.9 g-j	3718 b-i	68.9 ij	680 e-i	633 g-k
FloRun™ '107'	10.2 ef	16.8 def	3622 c-j	73.5 b-d	709 efg	630 g-k
AP-4	11.6 b-e	18.8 cd	3502 f-j	71.0 fgh	663 hi	618 g-l
AT-215	12.4 bc	22.6 bc	3247 j	69.6 hi	668 ghi	558 kl

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

Table 2. continued

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
<u>Virginia Types:</u>						
Georgia-08V	7.2 gh	13.0 fgh	4246 a	70.5 ghi	467 no	771 a
Bailey	5.4 i-l	11.8 g-k	3845 a-g	67.4 jk	540 lm	672 b-i
Florida Fancy	10.5 def	18.1 d	3711 b-i	67.5 jk	489 no	636 f-k
CHAMPS	10.2 ef	20.6 cd	3560 d-j	66.2 k	502 mn	610 g-l
Georgia-11J	8.0 g	13.7 efg	3504 f-j	68.6 ij	455 o	596 h-l
Gregory	11.6 b-e	19.9 cd	3537 e-j	66.1 k	558 kl	593 i-l
Perry	12.0 bcd	24.8 ab	3342 ij	69.0 ij	560 kl	590 i-l
Brantley	13.0 ab	27.8 a	3474 g-j	65.6 k	464 no	582 jkl
Titan	14.1 a	27.8 a	3380 hij	61.3 l	462 no	532 l

Table 3. 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, 2010.

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
Runner Types:						
GA 072531	5.4 i-l*	10.3 k-n	4583 a	67.8 ghi	749 de	789 ab
Georgia-06G	3.4 l	11.8 j-n	4255 a-d	72.6 abc	655 ij	768 abc
GA 072523	5.8 ijk	9.0 mn	4290 abc	71.0 a-f	725 ef	767 abc
GA 072515	6.8 ghi	12.8 jkl	4196 a-f	71.3 a-e	735 def	750 a-d
Exp. 27-1516	10.5 ef	18.4 e-h	4240 a-d	70.0 d-g	675 g-j	741 a-e
GA 072514	5.0 i-l	10.1 lmn	3987 b-g	73.2 a	759 cde	735 a-f
Georgia-09B	5.8 ijk	14.0 ijk	4171 a-f	70.4 c-f	731 def	729 a-g
Georgia Greener	5.9 ijk	13.0 jkl	4029 a-g	72.3 a-d	707 fgh	726 a-g
Georgia-07W	4.1 kl	9.8 lmn	4026 a-g	72.9 ab	673 hij	724 a-g
Georgia-10T	4.0 kl	8.8 n	3971 b-g	72.8 abc	731 def	723 a-g
GA 072716	4.2 jkl	11.3 k-n	4078 a-f	69.2 e-h	835 a	719 a-g
Florida-07	12.4 de	20.4 d-g	4090 a-f	69.2 e-h	651 ij	703 b-h
McCloud	13.9 cd	22.0 cde	4054 a-f	69.5 e-h	677 g-j	699 b-h
Georgia-03L	6.1 h-k	12.2 j-n	4016 b-g	67.7 g-j	711 fg	684 c-i
FloRun™ '107'	12.9 cd	23.3 c-d	3944 b-g	69.5 e-h	766 bcd	679 c-i
C724-19-25	12.4 de	18.0 fgh	3827 c-g	69.1 e-h	643 j	662 d-i
Tifguard	9.5 f	18.0 fgh	3763 c-g	70.6 b-f	660 ij	660 d-i
Georgia Green	8.4 fgh	17.7 ghi	3760 c-g	70.5 c-f	791 bc	656 d-i
Georgia-02C	6.6 g-j	12.6 j-n	3700 d-g	69.4 e-h	802 ab	640 f-i
AP-4	14.4 bcd	25.1 bc	3666 efg	70.0 d-g	686 ghi	638 f-i
AT-215	16.3 b	27.8 b	3696 d-g	68.8 fgh	654 ij	636 ghi

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

Table 3. continued

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
Virginia Types:						
Georgia-08V	8.5 fgh	15.5 hij	4415 ab	68.8 fgh	504 m	813 a
Georgia-11J	8.6 fg	12.7 j-m	4217 a-e	65.2 kl	512 lm	742 a-e
Bailey	6.2 h-k	12.6 j-m	4046 a-f	67.2 h-k	546 kl	717 a-g
CHAMPS	13.3 cd	21.2 c-g	3858 b-g	65.8 i-l	489 m	673 c-i
Florida Fancy	15.3 bc	24.6 bc	3865 b-g	63.9 lm	569 k	651 e-i
Sugg	14.0 bcd	21.6 c-f	3642 fg	65.3 jkl	516 lm	638 ghi
Perry	14.8 bc	23.4 cd	3476 g	65.8 i-l	509 m	614 hi
Gregory	14.4 bcd	23.9 cd	3694 d-g	62.8 mn	517 lm	611 hi
Titan	20.4 a	31.7 a	3650 fg	61.1 n	503 m	594 i

Table 4. 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>						
GA 072531	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
GA 072716	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

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

Table 4. continued

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
Virginia Types:						
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

Table 5. 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>						
GA 072716	4.3 h-k*	8.7 e-l	5649 a	71.3 ghi	861 bc	1013 a
GA 072531	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

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

Table 5. continued

Peanut Genotype	TSWV (%)	TD (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
<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 6. POD YIELD OF 9 RUNNER (RU) AND 4 VIRGINIA (VA) MARKET TYPE PEANUT GENOTYPES IN THE 2011 UPPT AVERAGED ACROSS ALL U.S. TEST LOCATIONS.

Peanut Genotypes	Pod Yield (lb/a)			
	SE†	SW‡	VC¶	Mean
GA 072531 (Ru)	6661 a*	4154 abc	4748 a	5317 a
UF 11301 (Ru)	6282 ab	4844 ab	4545 ab	5271 a
UF 11303 (Ru)	5914 bc	4124 abc	4223 abc	4833 ab
GA 072514 (Ru)	5742 bcd	3603 bc	4563 ab	4765 ab
GA 072523 (Ru)	5721 bcd	3752 bc	4383 abc	4727 ab
N09053oICSm (Va)	6312 ab	3654 bc	3838 a-d	4720 ab
UF 11302 (Ru)	5715 bcd	4583 ab	3648 a-d	4657 ab
N08082oIJCT (Va)	5872 bc	3374 bc	3618 a-d	4402 bc
N08081oIJC (Va)	5364 cde	3381 bc	3906 a-d	4322 bc
ACI 0808 (Ru)	5214 def	5495 a	2258 e	4176 bc
ACI 0814 (Ru)	4583 fg	4591 ab	2540 de	3819 c
NC 7 (Va)	4765 efg	3261 c	3207 b-e	3805 c
Florunner (Ru)	4389 g	4146 abc	2919 cde	3788 c

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

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

‡Pod yield for SW = mean of Texas and Oklahoma (4 tests).

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

WHITE MOLD/STEM ROT



**GA 072531
(Resistant)**



**Georgia-01R
(Susceptible)**

Table 7. DISEASE AND INSECT ASSESSMENT AND YIELD PERFORMANCE AMONG 20 PEANUT GENOTYPES WHEN GROWN WITHOUT FUNGICIDES AND INSECTICIDES AT THE UNIVERSITY OF GEORGIA, COASTAL PLAIN EXPERIMENT STATION, TIFTON, GA, 2010.

Peanut Genotype	Midseason TSW†	TSW and WM‡	Leafspot Rating¶	Leafhopper Rating§	Pod Yield
	(%)	(%)	(1-9 scale)	(0-9 scale)	(lb/a)
GA 072531	5.4 gh*	12.1 gh	4.3 ghi	6.5 cde	4518 a
GA 072523	9.6 def	11.2 h	3.3 k	5.0 gh	4358 ab
GA 072514	8.3 e-h	14.6 fgh	4.2 g-j	6.5 cde	4143 abc
Georgia-10T	4.6 h	12.9 gh	4.7 efg	5.7 fg	3989 a-d
GA 083106	10.4 c-f	15.4 fgh	4.7 efg	6.7 b-e	3904 a-e
GA 083108	11.2 cde	18.3 e-h	5.5 cd	6.8 bcd	3786 b-f
Georgia-05E	10.0 def	25.0 b-e	5.5 cd	6.2 def	3727 b-f
Tifguard	12.5 cd	28.8 abc	5.0 def	4.3 h	3708 b-f
GA 083109	7.1 fgh	15.4 fgh	5.8 c	6.0 ef	3655 c-f
GA 082514	11.7 cde	18.3 e-h	4.2 g-j	4.5 h	3483 def
Georgia-01R	12.5 cd	20.0 d-g	3.7 jk	2.7 l	3475 def
GA 052533	11.7 cde	22.1 c-f	4.5 fgh	7.8 a	3436 d-g
C724-19-25	16.7 ab	30.8 ab	5.2 de	6.8 bcd	3314 e-h
Florida-07	14.2 abc	30.4 ab	7.0 b	6.7 b-e	3305 e-h
GA 082546	9.6 def	20.0 d-g	3.8 ijk	4.8 h	3251 f-i
Georganic	10.4 c-f	16.7 fgh	3.7 jk	7.0 bc	2810 g-j
FloRun '107'	12.9 bcd	34.2 a	6.7 b	7.8 a	2701 hij
GA 083110	4.6 h	18.8 e-h	5.8 c	7.3 ab	2665 hij
GA 082548	9.2 d-g	26.2 a-e	4.0 hij	4.5 h	2635 ij
Exp. 27-1516	17.1 a	27.8 a-d	7.7 a	7.2 abc	2277 j

* Means within a column followed by the same letter are not significantly different at $P \leq 0.05$.

† Tomato spotted wilt (TSW) incidence at midseason (ca. 70 days after planting).

‡ Combined disease incidence prior to digging which included TSW and white mold (WM).

¶ Visual canopy rating on a 1-9 scale, where 1 = very highly leafspot resistant and 9 = highly leafspot susceptible.

§ Visual canopy rating on a 0-9 scale, where 0 = 0% leafhopper burn and 0% leaf lesion and 9 = >50% leafhopper burn and >50% leaf lesion.

Table 8. DISEASE AND INSECT ASSESSMENT AND YIELD PERFORMANCE AMONG 16 PEANUT GENOTYPES WHEN GROWN WITHOUT FUNGICIDES AND INSECTICIDES AT THE UNIVERSITY OF GEORGIA, COASTAL PLAIN EXPERIMENT STATION, TIFTON, GA, 2011.

Peanut Genotype	Midseason TSW†	TSW and WM‡	Leafspot Rating¶	Leafhopper Rating§	Pod Yield
	(%)	(%)	(1-9 scale)	(0-9 scale)	(lb/a)
GA 072523	2.5 f*	7.0 bc	3.0 h	5.2 c-f	6129 a
GA 072531	4.0 ef	8.0 bc	4.0 d-g	5.4 cde	6037 a
GA 072515	6.5 b-f	9.5 bc	4.2 def	6.6 b	6025 a
GA 072514	7.0 a-e	9.5 bc	4.4 de	6.0 bc	6004 ab
Georgia-05E	9.0 abc	11.5 abc	4.8 cd	5.6 cd	5811 ab
GA 082522	8.5 a-d	11.5 abc	5.4 bc	4.8 def	5530 abc
Tifguard	9.0 abc	13.0 abc	3.6 e-h	4.4 fg	5485 abc
Georgia-01R	7.5 a-e	11.5 abc	4.6 cd	3.0 h	5289 bcd
FloRun™ '107'	11.0 a	13.5 ab	6.8 a	7.6 a	4989 cde
Georgia-10T	4.5 def	6.5 c	4.2 def	5.0 def	4941 cde
Florida-07	10.0 ab	17.5 a	6.6 a	4.6 ef	4891 cde
GA 082548	4.0 ef	6.5 c	3.2 gh	4.8 def	4685 de
Georgia-11J	5.0 c-f	9.5 bc	3.4 fgh	7.6 a	4675 de
GA 082546	6.0 b-f	7.5 bc	3.0 h	4.6 ef	4524 ef
GA 082524	5.5 c-f	6.5 c	6.0 ab	3.6 gh	4421 ef
Georganic	7.5 a-e	12.0 abc	3.4 fgh	6.0 bc	3904 f

* Means within a column followed by the same letter are not significantly different at $P \leq 0.05$.

† Tomato spotted wilt (TSW) incidence at midseason (ca. 70 days after planting).

‡ Combined disease incidence prior to digging which included TSW and white mold (WM).

¶ Visual canopy rating on a 1-9 scale, where 1 = very highly leafspot resistant and 9 = highly leafspot susceptible.

§ Visual canopy rating on a 0-9 scale, where 0 = 0% leafhopper burn and 0% leaf lesion and 9 = >50% leafhopper burn and >50% leaf lesion.

Table 9. THREE-YEAR (14 TESTS) AVERAGE POD PRESIZER DISTRIBUTION OF GA 072531 VS. GEORGIA-10T, 2009-11.

Peanut Genotype	Fancy Pods† (%)	+38/64" (%)	-38+34/64" (%)	-34/64" (%)
GA 072531	4 b*	0 a	4 b	96 a
Georgia-10T	16 a	0 a	16 a	84 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 10. THREE-YEAR (14 TESTS) AVERAGE SHELLING OUTTURN OF GA 072531 VS. GEORGIA-10T, 2009-11.

Peanut Genotype	Jumbo[†] (%)	Med.[‡] (%)	No. 1[¶] (%)	SMK (%)	SS (%)	OK (%)	DK (%)	Meat (%)	Hull (%)
GA 072531	41 a*	23 a	3 a	67 a	6 b	2 a	1 a	76 b	24 a
Georgia-10T	40 a	23 a	3 a	66 a	11 a	2 a	1 a	80 a	20 b

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

† Jumbo = +21/64 x 3/4 inch screen.

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

¶ No. 1 = -18/64 + 16/ 64 inch screen.

Table 11. TWO-YEAR AVERAGE COMMERCIAL SHELLING OUTTURN, TOTAL SHELLING RATE (TSR) AND FIRST-STAGE SHELLING RATE (FSR) OF GA 072531 VS. GEORGIA GREEN, 2010-11†.

Peanut Genotype	Jumbo (%)	Med. (%)	No. 1 (%)	SMK (%)	OK (%)	Splits (%)	TSR (g/min)	FSR (g/min)
GA 072531	54 a*	18 b	4 b	76 b	5 b	19 a	1195 a	1887 a
Georgia Green	27 b	45 a	9 a	81 a	7 a	12 b	942 a	1463 a

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

† Research conducted by Marshall Lamb, USDA/ARS National Peanut Research Laboratory, Dawson, GA.

Table 12. TWO-YEAR AVERAGE BLANCHABILITY OF GA 072531 VS. GEORGIA GREEN, 2010-11†.

Peanut Genotype	Blanched (%)	Partial (%)	Unblanched (%)
GA 072531	84.5 b*	10.3 a	5.2 a
Georgia Green	92.6 a	7.2 a	0.3 a

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

† Research conducted by Wil Parker, JLA/Pert Labs, Edenton, NC.

Table 13. TWO-YEAR AVERAGE ROASTED FLAVOR, SENSORY, CHEMICAL, AND SHELF-LIFE PROPERTIES OF GA 072531 VS GEORGIA GREEN, 2010-11.†

Peanut Genotype	Roasted Flavor	Oil (%)	O/L Ratio	Iodine Value	Saturation (%)	Total Tocopherol‡	Total Sugars ‡
GA 072531	4.7 a*	50.2 b	2.0 a	90.1 b	20.3 a	215.3 b	27,779 a
Georgia Green	4.6 a	53.0 a	1.9 a	92.3 a	18.5 b	240.0 a	26,771 a

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

† Research conducted by Tim Sanders, USDA/ARS, Market Quality and Handling Research Unit, Raleigh, NC.

‡ mcg/gFW

GA 072531

- * High-Yielding, High TSWV Resistant, Runner-Type Cultivar.**
 - * Runner Growth Habit and Medium Late Maturity with Dark Green Leaf Color and Bright Pods.**
 - * Very High Levels of TSWV Resistance and Good White Mold or Stem Rot Resistance.**
 - * Good Performance and Stability across Many Different Environments.**
 - * Another Excellent Runner-Type for an Early-Planting Date Option.**
-