

Peanut Variety Challenge 2007

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Site and Design (Edisto REC)

Location: Field L7-A

Objectives:

Compare variety performance of new releases to standards.

Crop Description

Arachis hypogaea Peanut

Planting Date: 15 May 2007

Planting Method: SEEDED **Rate, Unit:** 5 S/ROW-FT

Row Spacing, Unit: 38 IN

Seed Bed: SMOOTH

Soil Moisture: NORMAL

Harvest Date: 03 Oct 2007 **Harvest Equipment:** 2-row KMC digger; Hobbs combine with bagger attachment

Harvested Width, Unit: 6.33 FT **Harvested Length, Unit:** 30 FT

Weighing Equipment: Digital hanging scale

Plot Width, Unit: 12.68 FT **Site Type:** FIELD

Plot Length, Unit: 30 FT **Tillage Type:** CONVENTIONAL-TILL

Replications: 6 **Study Design:** Randomized Complete Block

Soil Drainage: E

	Previous Crops	Year
1.	Corn	2006
2.	Corn	2005

No previous peanut history

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix
1.	15 May 2007	Temik	15	%	G	5	LB/A	n
2.	15 May 2007	Optimize Lift				14	FL OZ/A	n
3.	18 May 2007	Valor SX	51	%	WG	3	OZ WT/A	y
4.	18 May 2007	Prowl H20	3.8	lb	L	32	FL OZ/A	y
5.	14 Jun 2007	Select			L	16	FL OZ/A	y
6.	14 Jun 2007	Crop Oil Conc			L	32	FL OZ/A	y
7.	27 Jun 2007	Tilt/Bravo			L	1.5	PT/AC	y
8.	27 Jun 2007	Cadre	2	lb	L	4	FL OZ/A	y
9.	27 Jun 2007	Surfactant	80	%	L	1.0	QT/100 GAL	y
10.	27 Jun 2007	Boric Acid	17.5	%	G	1.0	LB/A	y
11.	13 Jul 2007	Bravo WS	7.2	lb	F	24	FL OZ/A	y
12.	13 Jul 2007	Moncut	70	%	DF	0.6	LB/A	y
13.	26 Jul 2007	Bravo WS	7.2	lb	F	24	FL OZ/A	y
14.	26 Jul 2007	Moncut	70	%	DF	0.6	LB/A	y
15.	26 Jul 2007	Mangro	33	%	DF	3.0	LB/A	y
16.	9 Aug 2007	Bravo WS	7.2	lb	F	24	FL OZ/A	y
17.	9 Aug 2007	Moncut	70	%	DF	0.6	LB/A	y
18.	24 Aug 2007	Bravo WS	7.2	lb	F	24	FL OZ/A	y
19.	24 Aug 2007	Moncut	70	%	DF	0.6	LB/A	y
20.	11 Sept 2007	Bravo WS	7.2	lb	F	24	FL OZ/A	y

Soil Description**Description Name:** Fuquay**Texture:** SAND**Soil Name:** Fuquay Sand **CEC:** 3.4 **Fert. Level:** GOOD**Soil Test: January 2007**

Element	Quantity	Unit
pH: 5.9		
P	96	lb/ac
K	49	lb/ac
Ca	522	lb/ac
Mg	108	lb/ac

Fertilizer: 170 lb/ac 0-0-60 March 2007.**Lime:** 1 ton /ac - February 2007**Moisture and Weather Conditions****Overall Moisture Conditions:** Hot and Dry with supplemental irrigation**Closest Weather Station:** NOAA Blackville **Distance:** 0.5 **Unit:** MI

Date	Amount	Unit	Type
15-May	0.3	Inches	SPRINKLER - LATERAL MOVE
18-May	0.75	Inches	SPRINKLER - LATERAL MOVE
25-May	0.75	Inches	SPRINKLER - LATERAL MOVE
2-Jun	1.4	Inches	RAIN
3-Jun	0.52	Inches	RAIN
7-Jun	0.75	Inches	SPRINKLER - LATERAL MOVE
11-Jun	2.85	Inches	RAIN
12-Jun	0.01	Inches	RAIN
13-Jun	0.55	Inches	RAIN
15-Jun	0.31	Inches	RAIN
20-Jun	0.06	Inches	RAIN
30-Jun	0.25	Inches	RAIN
2-Jul	0.52	Inches	RAIN
17-Jul	0.75	Inches	SPRINKLER - LATERAL MOVE
18-Jul	0.13	Inches	RAIN
23-Jul	1.0	Inches	SPRINKLER - LATERAL MOVE
25-Jul	1.0	Inches	SPRINKLER - LATERAL MOVE
27-Jul	1.46	Inches	RAIN
28-Jul	1.0	Inches	RAIN
3-Aug	0.15	Inches	RAIN
11-Aug	1.46	Inches	RAIN
17-Aug	0.26	Inches	RAIN
23-Aug	0.23	Inches	RAIN
25-Aug	0.11	Inches	RAIN
26-Aug	0.1	Inches	RAIN
12-Sep	0.54	Inches	RAIN
28-Sep	1.0	Inches	SPRINKLER - LATERAL MOVE
mean	18.21	6.3" by irrigation	

Site and Design (Pee Dee REC):

Location: Field 27-C

Planting Date: 15 May 2007**Planting Method:** SEEDED **Rate, Unit:** 6 S/ROW-FT**Row Spacing, Unit:** 38 IN**Seed Bed:** SMOOTH**Soil Moisture:** NORMAL**Harvest Date:** 24 Sept, 03 Oct 2007 **Harvested Width, Unit:** 6.33 FT **Harvested Length, Unit:** 40 FT

Plot Width, Unit: 12.68 FT Site Type: FIELD
 Plot Length, Unit: 40 FT Tillage Type: CONVENTIONAL-TILL
 Replications: 6 Study Design: Randomized Complete Block
 Soil Drainage: G

	Previous Crops	Year
1.	Corn	2006
2.	Tobacco	2005
3.	Soybeans	2004
4.	?	2003

Maintenance

Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix
10April2007	Prowl H20	3.8	lb	L	32	FL OZ/A	N
15May2007	Temik	15	%	G	5.0	LB/AC	
15May2007	Optimize Lift				21.0	FL OZ/A	N
16May2007	Dual Magnum	17.5	%	L	1.3	PT/A	Y
16May2007	Valor SX	51	%	WG	3	OZ WT/A	Y
6June2007	Orthene	97	%	SP	.773	LB/AC	N
26June2007	Gypsum				862	LB/AC	
28June2007	Tilt/Bravo				1.5	PT/AC	Y
28June2007	Solubor				2.0	LB/AC	Y
28June2007	Cadre	2	lb	L	4	FL OZ/A	Y
28June2007	Surfactant	80	%	L	1	QT/100 GAL	Y
15July2007	Moncut	70	%	DG	1.0	LB/AC	Y
15July2007	Headline				6.0	FL OZ/A	Y
31July2007	Bravo WS				1.5	PT/AC	Y
31July2007	Manganese				1.0	LB/AC	Y
31July2007	Karate Z	2	lb	L	2	FL OZ/A	Y
16Aug2007	Moncut	70	%	DG	1.0	LB/AC	Y
16Aug2007	Headline				6.0	FL OZ/A	Y
31Aug2007	Bravo WS				1.5	PT/AC	N

Soil Description

Description Name: Norfolk loamy sand

Texture: LOAMY SAND

pH: 5.9 Soil Name: Norfolk

CEC: 1.4 Fert. Level: Good

Soi Test:

Element	Quantity	Unit
P	65	lb/ac
K	66	lb/ac
Ca	259	lb/ac
Mg	46	lb/ac

1 ton of lime was applied according to soil test on 07Apr02

80 lbs of potash was applied according to soil test on 07Apr05

Moisture and Weather Conditions

Closest Weather Station: Sheds Distance: 0.4

Date	Amount	Unit	Type
May	1.54	in	Rainfall
June	5.97	in	Rainfall
July	4.89	in	Rainfall
Aug	3.09	in	Rainfall
17Aug	0.65	in	Traveling Gun
Sept	0.5	in	Rainfall
6Sept	0.65	in	Traveling Gun
21Sept	0.65	in	Traveling Gun
29Sept	0.65	in	Traveling Gun

Table 1. Yield, grade, value, and late leaf spot resistance of runner- and Virginia-type varieties grown on an irrigated deep sand, Blackville, SC 2007.

Rating Date			141 DAP				Late Leafspot	
Rating Data Type	Acre Value	Ton Value	Yield	TSMK	OK	ELK		
Trt Runner-type No. Variety	\$/acre	\$/ton	Lb/Ac	%	%		% Sympt. lvs	% Def
4 Georgia 06G	1566 a	528 a	5783 a	78.6 a	2.6 a		29 abc	0.6 a
3 Georgia Greener	1523 ab	522 ab	5699 a	77.0 ab	3.4 a		18 bc	0.0 a
9 Florida07	1422 bc	511 cde	5471 ab	74.9 bcd	2.9 a		14 c	0.0 a
6 AT215	1387 c	515 bcd	5261 b	75.6 bc	3.6 a		36 ab	2.4 a
10 McCloud	1380 cd	516 bc	5130 b	75.8 bc	3.7 a		13 c	1.0 a
1 Georgia Green	1354 cd	514 bcd	5081 b	75.3 bcd	4.0 a		18 bc	0.0 a
8 AT3085	1351 cd	510 cde	5085 b	74.7 cd	3.4 a		36 ab	0.2 a
5 Viruguard	1249 de	513 bcd	4669 c	75.1 bcd	4.0 a		28 abc	0.4 a
2 Georgia 03L	1189 e	506 de	4457 cd	74.0 cd	3.0 a		34 ab	0.0 a
7 AT3081R	1119 e	504 e	4229 d	73.3 d	3.5 a		47 a	0.2 a
LSD (P=.05)	131.9	8.8	389.8	1.38	1.10		19.3	4.76
Standard Deviation	90.7	6.1	301.8	0.95	0.76		15.1	3.72
CV	6.7	1.18	5.93	1.57	22.18		55.45	257.95
Bartlett's X2	12.098	16.335	5.966	17.599	10.593		15.148	7.127
P(Bartlett's X2)	0.208	0.06	0.743	0.04*	0.305		0.087	0.211
Replicate F	16.419	0.844	32.581	0.859	1.589		4.155	0.794
Replicate Prob(F)	0.0001	0.4819	0.0001	0.4740	0.2150		0.0072	0.5369
Treatment F	9.364	5.377	14.301	4.469	1.566		2.770	1.223
Treatment Prob(F)	0.0001	0.0003	0.0001	0.0012	0.1760		0.0142	0.3117
	Acre Value	Ton Value	141 DAP Yield	TSMK	OK	ELK	Late Leafspot	
Trt Virginia-type No. Variety	\$/acre	\$/ton	Lb/Ac	%	%	%	% Sympt. lvs	% Def
14 ATVC2	1674 a	581 c	5693 a	73.5 cde	1.7 a	45.8 c	26 ef	0.6 cd
12 Champs	1633 a	590 ab	5511 ab	75.0 a-d	1.5 a	54.8 a	51 bc	0.8 cd
18 VA98R	1590 a	582 bc	5309 abc	73.7 b-e	1.6 a	47.9 bc	37 cde	2.4 cd
13 Florida Fancy	1561 a	573 cd	5063 bcd	71.9 ef	1.9 a	46.6 bc	41 cde	0.6 cd
15 Phillips	1538 a	595 a	5092 bcd	75.7 a	1.4 a	57.4 a	64 ab	3.0 bc
11 NCV11	1534 a	578 cd	5342 abc	73.3 cde	1.7 a	42.9 c	14 f	0.0 d
16 Gregory	1533 a	581 bc	5152 bcd	73.2 de	1.3 a	54.4 a	78 a	9.4 a
19 Wilson	1521 a	569 d	5142 bcd	71.2 f	2.0 a	45.4 c	30 def	1.0 cd
17 Perry	1515 a	592 a	4894 cd	75.4 ab	1.6 a	51.7 ab	45 cd	1.4 cd
20 Brantley	1426 a	591 ab	4800 d	75.1 abc	1.2 a	55.2 a	71 a	7.4 ab
LSD (P=.05)	134.4	9.7	493.7	1.84	0.56	5.75	17.0	5.98
Standard Deviation	92.4	6.7	382.3	1.27	0.39	3.96	13.3	4.68
CV	5.95	1.14	7.35	1.72	24.7	7.89	29.11	81.43
Bartlett's X2	3.464	8.148	8.119	6.167	10.994	13.486	11.478	6.208
P(Bartlett's X2)	0.943	0.519	0.522	0.723	0.276	0.142	0.244	0.624
Replicate F	25.696	0.780	18.369	1.155	2.256	0.744	19.223	9.808
Replicate Prob(F)	0.0001	0.5154	0.0001	0.3449	0.1047	0.5350	0.0001	0.0001
Treatment F	2.179	6.404	2.517	5.528	1.536	6.572	11.921	6.318
Treatment Prob(F)	0.0585	0.0001	0.0244	0.0002	0.1856	0.0001	0.0001	0.0001

Values based on 2008 contract prices (\$500/ton runner and \$550/ton Virginia).

Means of the same type classification followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when probability of F value ≤ 0.05.

Table 2. Yield, grade, and value of runner- and Virginia-type peanut varieties grown at the Pee Dee Research and Education Center, Florence, SC 2007.

Inversion Date	1 st Dig Acre Value 132 DAP	1 st Dig Ton Value 132 DAP	1 st Dig Yield 132 DAP	2 nd Dig Yield 141 DAP	Average Yield	1 st Dig TSMK 132 DAP	1 st Dig OK 132 DAP	1 st Dig ELK 132 DAP	
Trt No.	Runner-type Variety	\$/acre	\$/ton	Lb/ac	Lb/ac	Lb/ac	%	%	%
3	Viruguard	879 a	496 a	3545 a	4188 a	3866 a	71.0 a	5.5 a	--
4	AT 215	846 a	494 a	3423 a	4328 a	3754 a	70.7 a	5.2 a	--
2	Georgia 03L	822 a	467 b	3499 a	4300 a	3900 a	65.0 b	5.4 a	--
1	Georgia Green	816 a	491 a	3324 a	4074 a	3623 a	69.9 a	5.9 a	--
LSD (P=.05)		139.6	13.1	518.0	520.0	561.5	2.54	2.28	.
Standard Deviation		112.7	10.6	418.3	413.3	453.4	2.07	1.86	.
CV		13.41	2.19	12.13	9.79	11.98	2.99	33.73	.
Replicate F		0.193	2.453	0.146	0.353	0.170	3.591	1.003	
Replicate Prob(F)		0.9603	0.0816	0.9781	0.8706	0.9694	0.0247	0.4494	
Treatment F		0.383	9.655	0.322	0.473	0.457	10.896	0.136	
Treatment Prob(F)		0.7667	0.0009	0.8094	0.7065	0.7169	0.0005	0.9372	
Trt No.	Virginia-type Variety	\$/acre	\$/ton	Lb/ac	Lb/ac	Lb/ac	%	%	%
6	Champs	1148 a	564 a	4059 a	4062 a	4026 a	70.5 a	2.1 b	38.0 ab
9	Phillips	999 ab	560 a	3568 ab	4063 a	3815 a	69.5 a	2.1 b	41.5 a
5	NC V11	944 abc	527 bc	3566 ab	4034 a	3740 a	63.5 c	3.6 a	26.6 c
7	Florida Fancy	916 bc	531 bc	3446 ab	3413 a	3446 a	64.4 bc	2.9 ab	28.8 c
8	Gregory	879 bc	526 c	3308 b	4254 a	3781 a	63.0 c	2.8 ab	33.3 bc
10	Perry	789 c	546 ab	2888 b	3550 a	3219 a	67.4 ab	2.5 b	30.6 c
LSD (P=.05)		209.3	19.1	683.3	696.8	612.9	3.69	0.96	6.85
Standard Deviation		175.6	16.1	573.4	581.9	515.3	3.10	0.81	5.76
CV		18.57	2.97	16.51	14.94	14.04	4.67	30.04	17.39
Replicate F		0.751	1.084	0.704	0.555	0.832	0.940	1.099	1.650
Replicate Prob(F)		0.5936	0.3934	0.6257	0.7328	0.5393	0.4725	0.3855	0.1836
Treatment F		2.867	6.450	2.668	1.966	1.891	6.454	3.212	5.828
Treatment Prob(F)		0.0362	0.0006	0.0470	0.1238	0.1318	0.0006	0.0224	0.0011

Values based on 2008 contract prices (\$500/ton runner and \$550/ton Virginia).

Means of the same type classification followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when probability of F value ≤ 0.05.

Planting Date 15 May

Harvest Dates: 1st Dig 1 Oct, 2nd Dig 10 Oct.