

2012

Peanut Variety and Quality Evaluation Results

Agronomic and Grade Data

Tidewater Agricultural Research and Extension Center

Virginia Agricultural Experiment Station



Virginia
Extension
Cooperative



 VirginiaTech
Invent the Future

PEANUT VARIETY AND QUALITY EVALUATION RESULTS 2012

I. Agronomic and Grade Data

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Brenda Kennedy, above

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ABBREVIATIONS

% Loose Shelled Kernels (%LSK), percent of kernels or portions of kernels free from hulls and scattered throughout the pod sample.

% Foreign Material (%FM), percent of anything other than mature pods found in the sample, including dirt, vines, sticks, stones, insects, broken shells, and raisins (immature pods with shriveled and shrunken shells that cannot be mechanically shelled).

% Moisture, percent kernel moisture at grading, as determined by an electronic moisture meter.

% Fancy, percent pods that ride the 34/64 inch spacing set on the pre-sizer.

% Extra Large Kernels (%ELK), percent kernels which ride a 21.5/64 x 1 inch slotted screen.

% Sound Splits (%SS), percent split or broken kernels which are not damaged. Portions less than 1/4 of a whole kernel are not included but go into other kernels.

% Damaged Kernels (%DK), percent moldy and decayed kernels, or with skin and flesh discoloration due to insects and weather damage.

% Other Kernels (%OK), percent kernels passing through a 15/64 x 1 inch slotted screen. Splits and broken pieces, 1/4 kernel or larger which pass through this screen are considered SS or DK depending upon their condition.

% Sound Mature Kernels (%SMK), percent whole kernels which ride a 15/64 x 1 inch slotted screen. Splits that ride this screen are included as SS or DK, as the case may be.

% Total Kernels, percent all kernels in the shelling sample including SMK, SS, OK, and DK.

Support Price (\$/cwt), price based on a standard loan price (\$358.17 per ton for Virginia-type and \$354.65 per ton for runner-type peanut) taking the various grade factors into consideration.

Yield (lb/A), plot weights converted to an acre basis. All yields are adjusted to a standard 7% moisture with %FM deducted.

Value (\$/A), crop value computed by the following formula:

Value = [Yield - (% LSK)(Yield)] [Support Price/lb] + Yield (% LSK)(\$.07/lb LSK)

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Introduction

INTRODUCTION

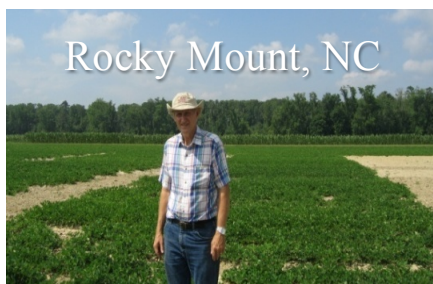
Due to suitability to the environmental conditions and existence of a strong peanut industry tailored to process primarily the large-seeded Virginia-type peanut, growers in Virginia, North Carolina, and South Carolina generally grow Virginia-type cultivars. In the view of a common interest in the Virginia-type peanut, the three states are working together through a multi-state project, the Peanut Variety Quality Evaluation Project (PVQE), to evaluate advanced breeding lines and commercial cultivars throughout their production regions. The objectives of this project are: 1) to determine yield, grade, quality, and disease response of commercial cultivars and advanced breeding lines at various locations in Virginia and the Carolinas, 2) develop a database for Virginia-type peanut to allow research-based selection of the best genotypes by growers, industry, and the breeding programs, and 3) to identify the most suited peanut genotypes for various regions that can be developed into varieties. This report contains agronomic and grade data of the PVQE tests in 2012.



Plant Material and Test Locations

PLANT MATERIAL AND TEST LOCATIONS

In 2012, PVQE included 26 genotypes: 7 commercial varieties and 19 advanced breeding lines developed by the North Carolina State University peanut breeding program (Table 1). Seventeen breeding lines have the ‘high oleic acid’ characteristic and they are marked by ‘ol’ letters in their names; the commercial cultivars are conventional for this trait. Genotypes were planted from 9 April to 20 May at five locations: at the Tidewater AREC in Suffolk, VA, Martin Co., NC, the Upper Coastal Plain Research Station near Rocky Mount, NC, Bladen County, NC, and the Edisto Research and Education Center at Blackville, SC. At Suffolk and Martin two digging dates and two replications within each digging date were planted (Table 2). At all other locations, only one planting date and three replications at each site were planted. At all locations, plots were arranged in a randomized complete block design. The commercial cultivars are used as checks for the performance of the breeding lines as the ultimate objective is development of new Virginia-type peanut cultivars. Some breeding lines were selected for evaluation because they exhibited good performance in the previous years. Some other lines are relatively new.



Plant Material and Test Locations

PLANT MATERIAL AND TEST LOCATIONS

Table 1. Names and pedigree of the genotypes (advanced breeding lines and commercial varieties) evaluated in 2012.

Genotype Number	Variety or Line	Pedigree
1	NC-V 11	Florigiant / NC 5 // Florigiant / Valencia
2	Gregory	NC 7 / NC 9
3	VA 98R	VA 81B x VA 780839P
4	Perry	NC 7 / Florigiant // N90021
5	Phillips	N90014E / N91024
6	Bailey	NC 12C*2 / N96076L
7	Florida Fancy	F87 x 8-2-1 / F 85410 / 93Q10
8	N08070oIJC	N03079FT / X03034 (F01)
9	N08071oIJC	N03079FT / X03034 (F01)
10	N08075oICT	N03079FT / X03034 (F01)
11	N08081oIJC	Bailey / X03036 (F01)
12	N08082oIJCT	Bailey / X03036 (F01)
13	N08085oIJCT	Bailey / X03036 (F01)
14	N08087oIJCT	Bailey / X03036 (F01)
15	N09037ol	N03079FT / X03031 (F01)
16	N09053oICSm	N03075FT / N00098ol (Gre)
17	N10046ol	N03079FT / X03031 (F01)
18	N10047ol	N03079FT / X03031 (F01)
19	N10053ol	Bailey / X03036 (F01)
20	N10066oISmT	N03076FT / X05019 (F01)
21	N10078oIJC	N03088T / X05030 (F01)
22	N10080oIJCL	N03088T / X05030 (F01)
23	N10082oIJC	N03088T / X05030 (F01)
24	SPT 10-05	VA 98R / 04 L LAU 003
25	SPT 10-11ol	04 L LAU 003 / ANorden
26	SPT 10-14	04 L LAU 003 / Brantley

Plant Material and Test Locations

Table 2. Planting, digging and combining dates for each test location in 2012. Dig I was considered an early digging, and Dig II and optimum digging time for peanut in V-C area.

Locations	Planting Date		Digging Date		Combining Date	
	I	II	I	II	I	II
Tidewater AREC, VA	May 7	May 7	Sept. 21	Oct. 10	Sept. 27	Oct. 24
Martin Co., NC	May 15	May 15	Oct. 5	Oct. 17	Oct. 17	Nov. 2
Rocky Mount, NC	May 16		Oct. 13		Oct. 23	
Bladen Co., NC	May 8		Sept. 26		Oct. 12	
Blackville, SC	May 4		Sept. 21		Sept. 28	

Weather Conditions

WEATHER CONDITIONS

The 2012 growing season was hot and humid at all locations. Weather information is provided in Tables 3 through 7.

Table 3. Temperature of air and soil at 4 inches depth, peanut heat units (degree day – DD56) calculated based on a 56 °F temperature base (T_b), average and maximum radiation (RAD), air relative humidity (RH), and precipitation at Tidewater AREC, Suffolk VA, in 2012 peanut growing season. These data were recorded next to the plots from planting of Dig I to the harvest of Dig II.

Month	AVG	Max	Min	AVG	Heat	AVG	Max	RH	Rain
	Tair	Tair	Tair	Tsoil	units	RAD ¹	RAD ¹		
		°F			°F d	W/m ²		%	inch
May	70	82	59	72	429	217	740	80	7.9
June	73	86	61	76	941	253	807	75	6.2
July	81	93	72	84	1715	243	810	81	4.5
August	77	88	69	80	2358	191	671	87	7.9
September	70	83	59	74	2778	177	650	83	3.6
October	64	76	54	70	2901	148	553	85	7.9
Mean/Sum	72	84	62	76	2901	205	705	82	38.0

¹ Light is important for peanut growth and development. On a fully sunny day, maximum RAD approaches 1366 watts/m² and average RAD (average from sunrise to sunset) is approximately 250 watts/m². If these numbers are less, it denotes cloudy days, on which plants grow less.

Weather Conditions

Table 4. Temperature of air and soil at 4 inches depth, light (photosynthetic active radiation - PAR), air relative humidity (RH), and precipitation at Martin County, NC, in 2012 peanut growing season. These data were recorded next to the plots from planting of Dig I to the harvest of Dig II.

Month	AVG Tair	Max Tair	Min Tair	AVG Tsoil	Heat units DD56	AVG PAR	Max PAR	RH	Rain
	°F				°F d	$\mu\text{mol m}^{-2} \text{s}^{-1}$	$\mu\text{mol m}^{-2} \text{s}^{-1}$	%	inch
May	70	81	62	71	538	420	2222	72	4.09
June	73	85	62	75	1061	547	2331	66	4.46
July	80	91	72	82	1590	288	2228	76	5.17
August	77	86	70	80	2270	317	2237	79	5.23
September	70	81	61	75	2725	291	1887	77	5.48
October	64	74	56	69	2859	289	1588	77	2.05
Mean/Sum	72	83	64	75	2859	359	2082	74	26.48

¹ Light is important for peanut growth and development. On a fully sunny day, maximum PAR approaches $2500 \mu\text{mol m}^{-2} \text{s}^{-1}$ and average PAR (average from sunrise to sunset) is approximately $600 \mu\text{mol m}^{-2} \text{s}^{-1}$. If these numbers are less, it denotes cloudy days, on which plants grow less.

Weather Conditions

Table 5. Temperature of air and soil at 4 inches depth, peanut heat units (degree day – DD56) calculated based on a 56 °F temperature base (T_b), light (photosynthetic active radiation – PAR), air relative humidity (RH), and precipitation at Rocky Mount, NC, in 2012 peanut growing season. These data are provided by the State Climate Office of NC from 1 May to 31 October.

Month	AVG Tair	Max Tair	Min Tair	AVG Tsoil	Heat units DD56	AVG PAR	RH	Rain
	°F				°F d	$\mu\text{mol m}^{-2} \text{s}^{-1}$	%	inch
May	71	82	56	64	500	259	73	6.94
June	74	86	64	68	1044	221	67	2.24
July	81	92	69	72	1867	98	76	7.06
August	77	87	67	69	2555	214	80	8.16
September	70	82	61	73	3015	191	77	3.52
October	65	76	55	69	3145	238	78	6.84
Mean/Sum	71	82	56	64	3145	259	73	34.76

¹ Light is important for peanut growth and development. On a fully sunny day, maximum PAR approaches $2500 \mu\text{mol m}^{-2} \text{s}^{-1}$ and average PAR (average from sunrise to sunset) is approximately $600 \mu\text{mol m}^{-2} \text{s}^{-1}$. If these numbers are less, it denotes cloudy days, on which plants grow less.

Table 6. Temperature of air and soil at 4 inches depth, peanut heat units (degree day – DD56) calculated based on a 56 °F temperature base (T_b), air relative humidity (RH), and precipitation at Bladen County, NC, in 2012 peanut growing season. These data are provided by the State Climate Office of NC from 1 May to 31 October.

Month	AVG Tair	Max Tair	Min Tair	Heat units DD56	RH	Rain
	°F			°F d	%	inch
May	71	82	63	524	77	3.3
June	74	84	64	1088	71	2.6
July	81	92	74	1866	75	2.3
August	76	85	70	2543	85	4.4
September	72	82	63	3040	79	1.3
October	65	74	57	3191	82	1.0
Mean/Sum	73	83	65	3191	78	14.8

Weather Conditions

Table 7. Temperature of air, peanut heat units (degree day – DD56) calculated based on a 56 °F temperature base (T_b), air relative humidity (RH), and precipitation at Edisto Research and Education Center in Blackville, SC, in 2012 peanut growing season. These data are provided by the State Climate Office of NC from 1 May to 31 October.

Month	AVG Tair	Max Tair	Min Tair	Heat units DD56	RH	Rain
		°F		°F d	%	inch
May	76	88	67	699	71	3.1
June	76	87	65	1303	68	2.1
July	83	95	74	2179	72	3.8
August	78	88	71	2912	80	5.3
September	74	85	65	3476	74	3.2
October	67	78	58	3656	78	1.4
Mean/Sum	76	87	67	3656	74	18.8

CULTURAL PRACTICES

Cultural practices were performed according to Virginia and North Carolina recommendations. Plots were 35 ft rows planted on 36-inch centers (3 seed/row ft) with a two-row planter. All plots were dug with a KMC 2-row Planting Digger, and combined with a 2-row Hobbs peanut picker, model 325A, equipped with a bagging attachment. Tables 8 through 11 show planting dates, soil type, pH and mineral content, and cultural practices applied to the crops at each location.



Cultural Practices

Table 8. Cultural practices at Tidewater AREC (Suffolk), VA, for Digs I and II in 2012.

Planting Date:	May 7, 2012						
Harvest Date:	Dig 1 – Sept. 27, 2012; Dig II – Oct. 24, 2012						
Soil Type:	Eunola, Nansemond, Uchee						
Soil Test Results:	ppm						
	pH	P	K	Ca	Mg	Zn	Mn
	6.13	24	82	335	31	0.4	2.2
Cultivation:	Conventional Till						
Soil Fumigant:	4/16/12	-	Sectagon (Metam) 8 gal/A				
Landplaster:	6/16/12	-	1200 lbs/A Gypsum				
Herbicides:	4/17/12	-	Dual Magnum 1 pt/A				
	5/14/12	-	Intro 1 qt/A; Gramoxone 20 oz/A				
	7/5/12	-	Storm 1.5 pt/a; Basagran 1 pt/A				
	7/11/12	-	Select 1 pt/A				
	7/19/12	-	Intro 1 qt/A				
Insecticides:	5/17/12	-	Orthene 12 oz/A (in furrow)				
	5/29/12	-	Orthene 6 oz/A (broadcast)				
	7/24/12	-	Danitol 8 oz/A				
	8/8/12	-	Asana 6 oz/A				
	8/23/12	-	Asana 6 oz/A				
Fertility:	5/7/12	-	Optimize Lift 16 oz/A				
	5/14/12	-	Boron 9% 1 qt/A				
	7/24/12	-	Manganese 7% 1 qt/A				
	8/8/12	-	Boron 9% 1 qt/A; Manganese 7% 1 qt/A				
Fungicides:	7/24/12	-	Provost 8 oz/A				
	8/8/12	-	Provost 8 oz/A; Omega 1 pt/A				
	8/23/12	-	Omega 1 pt/A; Provost A 8 oz/A				

Cultural Practices

Table 9. Cultural practices at Martin Co., NC, for Digs I and II, in 2012.

Planting Date:	May 15, 2012
Harvest Date:	Dig I – Oct. 17, 2012; Dig II – Nov. 2, 2012
Soil Type:	Norfolk loamy fine sand
Cultivation:	Conventional till
Soil Fumigant:	None
Landplaster:	7/15/12 - 1300 lbs/A Gypsum
Herbicides:	5/15/12 - Intro 1 qt/A; Dual Magnum 1 pt/A 7/9/12 - Storm 1.5 pt/A; Basagran 1 pt/A 7/26/12 - Select 1 pt/A; Intro 1 qt/A
Insecticides:	5/15/12 - Orthene 12 oz/A (in furrow) 7/9/12 - Orthene 6 oz (broadcast) 7/26/12 - Danitol 8 oz/A 8/10/12 - Asana 6 oz/A
Fertility:	5/15/12 - Optimize Lift 16 oz/A; Boron 9% 1 qt/A 7/9/12 - Manganese 7% 1 qt/A 7/26/12 - Boron 9% 1 qt/A; Manganese 7% 1 qt/A
Fungicides:	5/15/12 - Proline 5.7 oz/A 7/26/12 - Provost 8 ozA 8/10/12 - Provost 8 oz/A; Omega 1 pt/A 9/6/12 - Provost 8 oz/A; Omega 1 pt/A

Cultural Practices

Table. 10 Cultural practices at Rocky Mount, NC in 2012.

Planting Date:	May 16, 2012
Harvest Date:	Oct. 23, 2012
Soil Type:	Aycock very fine sandy loam
Cultivation:	Conventional Till 6/5/12 - Cultivation
Soil Fumigant:	None
Landplaster:	7/6/12 - 1200 lbs/A
Herbicides:	5/8/12 - Prowl 1 pt/A; Dual Magnum 1 pt/A 5/17/12 - Intro 2 qt/A 6/14/12 - Ultra Blazer 1.5 pt/A 6/19/12 - Poast Plus 1.5 pt/A 7/4/12 - Basagran 1 pt/A; Cobra 12 oz/A; 7/20/12 - Select Max 1 pt/A 8/16/12 - Arrow 2 EC 16 oz/A
Insecticides:	5/15/12 - Orthene 12 oz/A (in furrow) 6/30/12 - Orthene 1 lb/A 7/6/12 - Karate 1.9 oz/A 7/16/12 - Lorsban 14 lbs/A 7/30/12 - Danitol 8 oz/A 8/10/12 - Tracer 3 oz/A 8/30/12 - Asana 9.6 oz/A
Fertility:	5/15/12 - Optimize Lift 16 oz/A 7/16/12 - Boron 1 qt/A 7/30/12 - Manganese 1 lb/A 8/14/12 - Boron 1 qt/A 8/27/12 - Tech Manganese 3 lbs/A
Fungicides:	5/15/12 - Proline 5.7 oz/A 7/16/12 - Bravo WS 2 pts/A 7/30/12 - Provost 7 oz/A 8/14/12 - Omega 500 1 pt/A; Headline 10 oz/A 8/27/12 - Folicur 7.2 oz/A; Bravo WS 1 pt/A

Cultural Practices

Table 11. Cultural practices at Bladen County, NC in 2012.

Planting Date:	May 8, 2012
Harvest Date:	Oct. 12, 2012
Soil Type:	Goldsboro sandy loam
Cultivation:	Conventional till
Soil Fumigant:	None
Landplaster:	6/23/12 - 1900 lbs/A
Herbicides:	5/25/12 - Gramoxone 6 oz/A; Basagran 1 pt/A; Dual Magnum 1 1/3 pt/A 6/14/12 - Cadre 4 oz/A; Cropoil 1 qt/A
Insecticides:	5/8/12 - Orthene 12 oz/A (in furrow) 5/25/12 - Orthene 3 oz/A 7/2/12 - Lorsban 13 lbs/A 7/28/12 - Mustang Max 4 oz/A
Fertility:	5/8/12 - Optimize Lift 16 oz/A 6/21/12 - Manganese (31%) 6 oz/A 7/11/12 - Manganese (31%) 6 oz/A 7/28/12 - Boron 10% 1 pt/A
Fungicides:	6/21/12 - Tilt Bravo 1 1/2 pt/A 7/11/12 - Abound 18 oz/A 7/28/12 - Generic Folicur 7.2 oz/A 8/14/12 - Generic Folicur 7.2 oz/A 8/31/12 - Headline 12 oz/A
Growth Regulators:	7/28/12 - Apogee 7.2 oz/A 8/14/12 - Apogee 7.2 oz/A

Cultural Practices

Table 12. Cultural practices at Blackville, SC in 2012.

Planting Date:	May 4, 2012						
Harvest Date:	Sept. 28, 2012						
Soil Type:	Barnwell loamy sand						
Soil Test Results:	lb/ac						
	pH	P	K	Ca	Mg	Zn	Mn
	6.6	62	172	1107	86	--	--
Cultivation:	Conventional till						
Soil Fumigant:	None						
Landplaster:	None						
Herbicides:	5/7/12 - Valor (3 oz), Prowl (1 qt), + Round-up (1 qt)						
	6/19/12 - Cadre (4 oz) + 2.4 DB (1pt) applied 45 DAP						
Insecticides:	5/14/12 - Thimet 20G (5 lb In Furrow)						
	8/6/12 - Over-sprayed with Karate Z for leaf hopper control after ratings						
Fertility:	None						
Fungicides:	6/19/12 - Bravo WS (1.5 pt/A)						
	7/19/12 - Bravo WS (1.5 pt/A)						
	8/3/12 - Bravo WS (1.5 pt/A)						

RESULTS

Seedcoat color and maturity rating are presented in Table 13. This year, disease incidence was evaluated only at Suffolk and Blackville (Tables 14-15). After harvest, yield and farmer-stock grade factors including percentages of jumbo and fancy pods, pod brightness, foreign material (%FM), loose shelled kernels (%LSK), % jumbo and fancy pods, extra large kernels (%ELK), sound mature kernels (%SMK), sound splits (%SS), other kernels (%OK), damaged kernels (%DK), pod brightness (Hunter L score) for jumbo and fancy pods, pod yield adjusted for 7% kernel moisture, price per pound calculated by the federal formula.

The results are presented in tables 16 to 28 and figures 1 through 24 for individual locations and all locations combined. Two-year averages are presented in Tables 29-33.



2012 Results by Location

RESULTS – COLOR AND MATURITY

Table 13. Seedcoat color and maturity rating of the peanut entries averaged for all locations in 2012.

Variety or Line	Seedcoat ¹ Color	Maturity Rating ²	
		ELK	Medium
NC-V11	P,LP	1	2
Gregory	LP	1	2
VA98R	LP	1	2
Perry	P,LP	1	2
Phillips	LT	1	2
Bailey	LT	1	2
Florida Fancy	P,LP	1	2
N08070oIJC	LP	1	2
N08071oIJC	LT	1	2
N08075oICT	LT	1	2
N08081oIJC	T,LT	1	2
N08082oIJCT	T,LT	1	2
N08085oIJCT	LT	1	2
N08087oIJCT	LT	1	2
N09037ol	LT	1	2
N09053oICSm	T,LT	1	2
N10046ol	LT	1	2
N10047ol	LT	1	2
N10053ol	T,LT	1	2
N10066oISmT	T,LT	1	2
N10078oIJC	P,LP	1	2
N10080oIJCL	P,LP	1	2
N10082oIJC	P,LP	1	2
SPT10-05	LT	1	2
SPT10-11ol	LP	1	2
SPT10-14	T	1	2

¹ T = tan, LP = light pink, P = pink, and LT = Light Tan

² Maturity rating (lower number indicates more mature seed) based on the degree of shriveling of the seedcoat with 1 = completely smooth 2 = somewhat smooth 3 = slightly shriveled 4 = somewhat shriveled and 5 = completely shriveled.

2012 Results by Location

RESULTS – DISEASE

Table 14. Disease incidence at the Tidewater AREC (Suffolk), VA, evaluated on 12 August 2012.

Variety or Line	TSWV	SB	CBR
NC-V 11	0.8 bc	0.3 bc	0.0 b
Gregory	1.0 bc	2.3 a	0.0 b
VA 98R	0.5 bc	1.3 ab	0.0 b
Perry	1.5 a-c	0.0 c	0.0 b
Phillips	3.3 a	0.8 bc	0.3 a
Bailey	0.5 bc	0.3 bc	0.0 b
Florida Fancy	0.3 bc	0.3 bc	0.0 b
N08070oIJC	0.3 bc	0.0 c	0.0 b
N08071oIJC	1.3 bc	0.5 bc	0.0 b
N08075oICT	0.3 bc	0.3 bc	0.0 b
N08081oIJC	1.3 bc	0.0 c	0.0 b
N08082oIJCT	0.8 bc	0.0 c	0.0 b
N08085oIJCT	0.5 bc	0.0 c	0.0 b
N08087oIJCT	0.8 bc	0.0 c	0.0 b
N09037ol	0.5 bc	0.0 c	0.0 b
N09053oICSm	1.3 bc	0.0 c	0.0 b
N10046ol	0.8 bc	0.0 c	0.0 b
N10047ol	0.5 bc	0.0 c	0.0 b
N10053ol	0.0 c	0.3 bc	0.0 b
N10066oISmT	0.5 bc	0.0 c	0.0 b
N10078oIJC	1.8 a-c	0.0 c	0.0 b
N10080oIJCL	1.8 a-c	0.8 bc	0.0 b
N10082oIJC	0.5 bc	1.3 ab	0.0 b
SPT 10-05	2.0 ab	0.3 bc	0.0 b
SPT 10-11ol	0.5 bc	0.3 bc	0.0 b
SPT 10-14	0.3 bc	0.0 c	0.0 b
Mean	0.8	0.3	0.0

¹ Hit (one foot row) count per plot with plants showing symptoms of Tomato Spotted Wilt Virus.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

2012 Results by Location

RESULTS – DISEASE

Table 15. Disease incidence at Blackville, SC.

Description Rating Date Rating Unit Trt No.	Treatment Name	White Mold	Leafspot	TSWV
		Sep-21-12 %	Sep-21-12 1-10	Sep-13-12 % stunt.
		15	13	11
1	NC V-11	17.1 c-k	6.6 d-j	7.5 c-j
2	Gregory	30.8 ab	6.9 a-e	5.4 e-l
3	VA 98 R	21.3 b-h	7 a-d	10 a-g
4	Perry	22.1 b-g	7.2 abc	12.9 a-d
6	Phillips	37.9 a	7.3 ab	13.8 ab
7	Bailey	9.2 ijk	6.1 l-r	1.7 jkl
9	Florida Fancy	25.4 bcd	5.9 o-r	15.8 a
10	N08070olJC	9.2 ijk	6.3 h-o	2.5 h-l
11	N08071olJC	12.7 f-k	5.9 n-r	3.3 h-l
12	N08075olICT	6.5 k	5.8 qrs	1.7 jkl
13	N08081olJC	14.2 d-k	5.9 n-r	3.8 h-l
14	N08082olJCT	13.3 e-k	6 m-r	7.1 d-k
15	N08085olJCT	15.4 c-k	6.9 a-f	12.9 a-d
16	N08087olJCT	22.9 b-g	6.2 j-q	5.8 e-l
17	N09037ol	16.7 c-k	6.4 g-n	5.8 e-l
18	N09053olCSm	18.5 c-j	6.8 c-h	13.3 abc
19	N10046ol	10 h-k	6.1 l-r	1.3 kl
20	N010047ol	15.4 c-k	6.8 b-g	2.1 i-l
21	N10053ol	12.9 e-k	7.3 a	4.2 g-l
22	N10066olSmT	12.1 g-k	6.1 l-r	10.4 a-f
23	N10078olJC	18.3 c-j	6.3 h-o	6.7 e-l
24	N010080olJCL	20.8 b-h	6.6 d-k	5.4 e-l
25	N10082olJC	24.2 b-f	6.7 d-i	10.8 a-e
26	SPT 10-05	19.6 b-i	5.3 st	5.8 e-l
27	SPT 10-11ol	22.9 b-g	6.2 j-q	8.3 b-h
28	SPT 10-14	19.6 b-i	5 t	5 e-l
29	GA Greener	14.2 d-k	5.9 o-r	4.6 f-l
30	GA 07W	16.3 c-k	5.8 pqr	5 e-l
31	GA 10 T	10 h-k	6.4 f-m	4.2 g-l
32	GA 11 J	7.5 jk	6.4 f-m	6.7 e-l
33	Spain	26.3 bc	6.3 h-o	6.7 e-l
34	Ga 06 G	15.8 c-k	6.3 i-p	5.8 e-l
35	Florunner 107	13.3 e-k	6.1 k-q	7.9 b-i
36	Fla 07	17.5 c-k	5.6 rs	2.9 h-l
37	ChampsBaileyMix	24.4 b-e	6.5 e-l	7.9 b-i
LSD (P=.05)		11.54	0.46	6.03
Standard Deviation		8.24	0.33	4.31
CV		48.23	5.24	67.27
Replicate F		2.654	4.881	0.497
Replicate Prob(F)		0.0522	0.0032	0.6853
Treatment F		2.803	9.976	3.27
Treatment Prob(F)		0.0001	0.0001	0.0001

Rating Unit

% = percent

1-10 = 1-10 index/scale

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

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

2012 Results by Location

RESULTS – PODS

Table 16. Average percent of jumbo pods¹ based on farmers' grade at all locations in 2012.

Variety or Line	Suffolk, VA		Martin Co., NC		Rocky Mount, NC	Bladen, NC	Blackville, SC	Average of all locations
	Dig I	Dig II	Dig I	Dig II				
NC-V 11	36 l	31 j-m	26 g-k	17 k-m	36 ij	56 j	39 k	36 kl
Gregory	86 a	80 ab	82 a	67 a	79 a	88 a	77 b	80 a
VA 98R	46 i-k	45 g-k	32 e-i	23 h-l	46 f-h	66 f-j	55 ij	47 g-i
Perry	39 kl	27 lm	31 e-j	28 g-j	39 hi	61 ij	37 k	39 jk
Phillips	50 g-j	49 f-i	16 kl	21 i-l	43 g-i	59 ij	54 ij	45 g-j
Bailey	38 kl	30 k-m	24 h-k	16 lm	25 kl	59 ij	54 ij	38 jk
Florida Fancy	76 b-d	77 a-c	60 bc	53 b-d	66 cd	74 c-g	67 d-g	68 b-d
N08070olJC	68 de	63 c-f	48 cd	51 c-e	66 cd	78 a-f	66 d-g	64 de
N08071olJC	78 a-c	64 b-f	65 b	50 c-e	69 bc	67 e-j	73 b-d	67 cd
N08075olCT	46 i-k	32 j-m	28 f-k	27 g-k	45 f-h	57 ij	55 h-j	45 h-k
N08081olJC	80 a-c	74 a-d	18 jk	61 ab	75 ab	83 a-c	77 b	72 a-c
N08082olJCT	82 ab	81 a	65 b	60 a-c	75 ab	86 ab	75 bc	76 ab
N08085olJCT	43 j-l	34 i-m	20 i-k	16 lm	43 g-i	66 g-j	58 h-j	43 i-k
N08087olJCT	82 ab	69 a-e	65 b	49 de	80 a	86 ab	74 b-d	73 a-c
N09037ol	79 a-c	68 a-e	56 bc	56 b-d	72 a-c	76 b-g	72 b-d	69 b-d
N09053olCSm	54 f-i	43 h-l	31 e-j	29 g-i	42 hi	66 f-j	59 g-i	48 f-i
N10046ol	81 a-c	66 a-e	50 cd	51 b-e	70 bc	79 a-d	68 c-f	67 cd
N10047ol	72 cd	60 d-g	38 d-g	42 ef	72 a-c	78 a-e	70 b-e	66 de
N10053ol	59 fg	46 g-j	38 d-g	30 g-i	50 e-g	69 d-i	62 f-i	53 fg
N10066olSmT	49 h-j	44 g-k	42 de	35 fg	52 ef	67 d-j	61 f-i	52 f-h
N10078olJC	53 f-i	35 i-m	24 h-k	22 h-l	51 e-g	60 ij	63 e-h	48 g-i
N10080olJCL	56 f-h	25 m	33 e-h	31 g-i	55 e	62 h-j	60 g-i	48 f-i
N10082olJC	60 ef	56 e-h	39 d-f	32 f-h	58 de	73 c-h	--	56 ef
SPT 10-05	22 m	24 m	19 jk	18 j-m	30 jk	34 k	42 k	29 l
SPT 10-11ol	17 m	20 mn	17 kl	16 lm	18 l	34 k	19 l	21 m
SPT 10-14	3 n	8 n	5 l	10 m	8 m	12 l	4 n	7 n
Mean	56	48	37	35	53	65	50	52
LSD_{0.05}³	9	16	13	10	8	12	8	8

¹Pods that rode a 38/64 inch opening on the pre-sizer.²Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.³Fisher's least significant difference (LSD) at P = 0.05.

2012 Results by Location

Table 17. Average percent of fancy pods¹ based on farmers' grade at all locations in 2012.

Variety or Line	Suffolk, VA		Martin Co., NC		Rocky Mount, NC	Bladen, NC	Blackville, SC	Average of all locations
	Dig I	Dig II	Dig I	Dig II				
NC-V 11	51 c-e	49 b-e	56 c-f	56 b-d	47 b-d	34 b-d	41 bc	46 bc
Gregory	12 o	14 m	13 m	24 l	15 k	10 h	16 r	15 l
VA 98R	32 h-k	39 e-h	54 d-g	52 c-e	42 c-e	27 c-g	30 e-i	38 d-f
Perry	49 c-e	52 a-d	51 d-g	46 d-g	49 b	30 c-e	36 cd	43 b-e
Phillips	43 e-g	45 c-f	72 a	55 b-e	48 bc	33 b-d	34 de	44 b-d
Bailey	54 b-d	59 ab	59 b-e	60 a-c	60 a	34 b-d	34 de	48 b
Florida Fancy	20 l-o	18 k-m	35 i-k	36 g-j	27 h-j	20 e-h	23 l-p	25 h-k
N08070oIJC	29 i-l	30 g-j	43 g-j	41 f-i	28 hi	20 e-h	25 j-n	29 hi
N08071oIJC	19 l-o	26 i-l	28 kl	36 h-k	25 ij	26 d-g	20 n-r	25 h-k
N08075oICT	45 d-f	50 b-e	54 d-g	52 c-e	45 b-e	37 bc	32 d-g	43 b-e
N08081oIJC	15 no	18 k-m	54 c-g	27 j-l	20 jk	13 h	18 p-r	20 j-l
N08082oIJCT	15 no	16 lm	27 kl	28 j-l	21 i-k	12 h	17 qr	19 kl
N08085oIJCT	52 c-e	55 a-d	61 a-d	68 a	50 b	28 c-f	31 d-h	46 bc
N08087oIJCT	16 m-o	25 j-m	26 kl	33 i-l	15 k	11 h	17 p-r	19 j-l
N09037oI	18 m-o	25 j-m	33 j-l	30 j-l	22 i-k	20 e-h	19 o-r	23 i-k
N09053oICSm	39 f-h	48 b-f	60 b-d	58 a-c	50 b	28 c-d	33 d-f	43 b-e
N10046oI	16 m-o	25 j-m	37 h-k	34 i-l	23 ij	17 gh	24 l-o	24 h-k
N10047oI	24 k-n	28 h-k	46 f-i	41 f-i	21 i-k	17 f-h	22 l-q	25 h-j
N10053oI	38 f-i	40 e-g	51 d-g	54 b-e	40 d-g	26 d-g	29 f-j	38 d-f
N10066oISmT	43 e-g	44 d-f	48 e-h	47 d-f	39 e-g	28 c-d	27 g-l	37 ef
N10078oIJC	43 e-g	56 a-c	66 a-c	52 c-e	43 b-e	34 b-d	26 i-m	43 b-f
N10080oIJCL	39 f-h	58 ab	54 d-g	52 c-e	41 c-f	33 b-d	28 g-k	42 c-f
N10082oIJC	35 g-j	37 f-i	52 d-g	50 c-f	34 f-h	24 d-g	--	36 fg
SPT 10-05	66 a	62 a	68 ab	64 ab	59 a	53 a	45 b	57 a
SPT 10-11oI	54 b-d	52 a-d	47 f-i	46 e-h	46 b-e	41 b	40 bc	46 bc
SPT 10-14	25 j-m	22 j-m	22 lm	26 kl	33 gh	34 b-d	42 b	30 gh
Mean	36	38	47	45	36	27	30	35
LSD_{0.05}³	10	11	12	10	7	11	5	6

¹ Pods that fell through a 38/64 inch opening but rode a 34/64 inch opening on the pre-sizer.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05

2012 Results by Location

Table 18. Average of pod brightness¹ (Hunter L Score) for jumbo pods in 2012.

Variety or Line	Suffolk, VA		Martin Co., NC		Rocky Mount, NC	Bladen, NC	Blackville, SC	Average of all locations
	Dig I	Dig II	Dig I	Dig II				
NC-V 11	45.65 a-c	45.91 a-c	43.48 a-c	35.95 e	42.74 f-h	41.50 cd	42.67 a-c	42.52 de
Gregory	47.34 a	44.52 bc	43.96 a-c	39.13 b-d	40.63 h	42.93 a-d	44.37 a-c	43.23 b-e
VA 98R	46.63 ab	45.44 a-c	45.77 a	38.76 b-d	44.20 d-g	42.38 a-d	43.90 a-c	43.81 a-e
Perry	45.63 a-c	46.11 a-c	44.33 a-c	36.92 de	46.65 a-d	42.40 a-d	43.88 a-c	43.81 a-e
Phillips	47.26 a	45.69 a-c	43.92 a-c	41.84 a	47.67 ab	42.92 a-d	44.13 a-c	44.85 ab
Bailey	46.76 ab	47.85 ab	44.35 a-c	38.88 b-d	47.08 a-c	43.83 ab	45.01 ab	44.91 ab
Florida Fancy	43.51 c	43.23 c	44.05 a-c	38.35 b-e	43.94 d-g	41.15 d	42.81 a-c	42.34 e
N08070oIJC	47.30 a	45.27 a-c	43.59 a-c	39.10 b-d	45.72 a-e	43.70 a-c	44.41 a-c	44.25 a-d
N08071oIJC	44.05 bc	47.05 ab	44.37 a-c	38.37 b-e	46.07 a-e	43.24 a-d	43.66 a-c	43.90 a-e
N08075oICT	48.15 a	47.52 ab	44.44 a-c	40.02 ab	44.88 b-f	43.30 a-d	43.87 a-c	44.56 a-c
N08081oIJC	46.72 ab	46.92 ab	41.56 bc	40.42 ab	46.76 a-d	42.91 a-d	45.19 ab	44.67 ab
N08082oIJCT	46.10 a-c	46.14 a-c	43.77 a-c	39.79 a-c	45.63 a-e	43.34 a-d	44.91 a-c	44.37 a-c
N08085oIJCT	46.09 a-c	47.89 ab	41.01 c	38.52 b-e	44.15 d-g	41.42 cd	44.22 a-c	43.37 b-e
N08087oIJCT	45.76 a-c	47.63 ab	44.85 a-c	39.44 a-d	44.41 c-g	42.12 b-d	44.07 a-c	43.95 a-e
N09037ol	46.97 ab	44.99 a-c	45.92 a	40.36 ab	46.20 a-e	43.14 a-d	45.94 a	44.90 ab
N09053oICSm	45.20 a-c	45.69 a-c	43.15 a-c	38.74 b-d	44.15 d-g	42.33 b-d	44.47 a-c	43.49 a-e
N10046ol	47.61 a	46.03 a-c	46.20 a	39.32 a-d	45.26 a-f	43.05 a-d	44.16 a-c	44.44 a-c
N10047ol	45.54 a-c	48.17 a	45.16 ab	38.85 b-d	44.12 d-g	42.36 a-d	45.43 ab	44.20 a-d
N10053ol	47.05 ab	46.62 a-c	44.96 ab	39.22 a-d	44.35 c-g	42.88 a-d	43.99 a-c	44.07 a-e
N10066oISmT	47.48 a	46.37 a-c	45.20 ab	40.38 ab	46.66 a-d	44.67 a	45.23 ab	45.21 a
N10078oIJC	46.63 ab	45.12 a-c	44.67 a-c	37.28 c-e	45.78 a-e	43.07 a-d	43.94 a-c	43.87 a-e
N10080oIJCL	46.18 a-c	46.96 a-c	44.34 a-c	37.81 b-e	48.12 a	43.17 a-d	44.80 a-c	44.52 a-c
N10082oIJC	47.57 a	47.54 ab	45.44 ab	39.43 a-d	44.56 c-g	42.84 a-d	--	44.36 a-c
SPT 10-05	47.00 ab	43.22 c	42.60 a-c	36.78 de	43.55 e-g	43.37 a-d	44.27 a-c	43.17 b-e
SPT 10-11ol	44.24 bc	45.17 a-c	43.91 a-c	40.09 ab	41.93 gh	42.71 a-d	42.02 bc	42.75 c-e
SPT 10-14	30.00 d	37.91 d	32.27 d	32.42 f	40.22 h	38.68 e	31.01 e	35.00 f
Mean	45.71	45.77	43.71	38.70	44.82	42.67	43.69	43.64
LSD_{0.05}³	3.00	3.48	3.92	2.68	2.87	2.31	3.90	1.84

¹ The higher the number the brighter the pod color.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05

2012 Results by Location

Table 19. Average of pod brightness¹ (Hunter L Score) for fancy pods in 2012.

Variety or Line	Suffolk, VA		Martin Co., NC		Rocky Mount, NC	Bladen, NC	Blackville, SC	Average of all locations
	Dig I	Dig II	Dig I	Dig II				
NC-V 11	44.74 a-e	45.56 a	43.62 a-c	40.42 a-c	40.78 h	42.20 b-e	41.97 c-g	42.53 b-e
Gregory	43.98 b-e	40.92 a	41.53 c	37.66 c-g	40.96 gh	41.48 de	42.54 b-f	41.45 e-g
VA 98R	45.99 a-c	42.76 a	43.83 a-c	39.54 a-e	43.75 b-f	41.05 ef	42.79 b-f	42.77 b-e
Perry	47.55 a	46.05 a	45.10 ab	38.93 b-e	46.63 a	42.61 a-e	43.71 a-e	44.32 ab
Phillips	46.41 ab	44.23 a	43.37 a-c	42.04 a	45.66 a-d	41.99 c-e	43.98 a-e	43.98 a-c
Bailey	46.27 a-c	47.52 a	45.21 ab	41.39 ab	45.73 a-c	43.84 ab	44.26 a-c	44.81 a
Florida Fancy	44.22 e	41.24 a	42.39 bc	38.55 c-e	41.11 f-h	39.54 f	39.72 g	40.52 g
N08070oIJC	44.86 a-e	42.40 a	43.81 a-c	37.92 c-f	43.57 b-g	42.39 a-e	41.63 e-g	42.35 c-f
N08071oIJC	43.14 de	45.10 a	43.10 a-c	37.41 e-g	42.85 e-h	42.71 a-e	42.68 b-f	42.49 c-e
N08075oICT	46.44 ab	47.23 a	46.54 a	40.06 a-d	42.87 e-h	43.61 ab	42.94 b-f	43.98 a-c
N08081oIJC	45.90 a-d	28.64 b	41.28 c	38.83 b-e	43.21 b-h	40.86 ef	42.63 b-f	40.63 fg
N08082oIJCT	44.39 b-e	44.92 a	43.33 a-c	39.25 b-e	43.82 a-e	42.51 a-e	42.11 c-f	42.82 b-e
N08085oIJCT	45.48 a-d	45.68 a	42.51 bc	35.96 fg	44.24 a-e	41.85 c-e	44.17 a-d	43.01 a-e
N08087oIJCT	43.44 c-e	45.06 a	44.78 a-c	37.29 e-g	42.25 e-h	42.52 a-e	41.28 fg	42.31 c-g
N09037ol	45.83 a-d	41.66 a	43.28 a-c	37.02 e-g	42.95 d-h	42.57 a-e	42.64 b-f	42.37 c-f
N09053oICSm	44.73 a-e	45.69 a	43.87 a-c	37.75 d-g	44.59 a-e	42.41 a-e	42.19 c-f	43.00 b-e
N10046ol	45.73 a-d	42.88 a	42.45 bc	39.37 b-e	43.92 a-e	42.00 b-e	42.99 b-f	42.81 b-e
N10047ol	44.66 b-e	46.44 a	43.98 a-c	38.83 b-e	42.95 c-h	42.08 b-e	43.00 b-f	43.00 b-e
N10053ol	45.12 a-d	45.10 a	43.25 a-c	38.39 c-f	42.57 e-h	43.40 a-c	41.88 d-g	42.73 b-e
N10066olSmT	45.75 a-d	43.68 a	45.52 ab	38.71 c-e	44.65 a-e	43.33 a-d	42.63 b-f	43.43 a-d
N10078oIJC	45.18 a-d	46.60 a	44.82 a-c	38.84 b-e	44.03 a-e	43.55 a-c	43.71 a-e	43.80 a-d
N10080oIJCL	45.39 a-d	47.06 a	44.80 a-c	37.62 d-g	45.87 ab	44.08 a	42.79 b-f	44.00 a-c
N10082oIJC	46.79 ab	45.65 a	45.65 ab	38.42 c-f	43.13 b-h	42.25 a-e	--	43.35 a-d
SPT 10-05	46.39 ab	41.68 a	44.05 a-c	38.55 c-e	44.08 a-e	43.28 a-d	44.61 ab	43.44 a-d
SPT 10-11ol	45.35 a-d	44.14 a	41.31 c	40.18 a-d	42.70 e-h	42.58 a-e	42.29 b-f	42.63 b-e
SPT 10-14	43.49 c-e	40.14 a	42.64 bc	35.32 g	44.25 a-e	42.47 a-e	43.74 a-e	42.03 d-g
Mean	45.26	43.77	43.74	38.63	43.58	42.43	42.60	42.88
LSD_{0.05}³	2.85	9.39	3.55	2.58	2.79	1.88	2.38	1.80

¹ The higher the number the brighter the pod color.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05.

2012 Results by Location

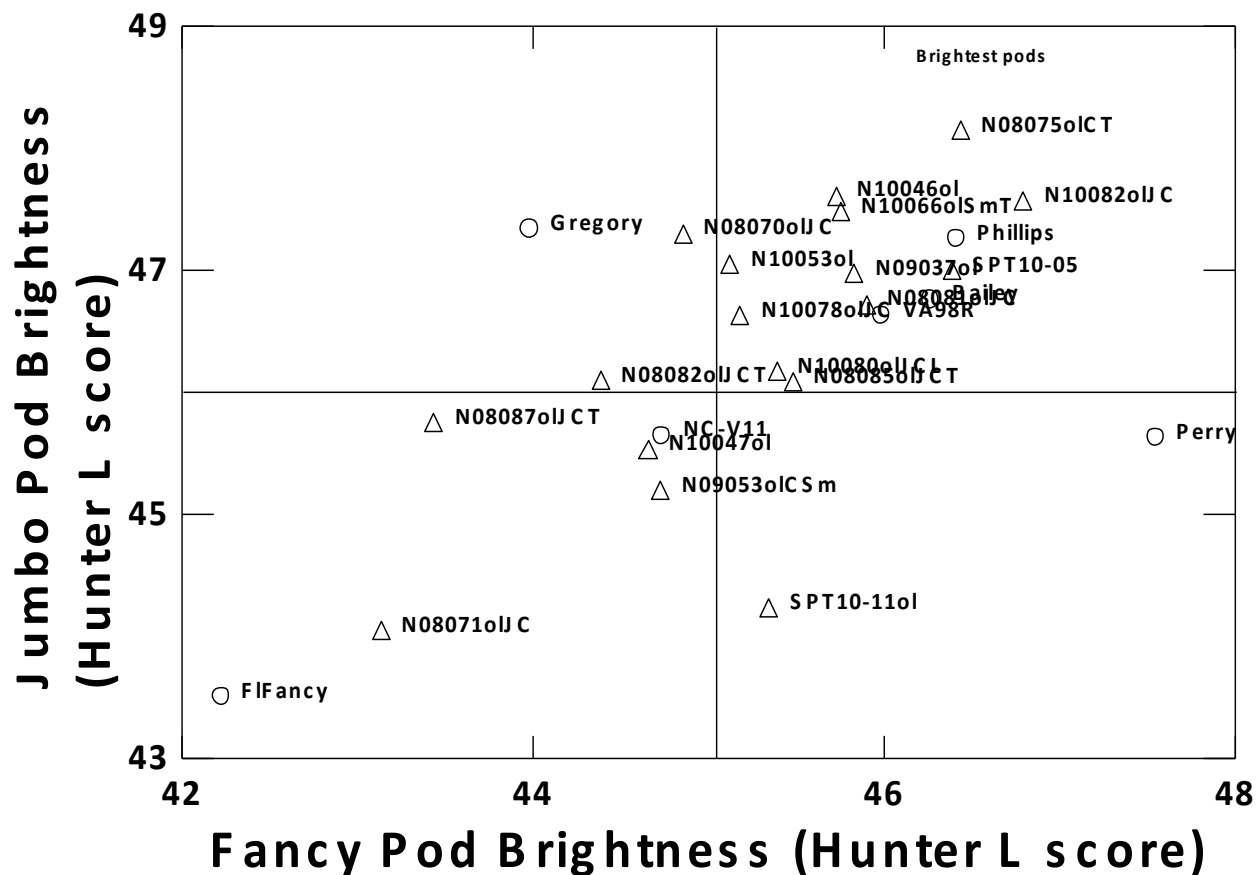


Figure 1. Brightness of jumbo and fancy pods of Digging Date I at Tidewater AREC, Suffolk, VA, in 2012. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 26 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness at this location and digging date. SPT 10-14 not on the figure; it had the least bright pods (Tables 18 & 19).

2012 Results by Location

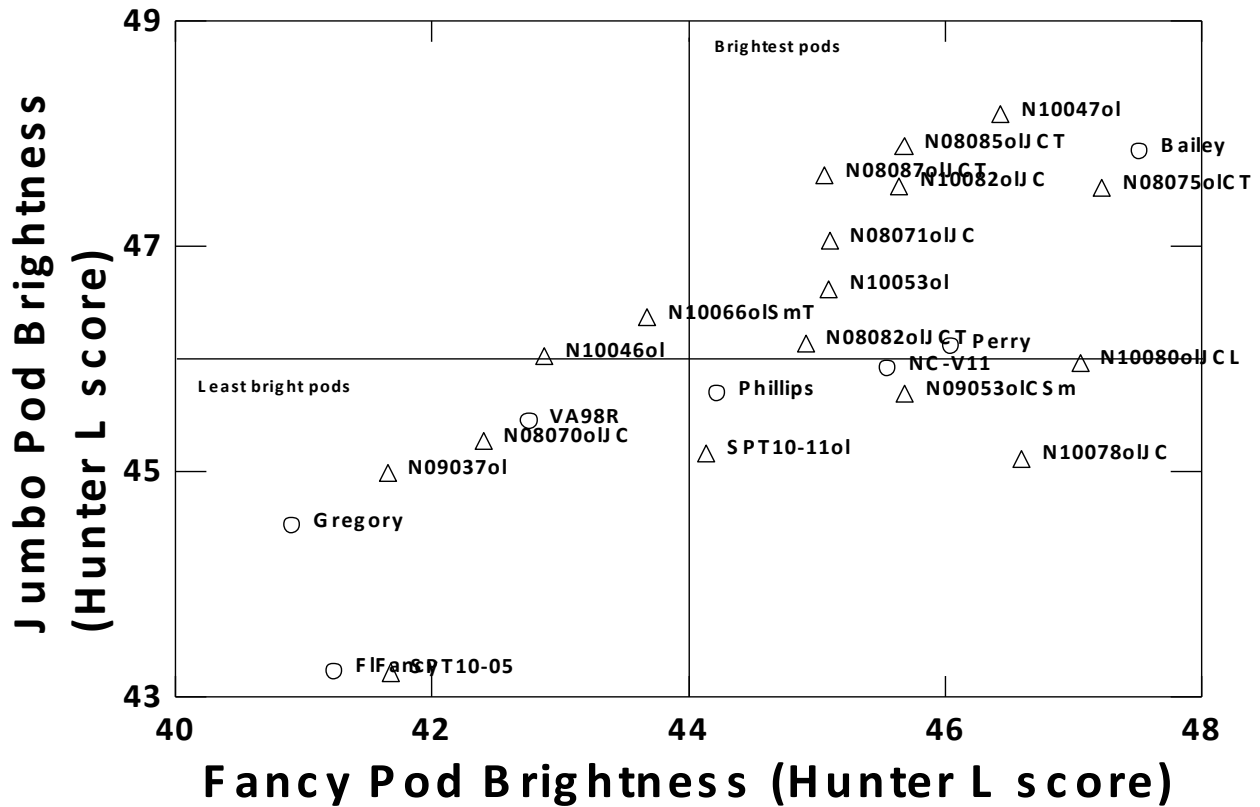


Figure 2. Brightness of jumbo and fancy pods of Digging Date II at Tidewater AREC, Suffolk, VA, in 2012. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 26 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness at this location and digging date. SPT 10-14 and N08081olJ C not on the figure; it had the least bright pods (Tables 18 & 19).

2012 Results by Location

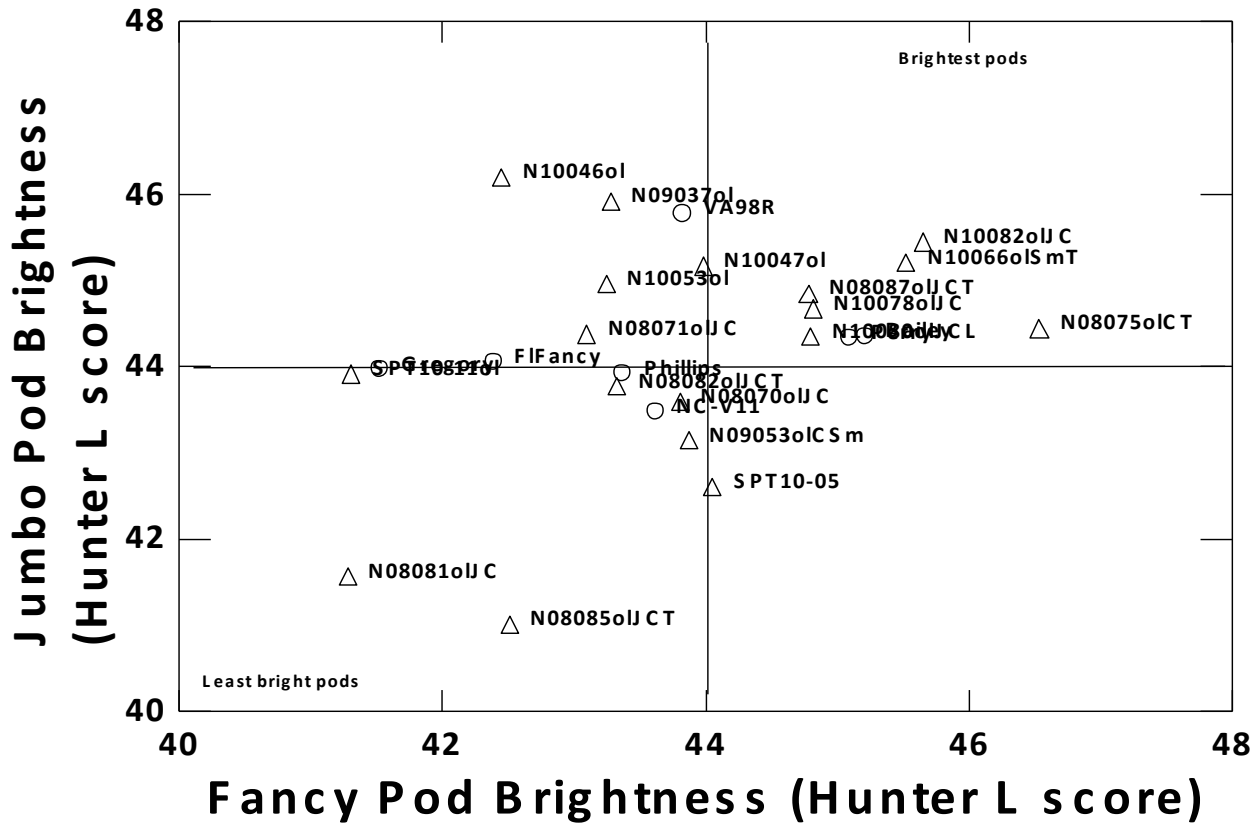


Figure 3. Brightness of jumbo and fancy pods of Digging Date I at Martin Co., NC, in 2012. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 26 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness at this location and digging date. SPT 10-14 not on the figure; it had the least bright pods (Tables 18 & 19).

2012 Results by Location

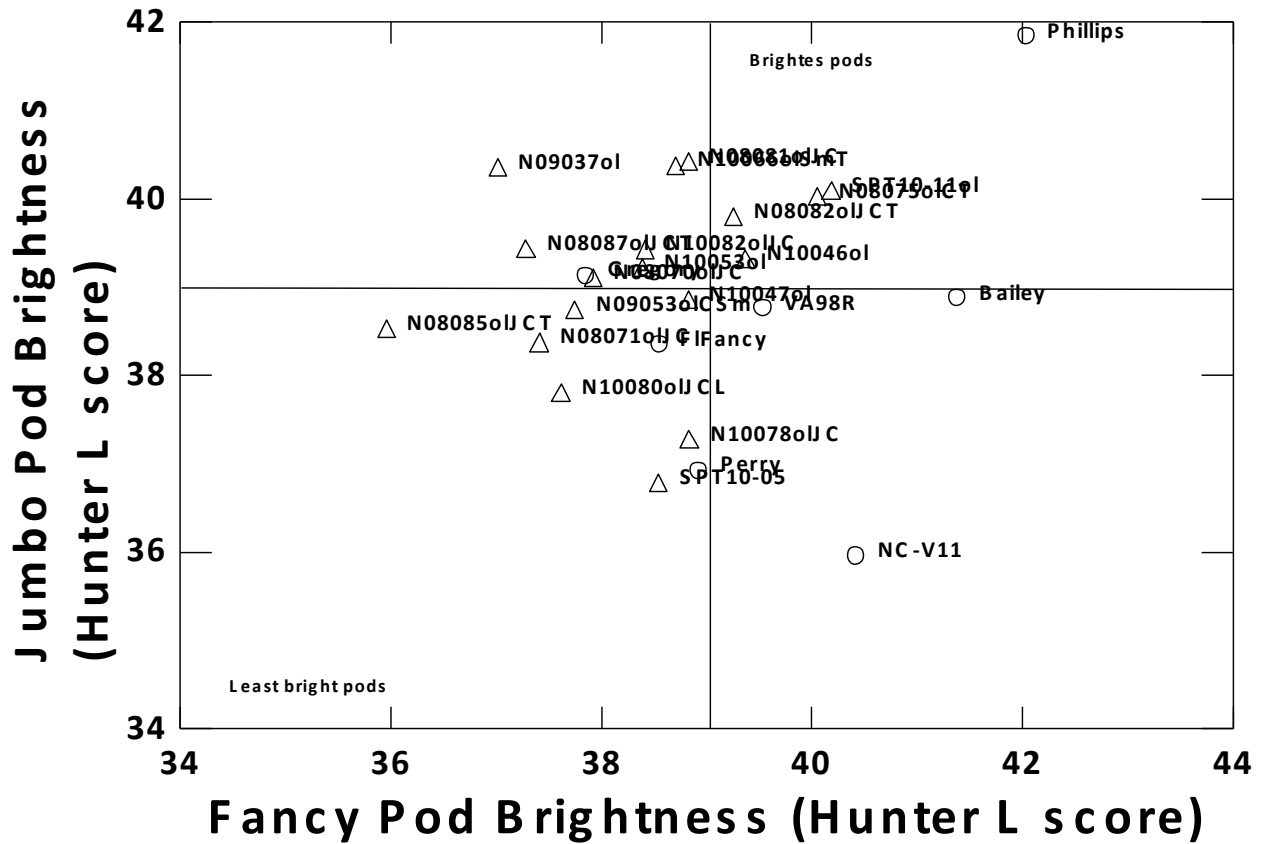


Figure 4. Brightness of jumbo and fancy pods of Digging Date II at Martin Co., NC, in 2012. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 26 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness at this location and digging date. SPT 10-14 not on the figure; it had the least bright pods (Tables 18 & 19).

2012 Results by Location

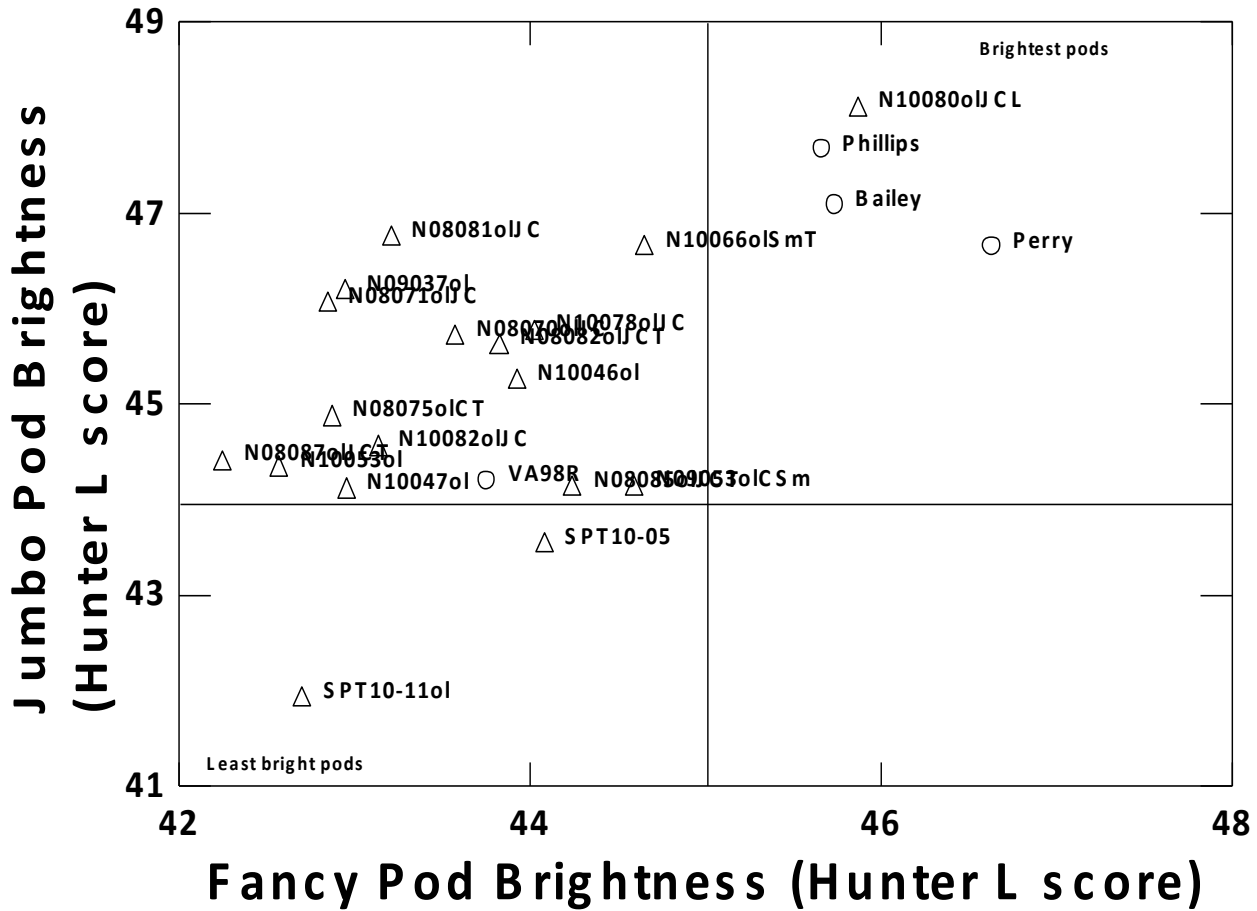


Figure 5. Brightness of jumbo and fancy pods at Rocky Mount, NC, in 2012. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 26 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness at this location. SPT 10-14 not on the figure; it had the least bright pods (Tables 18 & 19).

2012 Results by Location

RESULTS – YIELD AND GRADE BY LOCATION

Table 20. Performance of genotypes at Tidewater AREC (Suffolk), VA, in 2012. Dig I averages of two replicated plots planted on 7 May, dug on 21 September, and combined on 27 September.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.5	1.7	87 e	8.8	38 fg	0.2	3.2	3.4	63 h	70 f-i	\$15.94 hi	5234 a-e	\$838 c-i
Gregory	1.0	1.2	97 ab	9.7	53 ab	0.7	1.1	2.8	65 d-h	70 g-i	17.05 d-g	4719 d-i	804 d-i
VA 98R	0.8	1.0	78 f	9.0	42 d-g	0.6	1.9	2.2	68 a-e	73 ab	17.69 a-d	5031 a-f	888 a-f
Perry	0.4	1.4	88 c-e	9.1	45 c-f	0.9	2.7	2.3	65 e-h	71 c-g	17.21 c-g	4797 c-i	826 d-i
Phillips	0.8	0.7	92 a-e	10.2	45 c-f	0.2	1.8	1.6	68 a-d	72 a-e	17.65 a-d	5260 a-d	928 a-d
Bailey	1.3	0.7	92 a-e	9.4	42 d-g	0.8	2.4	1.1	68 a-f	72 a-d	17.77 a-d	4900 b-h	871 b-g
Florida Fancy	0.9	1.6	96 ab	10.1	43 c-g	0.4	2.1	2.4	64 gh	69 i	16.60 e-h	4750 d-i	788 e-i
N08070oJJC	0.5	0.8	97 ab	9.1	47 b-e	1.5	2.2	4.1	64 h	70 hi	16.56 e-i	4880 b-h	808 d-i
N08071oJJC	0.4	1.1	97 ab	9.9	47 b-e	0.5	2.5	3.3	63 h	70 hi	16.38 g-i	4393 f-i	720 hi
N08075oJCT	0.6	1.3	91 b-e	10.2	45 c-f	0.7	2.4	1.5	66 c-h	71 d-h	17.41 b-f	4165 ij	726 hi
N08081oJJC	0.9	0.8	95 ab	9.2	48 b-d	0.4	2.2	1.2	66 c-h	70 hi	17.35 b-g	4600 e-i	798 e-i
N08082oJCT	0.8	0.9	97 ab	10.0	53 ab	0.6	1.8	1.9	66 c-g	71 d-h	17.57 a-e	4737 d-i	831 d-i
N08085oJCT	0.6	0.5	95 a-c	10.0	37 g	0.7	2.4	1.6	65 f-h	70 hi	17.05 d-g	4774 d-i	814 d-i
N08087oJCT	0.9	1.0	98 a	9.5	47 b-e	0.5	1.2	2.3	67 c-g	70 d-h	17.29 b-g	4445 f-i	769 f-i
N09037oI	0.6	1.2	97 ab	9.9	50 a-c	0.8	2.5	1.6	66 c-h	71 d-h	17.47 a-f	4239 h-j	741 g-i
N09053oIcSm	0.8	0.5	93 a-e	10.1	40 e-g	0.5	2.6	0.7	66 c-h	70 hi	17.34 b-g	4743 d-i	823 d-i
N10046oI	0.7	0.7	97 ab	9.7	56 a	0.5	1.7	0.5	70 a	72 a-c	18.47 a	4940 b-g	912 a-e
N10047oI	0.9	0.9	96 ab	9.5	55 a	0.5	1.3	1.7	69 ab	73 a	18.30 ab	4721 d-i	863 b-g
N10053oI	0.8	1.3	96 ab	9.7	50 a-c	1.3	1.7	2.4	65 f-h	70 e-h	17.12 d-g	5667 a	972 ab
N10066oIcSmT	0.5	1.4	92 a-e	9.8	40 e-g	0.6	2.5	2.3	65 f-h	70 d-h	17.01 d-g	4236 h-j	721 hi
N10078oJJC	0.4	0.7	96 ab	10.6	43 c-g	0.3	1.7	2.1	68 a-c	72 a-c	17.68 a-d	5471 a-c	968 a-c
N10080oJCL	0.6	0.6	94 a-d	10.9	45 c-f	0.5	1.4	1.3	69 ab	73 ab	18.17 a-c	5531 ab	1005 a
N10082oJJC	0.4	0.9	94 a-d	9.3	45 c-f	0.5	1.8	2.4	67 b-f	72 a-e	17.38 b-g	4867 c-h	846 b-h
SPT 10-05	0.6	2.4	88 de	11.1	40 e-g	0.3	3.5	3.3	64 gh	71 b-g	16.50 f-i	4299 g-j	710 i
SPT 10-11oI	0.9	1.4	71 g	10.6	26 h	0.9	2.9	4.4	63 h	71 a-f	15.67 hi	4559 e-i	714 hi
SPT 10-14	1.6	2.0	28 h	10.4	26 h	0.2	6.5	2.8	60 i	69 hi	15.57 i	3645 j	567 j
Mean	0.7	1.1	90	9.8	44	0.6	2.3	2.2	66	71	17.16	4754	817
LSD_{0.05}³	0.7	0.5	7	1.4	7	0.8	1.0	1.7	3	1	0.01	682	133

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.³ Fisher's least significant difference (LSD) at P = 0.05.

2012 Results by Location

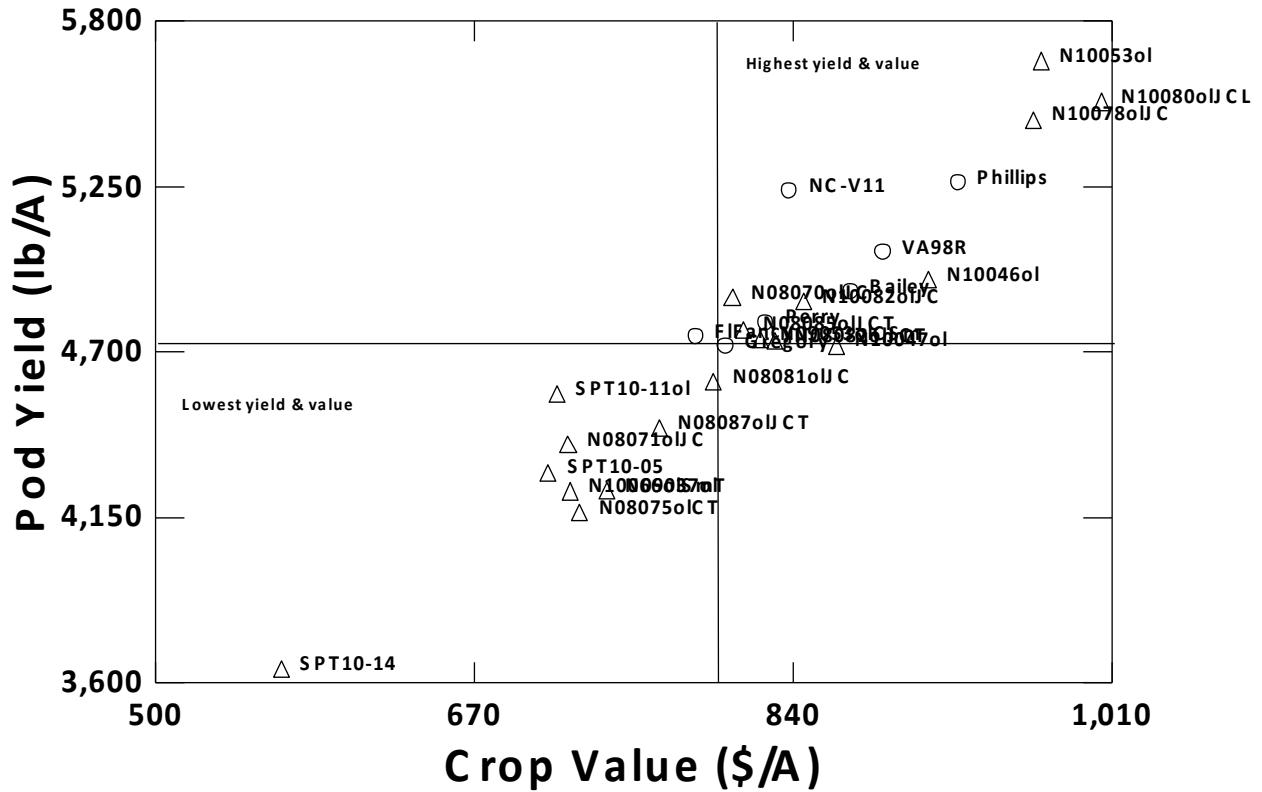


Figure 8. Summary of pod yield and crop value at Tidewater AREC (Suffolk), VA, Digging Date I in 2012. Vertical bar represents mean crop value and horizontal bar mean pod yield of 26 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value at this location and digging date.

2012 Results by Location

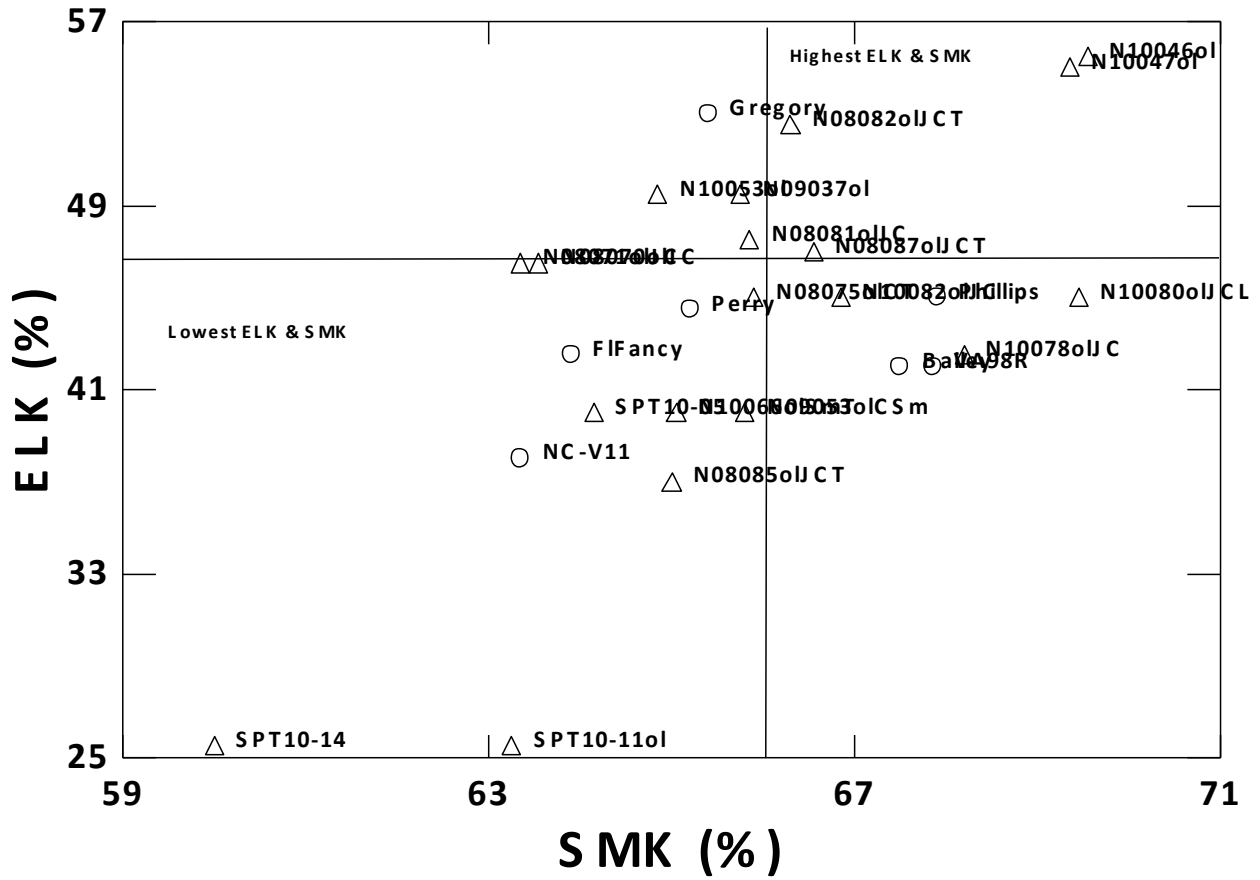


Figure 9. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Tidewater AREC (Suffolk), VA, Digging Date I in 2012. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 26 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and digging date.

Table 21. Performance of genotypes at Tidewater AREC (Suffolk), VA in 2012. Dig II averages of two replicated plots planted on 7 May, dug on 10 October, and combined on 24 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.4	0.9	80 g-i	6.5	47 hi	2.7	2.5	5.4	63 c-g	73 c-g	\$15.63 b-e	5448 a-e	\$851 d-f
Gregory	1.2	1.0	94 a-c	6.8	54 b-e	1.7	2.3	6.1	61 f-h	71 i	14.76 de	5630 a-e	831 d-f
VA 98R	1.0	0.9	84 d-h	6.5	50 e-i	2.5	3.1	4.6	64 b-g	74 b-d	16.62 a-d	5359 b-e	889 a-f
Perry	0.6	0.8	79 hi	6.8	47 g-i	1.7	4.1	6.7	62 e-h	74 bc	14.18 e	5651 a-e	806 ef
Phillips	0.3	0.8	94 a-c	6.5	59 ab	2.2	1.4	3.6	68 ab	75 ab	17.70 ab	5023 c-e	896 a-f
Bailey	0.6	0.5	88 b-g	6.5	52 c-h	2.9	2.6	1.4	67 a-d	73 c-g	18.25 a	5811 a-d	1061 a-e
Florida Fancy	0.6	0.9	95 ab	7.0	53 c-f	2.1	2.1	2.7	66 a-f	72 e-i	17.53 ab	5626 a-e	986 a-f
N08070oJJC	1.4	0.7	93 a-c	6.8	48 f-i	3.3	3.4	6.2	58 hi	72 e-i	13.72 e	6037 a-d	829 d-f
N08071oJJC	0.5	0.6	90 a-f	7.0	50 e-i	3.6	2.7	5.9	61 gh	73 c-g	15.11 c-e	5354 b-e	808 ef
N08075oJCT	0.2	1.1	81 f-h	7.2	51 d-i	1.9	3.3	2.0	65 a-f	73 d-i	17.64 ab	5379 a-e	947 a-f
N08081oJJC	0.7	0.8	92 a-d	6.5	52 c-g	3.2	2.7	3.5	63 c-g	72 f-i	16.80 a-d	5120 c-e	859 b-f
N08082oJCT	0.6	0.7	97 a	6.2	55 a-e	1.9	2.2	2.9	66 a-e	73 d-i	17.65 ab	5280 b-e	932 a-f
N08085oJCT	0.4	0.4	89 a-g	6.5	52 c-g	2.9	1.7	3.9	64 b-g	73 d-h	16.89 a-d	5212 b-e	881 a-f
N08087oJCT	0.6	1.0	93 a-c	6.9	52 c-h	2.2	2.7	3.9	64 c-g	72 g-i	16.94 a-d	5791 a-d	981 a-f
N09037oI	0.7	0.7	93 a-c	6.6	56 a-c	2.5	3.2	2.9	65 a-g	73 c-g	17.55 ab	4855 de	854 c-f
N09053oICSm	0.7	0.6	90 a-e	7.0	54 b-e	2.8	1.5	4.0	65 a-g	74 c-f	17.14 a-c	5091 c-e	873 a-f
N10046oI	0.6	1.0	91 a-e	6.8	59 ab	2.0	2.8	2.0	67 a-c	74 c-e	18.17 a	6135 a-c	1114 ab
N10047oI	0.4	0.7	88 b-g	7.1	60 a	2.2	2.4	1.9	69 a	75 ab	18.69 a	5346 b-e	999 a-f
N10053oI	0.3	0.5	86 b-h	7.0	51 c-i	2.8	3.2	3.0	63 d-h	72 hi	17.00 a-c	6362 ab	1081 a-d
N10066oISmT	0.4	1.0	88 b-g	6.9	51 d-i	1.5	3.1	2.6	65 a-f	73 d-i	17.44 ab	5021 c-e	876 a-f
N10078oJJC	0.4	0.6	91 a-e	6.6	54 b-e	3.4	1.9	4.8	65 a-g	75 ab	16.76 a-d	6588 a	1108 a-c
N10080oJCL	0.4	0.8	82 e-h	6.9	56 a-d	2.3	1.9	3.2	68 a	75 a	18.21 a	6171 a-c	1124 a
N10082oJJC	0.5	1.0	93 a-c	6.7	53 c-f	3.1	2.6	3.9	65 a-g	74 bc	17.34 ab	5801 a-d	1006 a-f
SPT 10-05	0.3	0.9	86 c-h	8.6	46 i	0.7	5.5	2.8	63 c-g	72 hi	16.57 a-d	4979 c-e	826 d-f
SPT 10-11oI	1.3	1.1	72 i	6.7	33 j	0.8	2.9	14.0	56 i	73 c-g	10.29 f	4985 c-e	511 g
SPT 10-14	0.5	1.2	29 j	8.6	34 j	0.5	4.1	1.9	65 a-g	72 hi	17.02 a-c	4507 e	767 fg
Mean	0.6	0.8	86	6.9	51	2.3	2.7	4.0	64	73	16.60	5483	911
LSD_{0.05}³	0.6	0.4	9	1.1	5	1.8	0.9	3.5	4	1	0.02	1221	257

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05.

2012 Results by Location

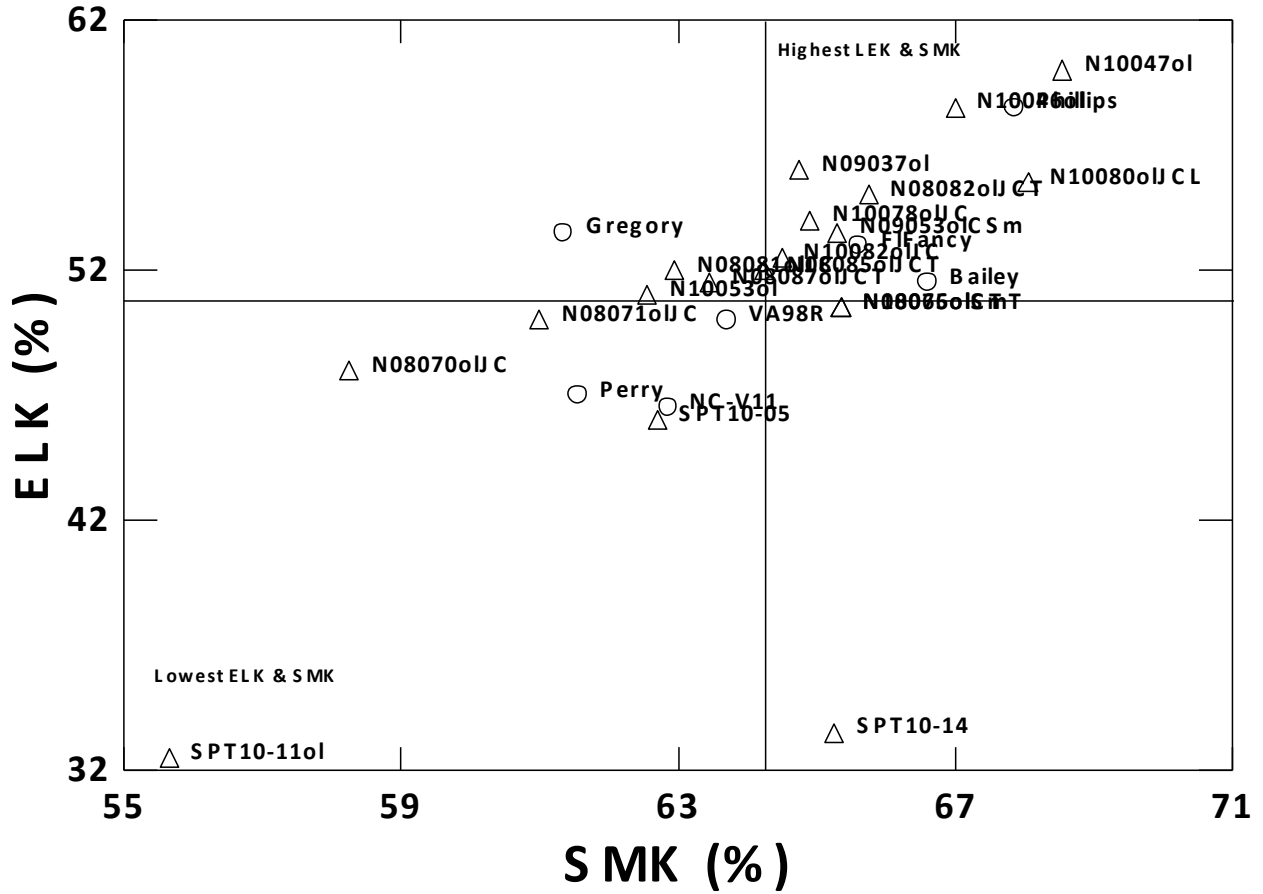


Figure 11. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Tidewater AREC (Suffolk), VA, Digging Date II in 2012. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 26 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and digging date.

2012 Results by Location

Table 22. Performance of genotypes at Martin Co., NC, in 2012. Dig I averages of two replicated plots planted on 15 May, dug on 5 October, and combined on 17 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.2	0.5	81 d	7.1	31 gh	1.2	3.6	1.2	66 a-d	72 e-g	\$17.28 a-d	4323 ab	\$747 a-c
Gregory	0.4	0.8	94 ab	6.6	57 a	0.6	1.5	1.5	69 a-c	72 b-f	18.15 a-d	5176 a	940 ab
VA 98R	0.3	0.4	85 a-d	6.8	47 a-f	1.3	1.7	1.4	70 a	74 a-c	18.47 ab	4722 a	874 ab
Perry	0.3	0.6	81 d	6.8	41 c-f	1.1	3.4	1.4	67 a-d	73 b-f	17.72 a-d	4947 a	877 ab
Phillips	0.3	1.1	88 a-d	6.4	49 a-d	0.8	2.4	0.7	70 a	73 a-e	18.48 ab	5059 a	935 ab
Bailey	0.3	0.6	83 cd	7.0	47 b-f	0.7	2.8	1.2	69 ab	74 a-d	18.30 a-c	5398 a	988 a
Florida Fancy	0.2	0.4	95 a	7.2	41 c-f	0.7	1.9	1.5	68 a-d	72 d-g	17.61 a-d	4914 a	865 ab
N08070olJC	0.3	0.6	91 a-d	6.7	43 b-f	2.2	3.5	3.0	63 de	72 c-g	16.89 c-e	4634 ab	783 a-c
N08071olJC	0.3	0.4	93 a-c	7.3	42 c-f	2.0	3.2	2.3	64 c-e	71 fg	17.11 b-e	4716 a	806 ab
N08075olCT	0.3	0.9	81 d	8.0	43 b-f	0.9	4.0	2.8	64 b-e	71 e-g	16.75 de	4331 ab	726 bc
N08082olJCT	0.4	0.6	92 a-c	6.8	47 a-f	0.8	3.3	1.3	66 a-d	71 fg	17.59 a-d	4750 a	836 ab
N08087olJCT	0.2	0.5	91 a-d	7.0	47 b-f	1.5	3.1	1.2	66 a-d	72 c-g	17.75 a-d	4773 a	847 ab
N09037ol	0.3	0.5	89 a-d	7.3	50 a-d	1.1	2.3	1.9	68 a-d	73 a-f	17.98 a-d	4558 ab	822 ab
N09053olCSm	0.3	0.5	91 a-d	7.2	38 fg	0.9	3.2	1.3	65 a-d	70 gh	17.13 b-e	4652 ab	797 a-c
N10046ol	0.2	0.8	87 a-d	6.8	52 ab	1.2	2.3	0.6	70 a	74 a-d	18.63 a	4753 a	887 ab
N10047ol	0.2	0.5	84 b-d	6.6	48 a-e	1.8	3.2	0.6	69 a-c	74 ab	18.52 ab	4796 a	888 ab
N10053ol	0.2	0.4	89 a-d	6.6	46 b-f	3.1	2.5	7.2	60 ef	72 b-f	13.56 f	5204 a	706 bc
N10066olSmT	0.6	0.6	90 a-d	7.1	47 a-f	0.7	2.0	1.0	69 a	73 a-f	18.34 a-c	5355 a	982 a
N10078olJC	0.2	0.5	90 a-d	7.3	47 b-f	1.6	3.5	1.8	67 a-d	74 a-d	17.92 a-d	4832 a	866 ab
N10080olJCL	0.2	0.6	87 a-d	7.3	40 d-g	1.4	3.6	2.1	65 a-d	72 c-g	17.24 a-d	4979 a	860 ab
N10082olJC	0.1	0.3	91 a-d	6.5	50 a-c	2.0	2.3	1.4	69 a	75 a	18.67 a	5054 a	944 ab
SPT 10-05	0.3	0.7	87 a-d	7.2	38 e-g	1.4	4.5	0.7	65 a-d	72 c-g	17.51 a-d	4522 ab	793 a-c
SPT 10-11ol	0.3	0.9	63 e	7.1	23 h	1.3	3.7	13.0	55 f	73 a-f	9.57 g	4236 ab	406 d
SPT 10-14	0.3	1.0	27 f	9.1	21 h	0.4	7.7	1.3	60 ef	69 h	15.71 e	3519 b	557 cd
Mean	0.3	0.6	84	7.1	42	1.3	3.2	2.3	66	72	17.09	4740	814
LSD_{0.05}³	0.4	0.4	11	1.2	10	1.5	1.6	2.2	5	2	0.02	1162	246

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05.

2012 Results by Location

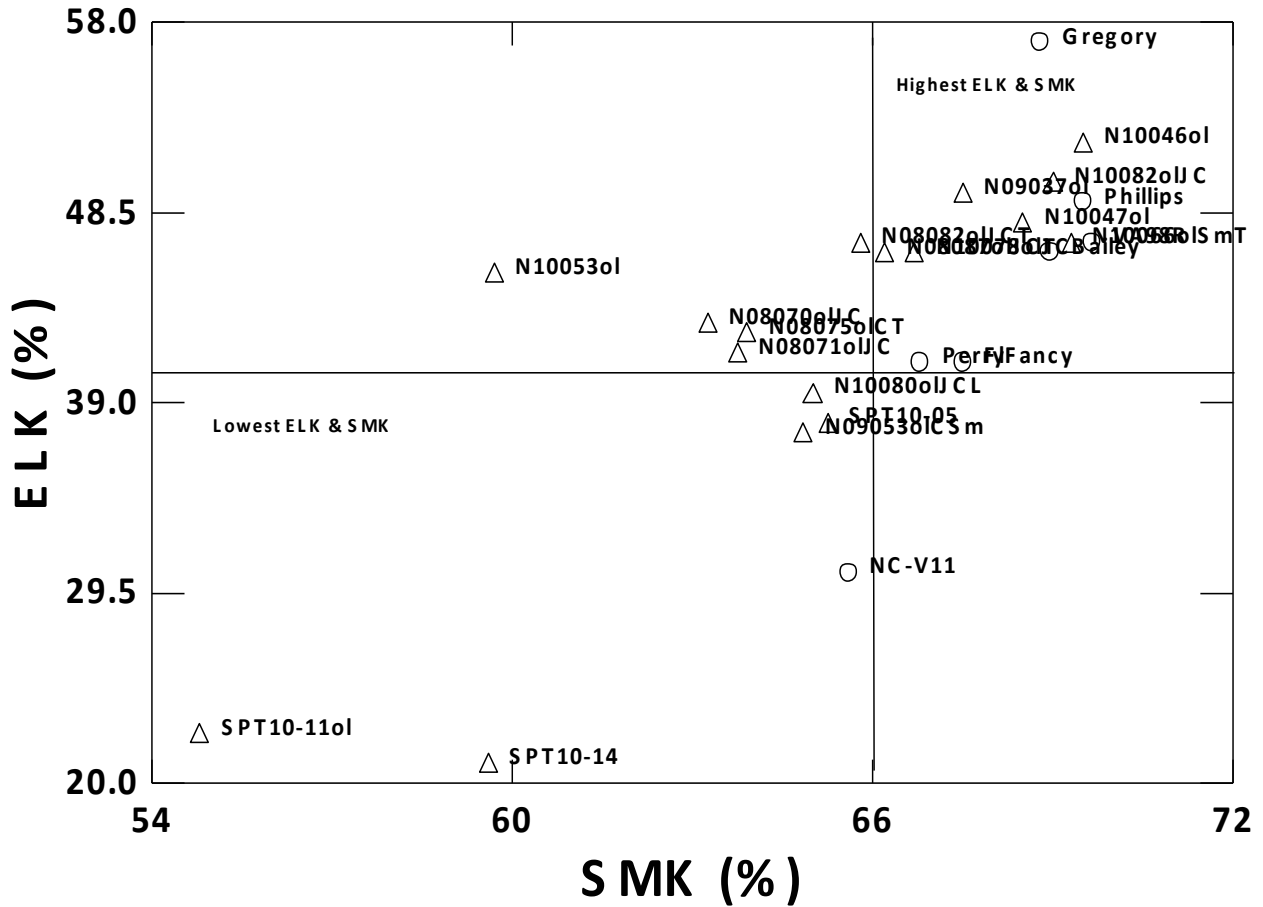


Figure 13. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Martin Co., NC, Digging Date I in 2012. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 26 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and digging date.

2012 Results by Location

Table 23. Performance of genotypes at Martin Co., NC, in 2012. Dig II averages of two replicated plots planted on 15 May, dug on 17 October, and combined on 2 November.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.3	0.7	73 i	6.6	35 ij	3.3	4.5	3.9	61 h-j	72 c-f	\$16.20 f-i	4928 ab	\$799 a-d
Gregory	0.7	0.6	91 ab	6.5	55 a	2.1	1.5	3.5	67 a-e	74 a-c	17.54 a-f	5201 a	916 ab
VA 98R	0.5	0.8	75 f-i	6.6	46 b-g	3.7	2.6	1.9	66 a-f	74 ab	18.18 a-d	4629 a-b	843 a-c
Perry	1.2	0.9	74 hi	6.9	35 ij	2.9	4.4	3.3	62 f-j	72 b-e	16.66 e-i	3653 b-e	609 c-e
Phillips	0.4	0.9	76 e-i	6.7	50 a-c	3.7	2.4	1.9	67 a-f	75 ab	18.31 a-c	4272 a-e	785 a-d
Bailey	0.4	0.5	75 f-i	6.8	44 b-h	3.2	3.3	2.5	65 b-h	74 a-c	17.70 a-e	4569 a-d	812 a-d
Florida Fancy	0.7	0.4	89 a-c	6.6	50 a-c	1.6	1.2	1.1	70 a	74 a-c	18.77 a	4913 ab	922 ab
N08070olJC	0.4	0.5	92 a	6.6	45 b-g	3.5	3.2	3.4	63 d-j	73 b-e	17.01 c-i	4113 a-e	698 a-e
N08071olJC	2.0	1.0	86 a-d	6.8	38 g-j	2.6	3.1	4.8	61 g-j	72 ef	15.77 i	3506 c-e	553 de
N08075olCT	0.4	0.8	79 d-i	6.8	45 b-h	2.9	3.7	2.7	64 c-i	73 a-e	17.31 b-h	4136 a-e	719 a-e
N08081olJC	0.6	0.5	88 a-d	6.6	46 b-f	2.7	2.5	3.6	65 b-h	74 a-d	17.36 a-g	4127 a-e	718 a-e
N08082olJCT	1.0	0.5	88 a-d	6.6	47 b-f	2.0	2.2	2.4	67 a-e	74 a-e	17.88 a-e	3736 b-e	672 b-e
N08085olJCT	0.4	0.5	84 a-f	6.7	41 d-i	3.6	2.7	3.4	63 d-j	73 b-e	17.00 c-i	4209 a-e	717 a-e
N08087olJCT	0.8	0.7	82 b-i	6.9	40 e-i	3.5	3.4	3.0	63 e-j	72 b-e	16.98 c-i	3762 b-e	644 c-e
N09037ol	0.4	0.6	86 a-d	7.1	50 a-c	2.2	2.9	1.7	67 a-e	74 a-e	18.15 a-d	4421 a-e	803 a-d
N09053olCSm	0.5	0.5	87 a-d	6.8	39 f-j	3.4	3.2	3.3	63 e-j	72 b-e	16.84 d-i	3281 de	559 de
N10046ol	0.6	0.7	85 a-e	7.2	51 ab	2.0	3.2	1.0	68 a-c	74 a-c	18.54 ab	4574 a-d	851 a-c
N10047ol	0.4	0.5	83 a-g	6.7	51 ab	2.7	2.9	1.5	68 a-c	75 a	18.65 ab	4660 a-c	868 a-c
N10053ol	0.7	0.5	84 a-f	6.8	49 a-d	4.6	3.0	5.1	61 h-j	73 a-e	15.95 g-i	4845 ab	773 a-e
N10066olSmT	0.4	0.7	82 c-i	7.1	51 ab	2.1	2.8	1.6	67 a-d	74 a-d	18.24 a-d	4352 a-e	796 a-d
N10078olJC	0.3	0.5	74 g-i	7.6	43 c-h	2.4	3.2	3.2	63 d-j	72 d-f	16.55 e-i	4557 a-d	769 a-e
N10080olJCL	0.6	0.5	83 a-h	6.8	47 b-e	2.6	2.7	2.6	67 a-e	75 ab	17.96 a-e	4080 a-e	735 a-e
N10082olJC	0.8	0.6	82 b-i	7.3	49 a-c	2.5	2.4	1.9	69 ab	75 a	18.54 ab	5099 a	946 a
SPT 10-05	0.7	1.0	81 c-i	7.0	37 h-j	2.9	4.0	1.7	65 b-g	74 a-d	17.78 a-e	3182 e	568 de
SPT 10-11ol	0.5	0.8	62 j	6.8	32 j	2.2	3.5	10.2	59 ij	75 a	11.60 j	4480 a-e	522 ef
SPT 10-14	1.3	1.6	35 k	7.6	24 k	1.0	8.7	1.4	59 j	70 f	15.89 hi	1765 f	280 f
Mean	0.6	0.6	80	6.8	44	2.7	3.2	2.9	65	73	17.20	4194	726
LSD_{0.05}³	0.9	0.4	9	0.6	8	1.8	1.9	2.1	5	2	0.01	1299	261

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05.

2012 Results by Location

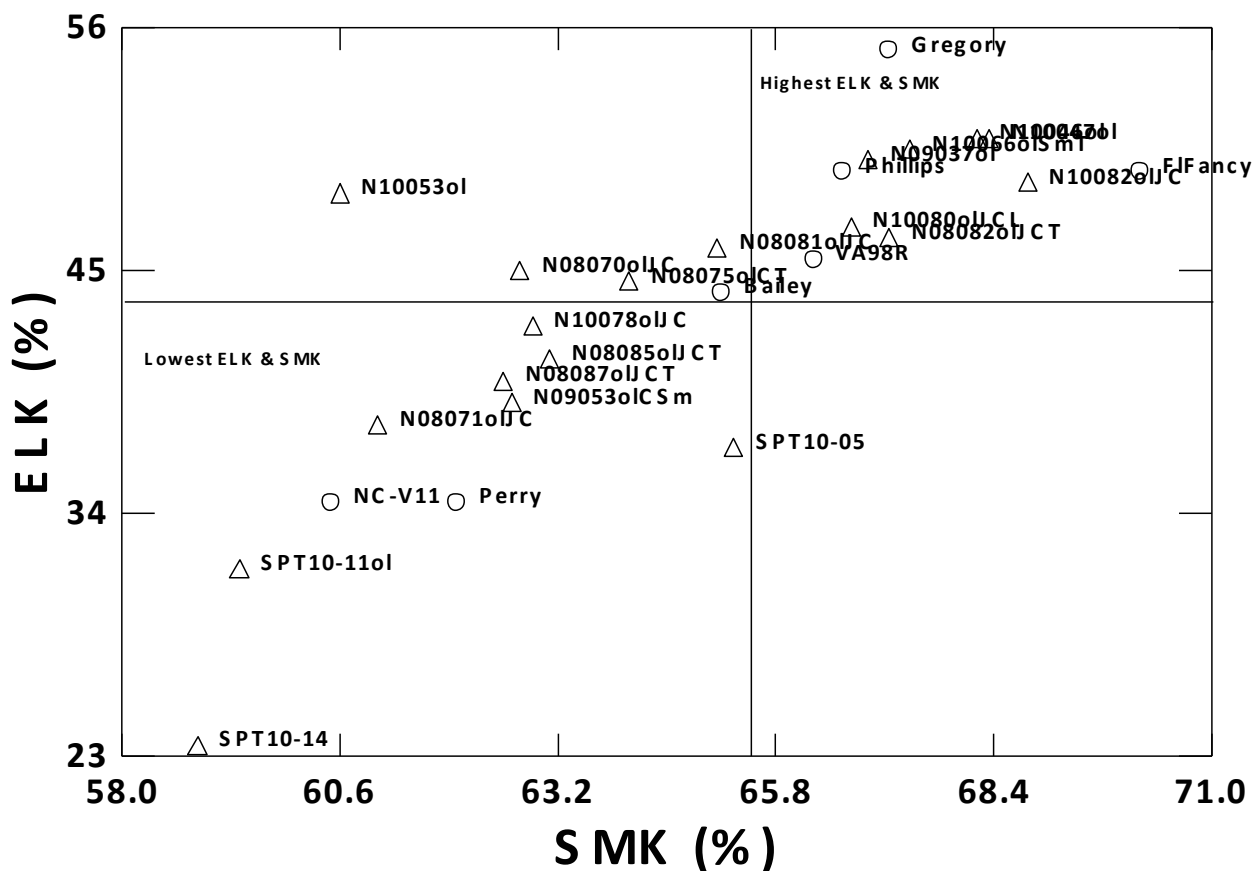


Figure 15. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Martin Co., NC, Digging Date II in 2012. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 26 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and digging date.

2012 Results by Location

Table 24. Performance of genotypes at Rocky Mount, NC, in 2012. Averages of three replicated plots planted on 16 May, dug on 13 October, and combined on 23 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.4	1.3	83 i	6.7	32 h	1.2	5.1	6.4	55 de	68 g	12.19 ef	3685 jk	465 ij
Gregory	0.9	1.6	95 a-c	6.6	34 gh	1.1	3.8	10.8	48 f	64 h	8.39 g	3124 k	265 j
VA 98R	0.5	1.0	87 g-i	6.6	44 d-f	1.1	3.4	4.4	62 a-c	71 c-f	15.44 a-e	3741 i-k	591 g-i
Perry	0.3	0.7	88 f-h	6.6	47 a-f	1.1	3.5	1.5	67 a	73 ab	17.91 a	4442 d-i	799 a-f
Phillips	0.3	0.8	91 b-g	6.4	52 a-c	1.5	2.2	4.8	65 ab	73 ab	15.95 a-d	4498 d-h	711 c-h
Bailey	0.6	0.6	85 hi	6.6	44 d-f	1.1	4.2	2.3	64 a-c	71 b-e	16.87 a-c	5781 a	976 a
Florida Fancy	0.9	0.9	93 a-e	6.4	45 b-f	1.5	3.1	4.2	63 a-c	71 b-e	15.97 a-d	4259 e-j	685 c-h
N08070olJC	0.5	0.7	93 a-e	6.6	46 b-f	2.3	3.1	5.3	60 b-d	71 b-f	15.05 a-e	5015 b-d	755 b-h
N08071olJC	0.5	0.8	94 a-e	6.8	45 c-f	1.4	3.7	5.5	59 b-d	70 c-g	14.40 b-e	4591 c-h	665 d-i
N08075olCT	0.4	1.1	89 e-h	6.7	42 ef	1.1	4.7	4.0	59 b-d	69 fg	15.15 a-e	4990 cd	755 b-h
N08081olJC	1.0	0.7	96 ab	6.8	47 a-f	1.2	2.8	4.5	62 a-c	71 b-f	15.34 a-e	4591 c-h	710 c-h
N08082olJCT	0.8	1.1	96 a	6.5	48 a-e	1.2	3.4	3.2	63 a-c	71 b-f	16.00 a-d	4884 c-e	784 a-g
N08085olJCT	0.4	0.6	93 a-e	6.8	45 d-f	1.4	2.6	6.5	62 a-c	72 a-d	14.42 b-e	4184 e-j	601 f-i
N08087olJCT	2.7	1.1	95 ab	6.6	44 d-f	1.5	2.9	6.9	58 c-e	69 e-g	13.03 d-f	4554 c-h	594 g-i
N09037ol	0.6	0.8	94 a-e	6.5	46 b-f	1.3	3.5	5.6	60 b-d	70 c-g	13.86 c-f	4172 f-j	575 hi
N09053olCSm	0.4	0.8	92 a-g	6.7	45 d-f	1.5	2.4	5.5	62 a-c	71 b-f	14.68 a-e	4407 d-i	649 d-i
N10046ol	0.6	1.0	94 a-e	6.6	52 ab	0.7	3.6	4.7	63 a-c	72 a-c	15.97 a-d	5099 a-d	812 a-e
N10047ol	0.6	0.7	93 a-f	6.7	53 a	1.0	2.8	3.6	65 ab	72 a-c	16.37 a-d	4859 c-f	798 a-f
N10053ol	0.3	0.7	90 c-g	6.7	48 a-e	1.5	4.1	4.6	60 b-d	70 e-g	15.24 a-e	5699 ab	866 a-c
N10066olSmT	0.7	1.2	91 b-g	6.6	50 a-d	1.1	3.7	1.6	65 ab	72 b-e	17.47 ab	4825 c-g	844 a-d
N10078olJC	0.5	1.0	94 a-d	6.8	51 a-d	0.9	3.0	5.2	64 a-c	73 ab	15.63 a-d	5039 b-d	792 a-g
N10080olJCL	0.9	0.8	96 ab	6.6	54 a	1.9	2.2	3.0	67 a	74 a	17.80 ab	5223 a-c	929 ab
N10082olJC	0.6	0.8	93 a-f	6.6	49 a-e	0.8	3.4	4.8	62 a-c	71 b-e	15.78 a-d	4146 g-j	654 e-i
SPT 10-05	0.3	0.9	90 d-h	6.7	40 fg	0.9	6.4	2.1	62 a-c	71 b-e	16.52 a-c	4648 c-h	769 b-h
SPT 10-11ol	0.7	1.8	64 j	6.7	23 i	1.0	5.3	10.5	53 ef	69 e-g	10.58 fg	3241 k	359 j
SPT 10-14	0.5	1.1	41 k	7.1	29 hi	0.6	5.4	3.1	61 a-d	70 c-g	15.62 a-d	4104 h-j	642 e-i
Mean	0.6	1.0	89	6.7	44	1.2	3.6	4.8	61	71	15.06	4531	694
LSD_{0.05}³	1.3	0.5	5	0.3	7	0.7	1.3	3.8	6	2	0.03	704	201

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05.

2012 Results by Location

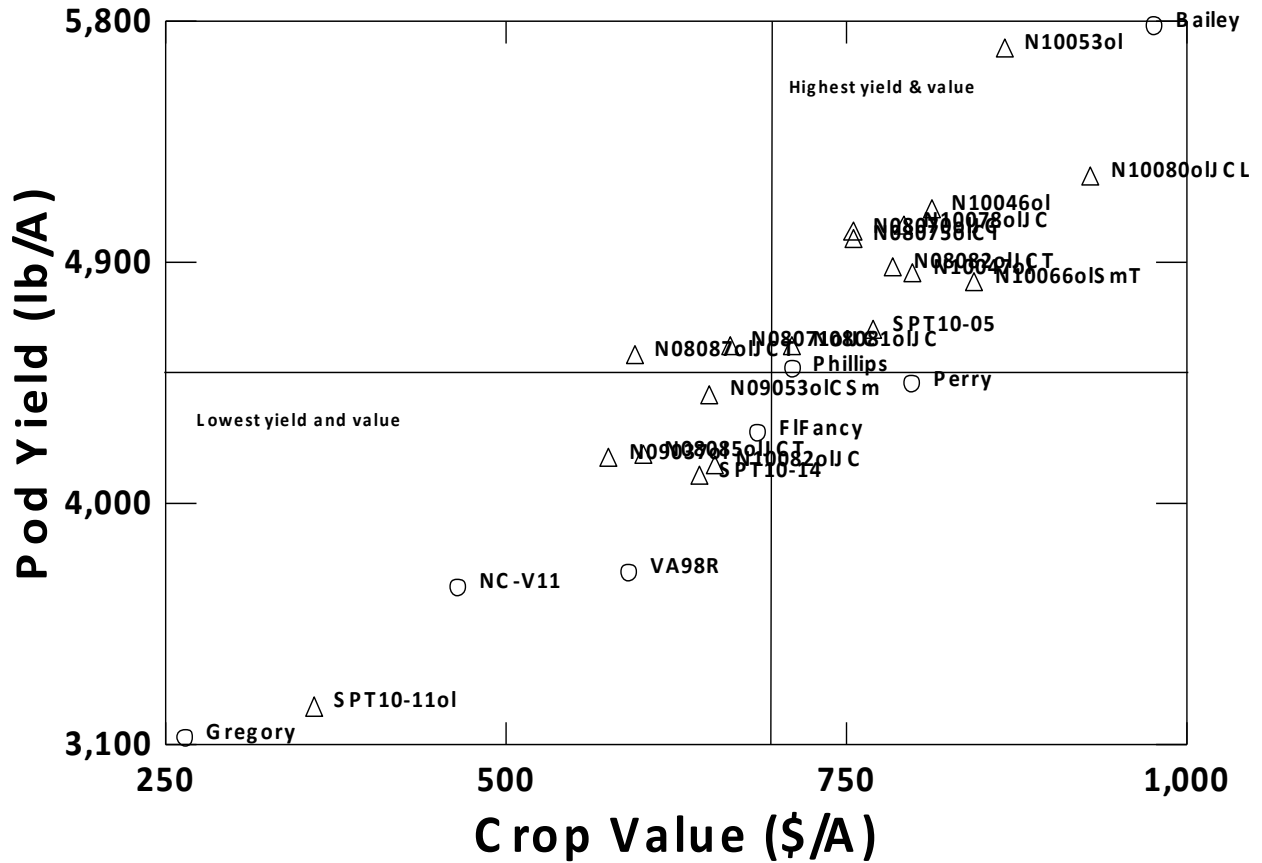


Figure 16. Summary of pod yield and crop value at Rocky Mount, NC, in 2012. Vertical bar represents mean crop value and horizontal bar mean pod yield of 26 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value at this location.

2012 Results by Location

Table 25. Performance of genotypes at Bladen County, NC, in 2012. Averages of three replicated plots planted on 8 May, dug on 26 September, and combined on 12 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.9	0.6	91 c-e	7.6	28 h	1.7	1.2	2.7	65 a-f	71 g-i	\$16.78 a-e	5087 d-h	\$854 d-g
Gregory	1.6	0.9	98 a	7.5	46 ab	2.2	0.6	2.5	64 b-g	69 jk	16.96 a-e	5576 a-g	944 a-f
VA 98R	0.9	0.6	93 a-d	7.5	42 b-e	3.1	0.8	2.4	66 a-e	72 a-f	17.64 a-d	5289 c-h	933 b-f
Perry	0.8	0.8	90 de	7.9	42 b-f	1.6	1.4	3.0	67 a-d	73 a-c	17.40 a-d	5400 b-h	942 a-f
Phillips	0.7	0.4	92 b-e	7.2	39 b-f	1.6	1.3	2.0	66 a-e	70 h-j	17.27 a-e	5279 c-h	913 c-g
Bailey	0.9	0.6	93 a-e	7.1	41 b-f	2.6	0.7	1.3	68 ab	72 a-d	18.18 ab	6212 ab	1129 a
Florida Fancy	0.9	0.6	94 a-d	7.2	37 c-g	3.1	1.1	3.4	63 c-h	70 h-j	16.52 b-f	5214 c-h	862 d-g
N08070olJC	1.7	0.7	97 ab	7.8	36 e-g	5.0	0.9	4.2	61 f-h	71 e-i	16.08 d-f	5802 a-e	932 b-f
N08071olJC	1.1	0.8	93 a-e	7.1	31 gh	5.0	1.4	3.4	59 h	69 k	15.67 e-g	5739 a-f	895 c-g
N08075olCT	0.9	0.8	94 a-d	7.5	46 ab	3.0	1.1	2.1	66 a-e	72 a-e	17.74 a-d	5477 b-h	976 a-f
N08081olJC	1.4	0.7	97 a-c	8.2	39 b-f	4.6	1.4	4.9	59 h	70 i-k	14.96 fg	4901 e-h	736 g
N08082olJCT	1.3	0.7	98 a	8.8	45 a-c	2.1	0.9	3.5	64 a-g	71 f-i	16.46 c-f	4860 f-h	987 a-e
N08085olJCT	1.1	0.7	93 a-d	7.6	31 gh	4.6	1.5	2.2	62 d-h	69 k	17.06 a-e	5034 d-h	857 d-g
N08087olJCT	1.4	0.6	97 ab	7.8	45 a-c	4.7	0.7	3.8	62 e-h	71 b-h	16.56 b-f	5522 a-g	915 c-g
N09037ol	1.2	0.7	96 a-d	7.4	45 a-c	4.1	0.9	1.2	66 a-e	72 a-g	18.14 a-c	5662 a-g	1029 a-d
N09053olCSm	1.0	0.6	95 a-d	8.0	40 b-f	1.5	1.2	1.6	66 a-e	70 i-k	17.29 a-e	5866 a-d	1015 a-d
N10046ol	1.5	0.6	96 a-d	7.8	52 a	3.3	0.7	1.4	67 ab	73 a	18.41 a	6014 a-c	1107 ab
N10047ol	1.3	0.5	96 a-d	7.5	46 ab	2.6	0.8	2.3	65 a-e	71 c-h	17.46 a-d	5600 a-g	977 a-f
N10053ol	0.9	0.6	95 a-d	8.0	40 b-f	3.0	1.1	6.2	60 gh	71 g-i	14.09 g	5706 a-f	808 e-g
N10066olSmT	1.8	0.8	96 a-d	8.3	44 b-d	2.2	0.9	1.3	67 a-c	71 c-h	17.95 a-c	5685 a-f	1020 a-d
N10078olJC	0.8	0.4	94 a-d	8.4	37 d-g	1.6	1.0	2.0	68 ab	72 a-e	17.69 a-d	6022 a-c	1067 a-c
N10080olJCL	1.5	0.7	95 a-d	7.2	34 f-g	2.5	1.1	1.9	65 a-e	71 e-i	17.34 a-e	6402 a	1110 ab
N10082olJC	1.1	0.7	98 ab	8.4	43 b-e	1.9	1.0	2.4	66 a-e	71 b-h	17.44 a-d	5657 a-g	806 e-g
SPT 10-05	0.7	2.0	87 e	9.5	30 gh	1.1	2.6	1.7	66 a-e	71 e-i	17.16 a-e	4593 h	788 fg
SPT 10-11ol	1.1	1.1	75 f	7.6	16 i	2.9	2.7	14.0	52 i	71 d-h	8.98 h	5205 c-h	469 h
SPT 10-14	0.6	1.2	46 g	9.9	30 gh	0.7	2.1	1.6	68 a	73 ab	17.67 a-d	4761 gh	842 d-g
Mean	1.1	0.7	92	7.9	39	2.8	1.2	3.0	64	71	16.73	5483	920
LSD_{0.05}³	0.6	0.3	6	1.4	8	2.2	0.6	2.2	4	1	0.02	915	191

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05.

2012 Results by Location

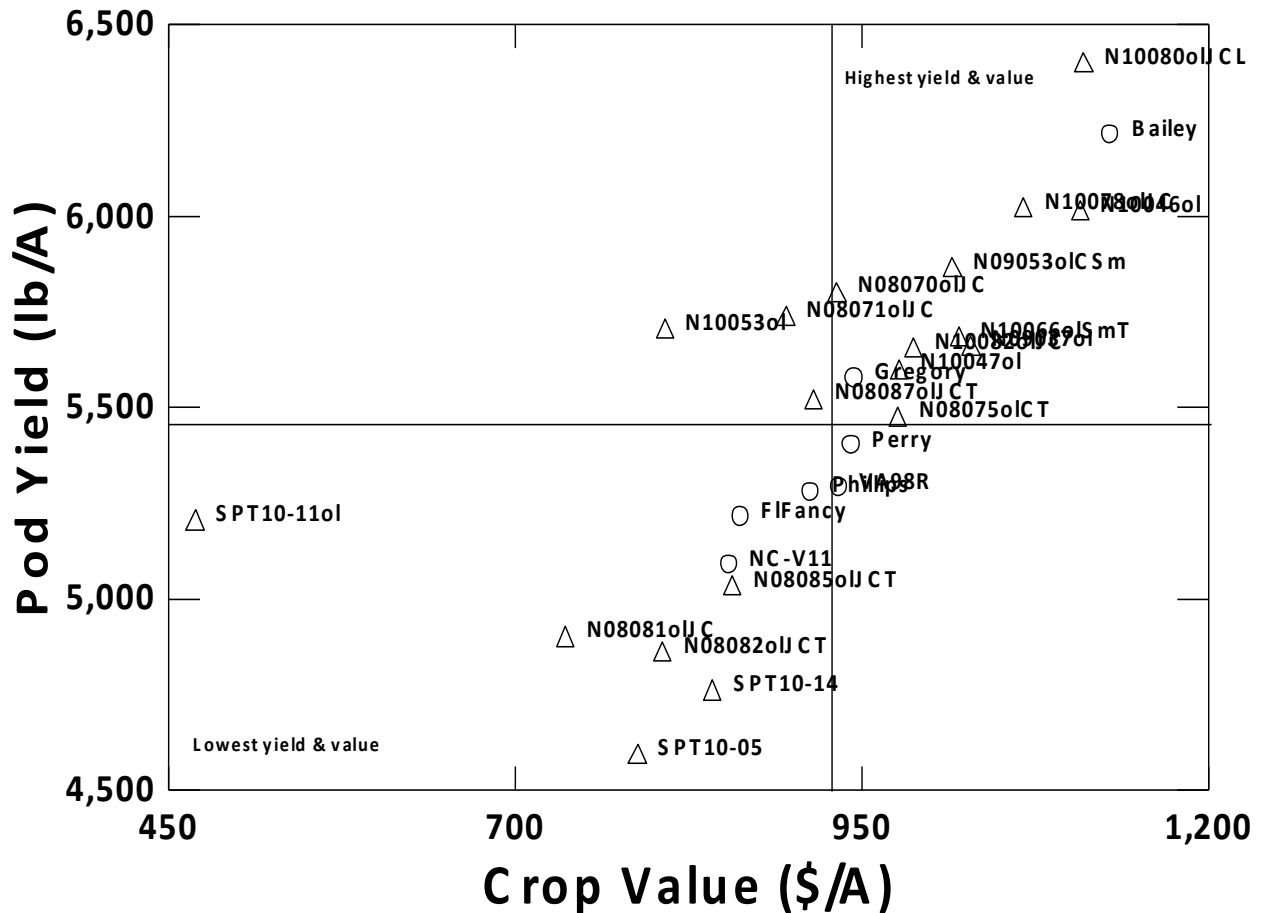


Figure 18. Summary of pod yield and crop value at Bladen Co., NC, in 2012. Vertical bar represents mean crop value and horizontal bar mean pod yield of 26 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value at this location.

2012 Results by Location

Table 26. Performance of genotypes at Blackville, SC, in 2012. Averages of four replicated plots planted on 4 May, dug on 21 September, and combined on 28 September.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.7	1.7	80 ef	6.2	38 m-o	3.9	1.9	5.7	61 g-l	72 e-k	\$14.90 j-n	3855 g-j	\$575 h-k
Gregory	0.7	1.6	93 a-c	6.3	48 c-f	3.1	1.6	7.0	60 k-m	71 h-l	13.50 mn	4019 d-i	545 jk
VA 98R	0.5	1.4	85 c-e	6.4	43 h-l	5.0	1.4	6.0	60 j-m	72 e-k	14.81 j-n	4013 d-i	594 g-k
Perry	0.5	1.2	73 fg	6.2	43 g-l	4.0	1.6	5.3	63 d-l	73 c-e	15.91 f-l	3641 h-j	581 g-k
Phillips	0.2	0.2	88 a-d	6.2	47 c-g	3.4	1.2	5.9	62 e-l	73 c-f	15.31 g-m	3702 g-j	568 i-k
Bailey	0.4	0.9	89 a-d	6.3	49 b-e	3.3	1.5	1.9	67 b-d	73 c-e	18.11 a-d	4645 a	841 a
Florida Fancy	0.7	1.9	89 a-d	6.0	41 k-n	6.5	2.1	6.4	56 mn	71 g-l	13.96 l-n	3678 h-j	514 k
N08070oJJC	0.7	1.2	91 a-d	6.4	47 c-i	5.3	1.7	3.2	62 d-l	73 d-h	17.39 a-f	4413 a-e	768 a-d
N08071oJJC	0.2	0.6	93 a-c	6.3	47 c-h	5.1	1.6	3.4	62 e-l	72 d-j	16.99 b-i	4130 c-g	705 b-g
N08075oJCT	0.3	1.7	87 b-e	6.2	50 a-d	3.2	1.7	2.1	65 b-f	72 d-i	17.87 a-e	4344 a-e	776 a-c
N08081oJJC	0.7	0.9	95 ab	6.4	51 a-c	3.3	1.3	3.6	64 c-i	72 e-k	17.04 b-h	4314 a-e	735 a-e
N08082oJCT	0.2	0.7	92 a-d	6.3	48 c-f	3.7	1.7	4.4	61 g-l	71 kl	15.97 e-k	4582 ab	731 a-f
N08085oJCT	0.7	0.8	89 a-d	6.4	42 j-n	3.0	1.5	6.0	60 i-m	70 l	14.13 k-n	3806 f-j	538 jk
N08087oJCT	0.2	0.5	91 a-d	6.2	46 d-j	3.5	1.8	6.1	60 i-m	71 i-l	14.54 j-n	4457 a-d	649 c-j
N09037oI	0.5	1.2	91 a-d	6.2	50 a-d	3.6	1.4	3.3	64 b-h	72 d-j	17.38 a-f	4400 a-e	765 a-d
N09053oICSm	0.4	0.6	92 a-d	6.3	42 i-m	3.9	1.7	4.9	61 g-l	71 j-l	15.16 h-m	3688 g-j	566 i-k
N10046oI	0.3	0.9	91 a-d	6.3	55 a	4.0	1.6	2.4	66 b-e	74 bc	18.25 a-c	4537 a-c	828 ab
N010047oI	0.3	1.2	92 a-d	6.1	53 ab	4.4	1.3	3.4	65 b-g	74 cd	17.56 a-f	4367 a-e	765 a-d
N10053oI	0.6	0.9	90 a-d	6.4	48 c-f	4.5	1.6	4.1	62 f-l	72 e-k	16.42 c-j	4601 ab	756 a-d
N10066oISmT	0.4	1.1	88 a-e	6.5	45 e-k	2.3	1.8	3.0	64 b-g	72 f-l	17.14 a-g	3762 f-j	645 d-j
N10078oJJC	0.4	2.0	89 a-d	6.5	47 c-h	2.9	1.7	4.7	63 c-k	72 d-j	16.27 d-j	4160 b-f	677 c-i
N010080oJCL	0.5	1.1	87 b-e	6.2	46 d-j	4.8	1.6	6.3	60 h-m	73 c-e	15.03 i-n	3838 f-j	580 h-k
SPT 10-05	0.3	2.1	86 c0e	6.5	40 l-n	3.9	2.3	3.0	64 c-k	73 c-f	17.27 a-f	3511 j	608 f-k
SPT 10-11oI	0.2	2.0	59 i	6.2	24 q	3.5	2.7	10.7	54 n	71 kl	10.21 o	3472 j	354 l
SPT 10-14	0.4	1.2	46 j	6.5	37 no	1.1	2.4	2.5	67 bc	73 d-g	17.39 a-f	3623 ij	630 e-k
GA Greener	0.9	0.9	40 j	6.2	35 op	5.0	1.6	2.9	68 ab	78 a	18.40 ab	3763 f-j	697 c-h
GA 07W	0.6	0.6	65 hi	6.3	34 op	4.2	2.0	3.9	65 b-f	75 b	16.98 b-i	3975 e-i	678 c-i
GA 10 T	1.5	0.8	31 k	6.2	33 p	4.9	1.6	6.2	66 b-f	78 a	15.91 f-l	3672 h-j	584 g-k
GA 11 J	0.3	3.9	88 a-e	6.7	53 ab	1.4	1.3	2.6	67 bc	72 e-k	17.71 a-f	3795 f-j	673 c-i
Spain	0.1	0.8	95 a	6.5	50 b-d	1.4	1.5	6.9	59 lm	69 m	13.17 n	4073 d-h	537 jk
Ga 06 G	1.5	0.6	73 fg	6.2	46 d-j	2.2	1.1	2.0	72 a	77 a	19.04 a	4001 e-i	763 a-d
Florunner 107	0.5	1.1	24 k	6.4	27 q	3.1	2.5	2.9	67 bc	75 b	17.74 a-f	4053 d-i	720 a-f
Fla 07	1.1	0.9	70 gh	6.4	37 n-p	2.5	2.8	4.2	63 c-l	73 d-i	16.30 c-j	4157 b-f	676 c-i
ChampsBaileyMix	1.2	0.8	85 de	6.3	43 f-l	3.4	1.5	4.4	64 c-j	73 c-e	16.29 c-j	3771 f-j	624 e-k
Mean	0.6	1.2	80	6.3	44	3.6	1.7	4.3	63	73	16.28	4037	660
LSD_{0.05}³	0.4	0.7	8	0.3	5	1.9	0.6	2.2	4	1	0.02	449	124

³ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.⁴ Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.³ Fisher's least significant difference (LSD) at P = 0.05.

2012 Results by Location

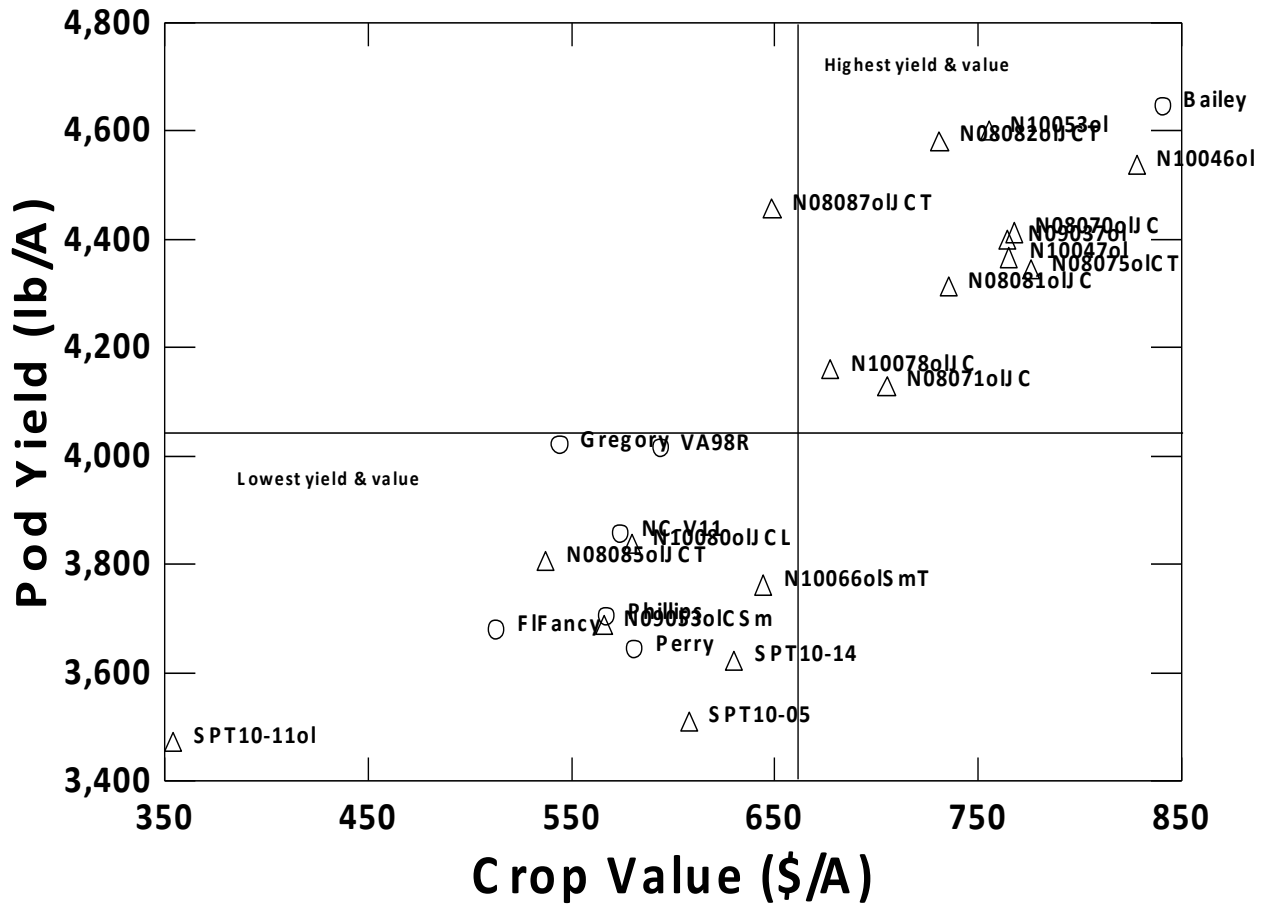


Figure 20. Summary of pod yield and crop value at Blackville, SC, in 2012. Vertical bar represents mean crop value and horizontal bar mean pod yield of 26 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value at this location.

2012 Results by Location

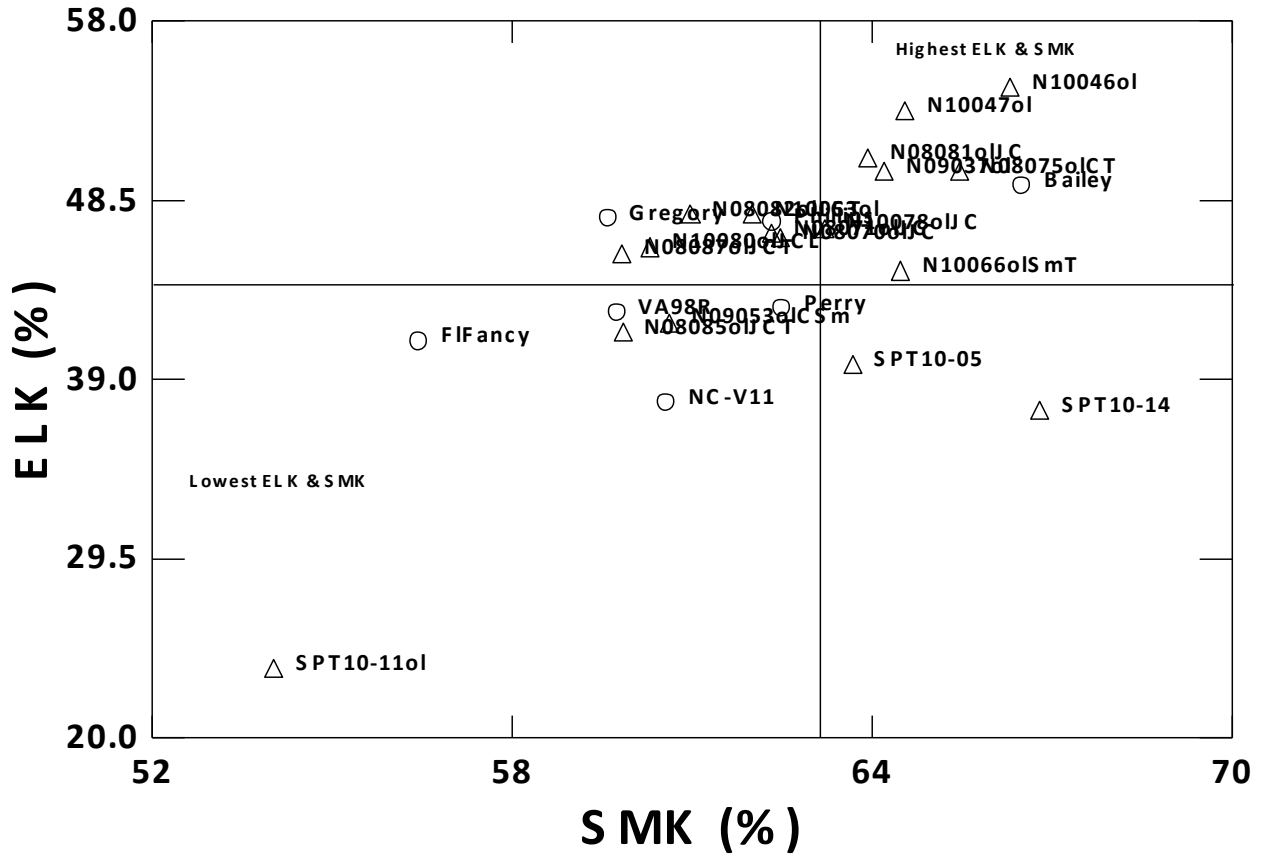


Figure 21. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Blackville, SC, in 2012. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 26 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location.

2012 Results across Locations

Table 27. Performance of genotypes averaged across test locations in 2012.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.5	1.1	82 i	7.0	35 j	2.1	3.0	4.3	62 hi	71 e-h	\$15.37 jk	4533 f-h	\$707 gh
Gregory	0.9	1.1	94 a	7.0	48 cd	1.8	1.8	5.3	61 i	70 i	14.72 k	4646 c-h	710 gh
VA 98R	0.6	0.9	85 hi	7.0	44 d-h	2.7	2.0	3.6	64 b-g	73 a-d	16.69 c-i	4590 e-h	774 d-g
Perry	0.6	0.9	82 i	7.1	43 f-h	2.0	2.8	3.4	65 b-g	73 ab	16.73 c-i	4566 e-h	766 e-g
Phillips	0.4	0.6	89 e-g	7.0	48 cd	2.0	1.7	3.3	66 a-d	73 ab	16.96 a-g	4663 b-h	795 c-g
Bailey	0.6	0.7	87 f-h	7.0	46 c-g	2.2	2.4	1.7	66 ab	73 ab	17.87 ab	5329 a	952 a
Florida Fancy	0.7	1	93 a-d	7.2	44 e-h	2.4	2.0	3.3	64 c-h	71 e-h	16.58 d-i	4751 b-g	795 c-g
N08070oJJC	0.8	0.8	93 a-c	7.0	44 e-h	3.6	2.4	4.1	62 hi	72 b-g	16.18 e-j	4968 a-f	798 c-g
N08071oJJC	0.7	0.7	92 a-e	7.2	43 gh	3.2	2.5	4.0	61 i	71 g-i	15.94 f-j	4636 c-h	737 f-h
N08075oJCT	0.4	1.1	87 f-h	7.3	46 c-g	2.1	2.8	2.5	64 b-g	72 d-h	17.13 a-e	4711 b-h	807 c-g
N08081oJJC	0.9	0.8	94 ab	7.2	47 c-e	2.7	2.0	3.7	63 f-i	71 e-h	16.38 e-j	4428 e-h	752 fg
N08082oJCT	0.7	0.7	94 a	7.2	48 c	2.0	2.1	3.1	64 b-g	71 e-h	16.77 b-h	4695 b-h	788 d-g
N08085oJCT	0.6	0.6	91 a-e	7.2	41 hi	2.8	2.0	4.2	62 g-i	71 hi	15.80 h-k	4454 f-h	709 gh
N08087oJCT	1.0	0.7	91 b-e	7.2	46 c-g	2.6	2.2	4.2	62 g-i	71 e-h	15.90 g-j	4773 b-g	762 e-g
N09037oI	0.6	0.8	92 a-e	7.1	49 bc	2.4	2.2	2.8	65 b-g	72 b-e	17.10 a-e	4625 d-h	795 c-g
N09053oICSm	0.6	0.6	92 a-e	7.3	42 g-i	2.2	2.1	3.3	63 d-i	71 f-h	16.30 e-j	4506 f-h	742 fg
N10046oI	0.6	0.8	92 a-e	7.2	54 a	2.2	2.2	2.0	67 a	73 a	17.98 a	5127 a-d	922 ab
N10047oI	0.6	0.8	91 a-e	7.1	52 ab	2.4	1.9	2.5	66 ab	73 a	17.74 a-c	4888 a-f	867 a-e
N10053oI	0.6	0.7	90 c-f	7.2	47 c-e	3.1	2.4	4.7	61 i	71 e-h	15.61 i-k	5376 a	839 b-f
N10066oISmT	0.7	1.0	90 d-g	7.4	47 c-f	1.6	2.3	2.0	66 a-c	72 b-g	17.60 a-d	4695 b-h	829 b-f
N10078oJJC	0.4	0.9	90 c-f	7.5	46 c-g	1.9	2.2	3.6	65 a-f	73 ab	16.82 b-h	5151 a-c	873 a-e
N10080oJCL	0.7	0.7	90 c-g	7.3	46 c-g	2.4	2.0	3.1	66 a-e	73 a	17.27 a-e	5171 ab	900 a-c
N10082oJJC	0.7	0.8	92 a-e	7.5	48 c-e	1.7	2.2	3.0	66 a-d	73 a-c	17.29 a-e	5077 a-e	882 a-d
SPT 10-05	0.4	1.5	86 gh	7.9	39 ij	1.8	4.0	2.2	64 c-g	72 b-f	17.05 a-f	4207 hi	716 gh
SPT 10-11oI	0.7	1.4	66 j	7.3	24 l	1.9	3.4	11.1	55 j	72 c-h	10.80 l	4251 g-i	462 i
SPT 10-14	0.7	1.3	37 k	8.3	29 k	0.6	4.9	2.1	63 e-i	71 g-i	16.49 d-j	3784 i	628 h
Mean	0.6	0.9	87	7.2	44	2.2	2.4	3.6	64	72	16.42	4721	781
LSD_{0.05}³	0.4	0.3	4	0.8	4	1.0	0.8	1.4	2	1	0.01	522	111

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05.

2012 Results across Locations

Table 28. Effect of genotype on value per acre with and without penalties due to segregation in 2012.

Variety or Line	TAREC (Suffolk), VA				Martin Co., NC				Bladen Co., NC		Rocky Mount, NC	
	Dig I		Dig II		Dig I		Dig II		Dig I		Dig I	
	with	without	with	without	with	without	with	without	with	without	with	without
	----- \$/A -----											
NC-V 11	\$605 a-c	\$838 c-i	\$298 de	\$851 d-f	\$747 a-d	\$747 a-c	\$280 de	\$799 a-d	\$490 c-f	\$854 d-g	\$163 gh	\$465 ij
Gregory	545 a-c	804 d-i	291 de	831 d-f	940 ab	940 ab	656 a-d	916 ab	535 c-f	944 a-f	93 h	265 j
VA 98R	888 a	888 a-f	311 c-e	889 a-f	874 a-c	874 ab	843 ab	843 a-c	744 a-d	933 b-f	381 b-h	591 g-i
Perry	826 ab	826 d-i	282 e	806 ef	877 a-c	877 ab	213 e	609 c-e	330 d-f	942 a-f	799 a	799 a-f
Phillips	928 a	928 a-d	314 c-e	896 a-f	935 a-c	935 ab	785 a-c	785 a-d	746 a-d	913 c-g	249 f-h	711 c-h
Bailey	871 ab	871 b-g	1061 a	1061 a-e	988 a	988 a	591 a-e	812 a-d	1129 a	1129 a	556 a-f	976 a
Florida Fancy	533 a-c	788 e-i	345 c-e	986 a-f	865 a-c	865 ab	922 a	922 ab	497 c-f	862 d-g	240 f-h	685 c-h
N08070oIJC	283 c	808 d-i	290 e	829 d-f	532 c-f	783 a-c	244 e	698 a-e	326 d-f	932 b-f	264 e-h	755 b-h
N08071oIJC	252 c	720 hi	283 e	808 ef	806 a-d	806 a-c	194 e	553 de	515 c-f	895 c-g	232 f-h	665 d-i
N08075oICT	726 a-c	726 hi	633 a-e	947 a-f	254 ef	726 a-d	252 de	719 a-e	598 b-f	976 a-f	429 a-h	755 b-h
N08081oIJC	798 ab	798 e-i	595 a-e	859 b-f	276 ef	276 e	252 de	718 a-e	258 ef	736 g	435 a-h	710 c-h
N08082oIJCT	831 ab	831 d-i	637 a-e	932 a-f	836 a-d	836 a-c	489 b-e	672 b-e	496 c-f	987 a-e	649 a-d	784 a-g
N08085oIJCT	814 ab	814 d-i	308 c-e	881 a-f	446 d-f	446 de	251 de	717 a-e	692 a-e	857 d-g	210 f-h	601 f-i
N08087oIJCT	527 a-c	769 f-i	344 c-e	981 a-f	847 a-d	847 ab	494 b-e	644 c-e	525 c-f	915 c-g	208 f-h	594 g-i
N09037oI	741 a-c	741 g-i	299 de	854 c-f	822 a-d	822 a-c	803 a-c	803 a-d	1029 ab	1029 a-d	352 b-h	575 hi
N09053oICSm	823 ab	823 d-i	306 c-e	873 a-f	797 a-d	797 a-c	196 a	559 de	1015 ab	1015 a-d	227 f-h	649 d-i
N10046oI	912 a	912 a-e	758 a-d	1114 ab	887 a-c	887 ab	851 ab	851 a-c	1107 a	1107 ab	284 d-h	812 a-e
N10047oI	863 ab	863 b-g	999 ab	999 a-f	888 a-c	888 ab	868 ab	868 a-c	559 c-f	977 a-f	663 a-c	798 a-f
N10053oI	686 a-c	972 ab	378 c-e	1081 a-d	247 ef	706 b-d	270 de	773 a-e	508 c-f	808 e-g	303 c-h	866 a-c
N10066oISmT	721 a-c	721 hi	613 a-e	876 a-f	982 a	982 ab	796 a-c	796 a-d	1020 ab	1020 a-d	679 ab	844 a-d
N10078oIJC	669 a-c	968 a-c	388 c-e	1108 a-c	866 a-c	866 ab	594 a-e	769 a-e	857 a-c	1067 a-c	277 d-h	792 a-g
N10080oIJCL	1005 a	1005 a	394 c-e	1124 a	604 a-e	860 ab	423 c-e	735 a-e	870 a-c	1110 ab	529 a-g	929 ab
N10082oIJC	570 a-c	846 b-h	352 c-e	1006 a-f	944 ab	944 ab	946 a	946 a	795 a-d	806 e-g	229 f-h	654 e-i
SPT 10-05	248 c	710 i	571 b-e	826 d-f	793 a-d	793 a-c	568 a-e	568 de	788 a-d	788 fg	625 a-e	769 b-h
SPT 10-11oI	250 c	714 hi	179 e	511 g	142 f	406 e	183 e	522 ef	164 f	469 h	126 h	359 j
SPT 10-14	389 bc	567 j	767 a-c	767 fg	557 b-e	557 c-e	280 de	280 f	842 a-c	842 d-g	370 b-h	642 e-i
Mean	665	817	461	911	712	786	509	726	671	920	368	694
LSD_{0.05}²	497	133	468	257	404	282	412	261	470	191	376	201

¹ Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

² Fisher's least significant difference (LSD) at P = 0.05.

2012 Results across Locations

Table 28. Effect of genotype on value per acre with and without penalties due to segregation in 2012, continued.

Variety or Line	Blackville, SC	
	with	without
	----- \$/A -----	
NC-V 11	\$201 d-f	\$575 h-k
Gregory	191 ef	545 jk
VA 98R	208 d-f	594 g-k
Perry	204 d-f	581 g-k
Phillips	199 d-f	568 i-k
Bailey	712 a	841 a
Florida Fancy	180 ef	514 k
N08070oIJC	395 b-f	768 a-d
N08071oIJC	376 b-f	705 b-g
N08075oICT	656 ab	776 a-c
N08081oIJC	385 b-f	735 a-e
N08082oIJCT	256 c-f	731 a-f
N08085oIJCT	188 ef	538 jk
N08087oIJCT	227 c-f	649 c-j
N09037oI	395 b-f	765 a-d
N09053oICSm	318 c-f	566 i-k
N10046oI	703 a	828 ab
N10047oI	268 c-f	765 a-d
N10053oI	392 b-f	756 a-d
N10066oISmT	323 c-f	645 d-j
N10078oIJC	237 c-f	677 c-i
N10080oIJCL	203 d-f	580 h-k
N10082oIJC	--	--
SPT 10-05	325 c-f	608 f-k
SPT 10-11oI	124 f	354 l
SPT 10-14	364 b-f	630 e-k
Mean	341	660
LSD_{0.05}²	305	124

¹ Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

² Fisher's least significant difference (LSD) at P = 0.05.

2012 Results across Locations

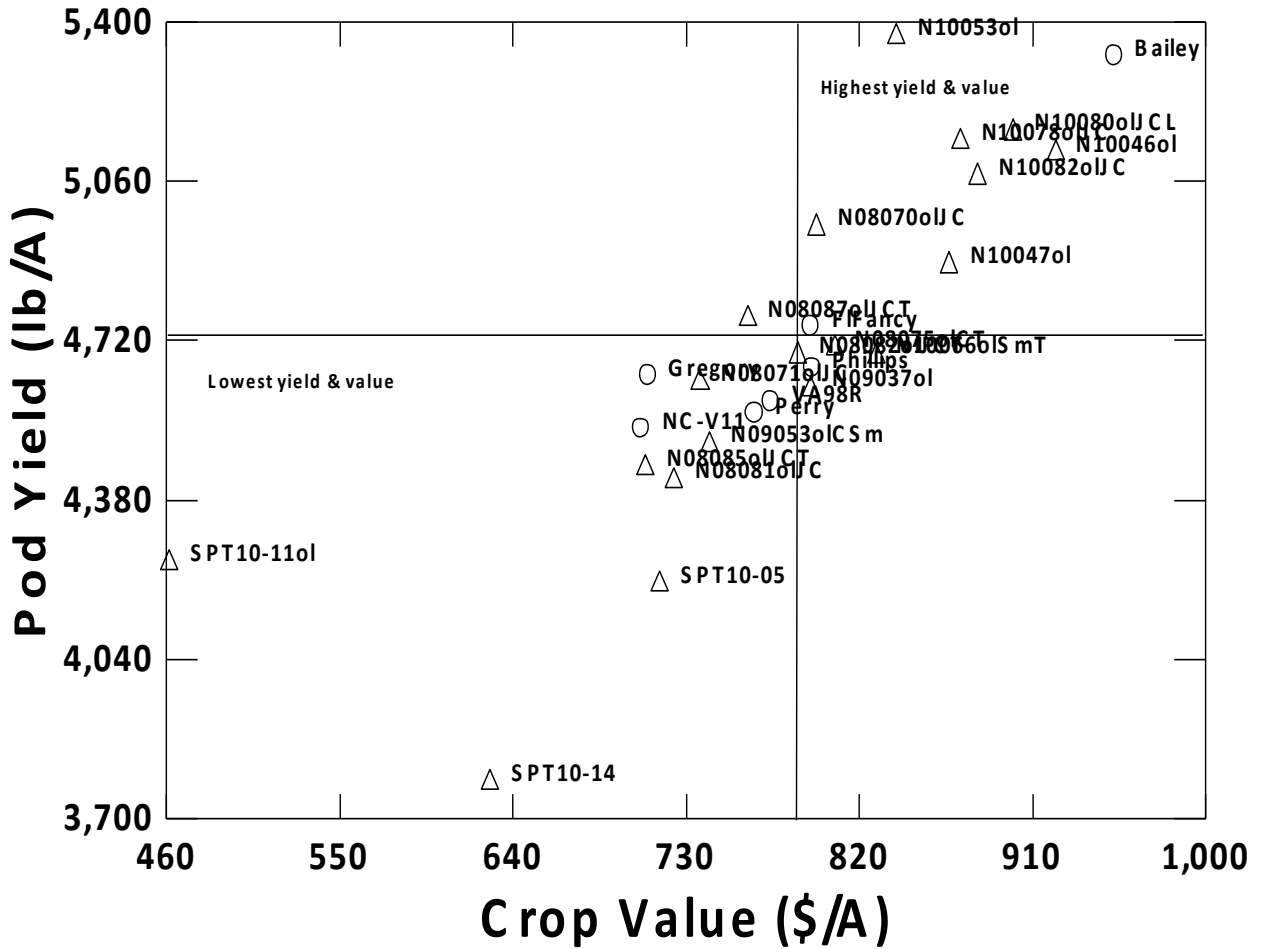


Figure 22. Summary of pod yield and crop value across locations and digging dates in 2012. Vertical bar represents mean crop value and horizontal bar mean pod yield of 26 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value.

2012 Results across Locations

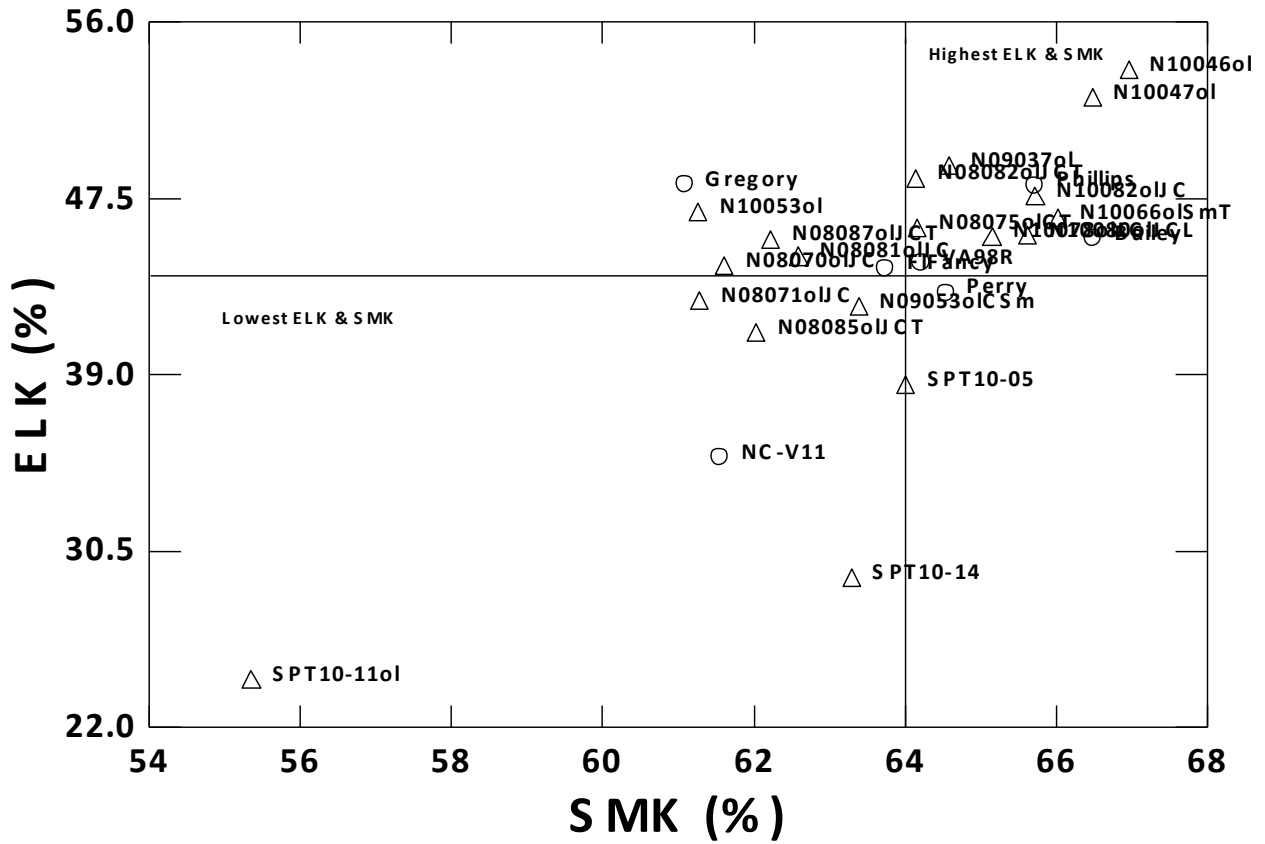


Figure 23. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content across all locations and digging dates in 2012. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 26 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content.

2012 Results across Locations

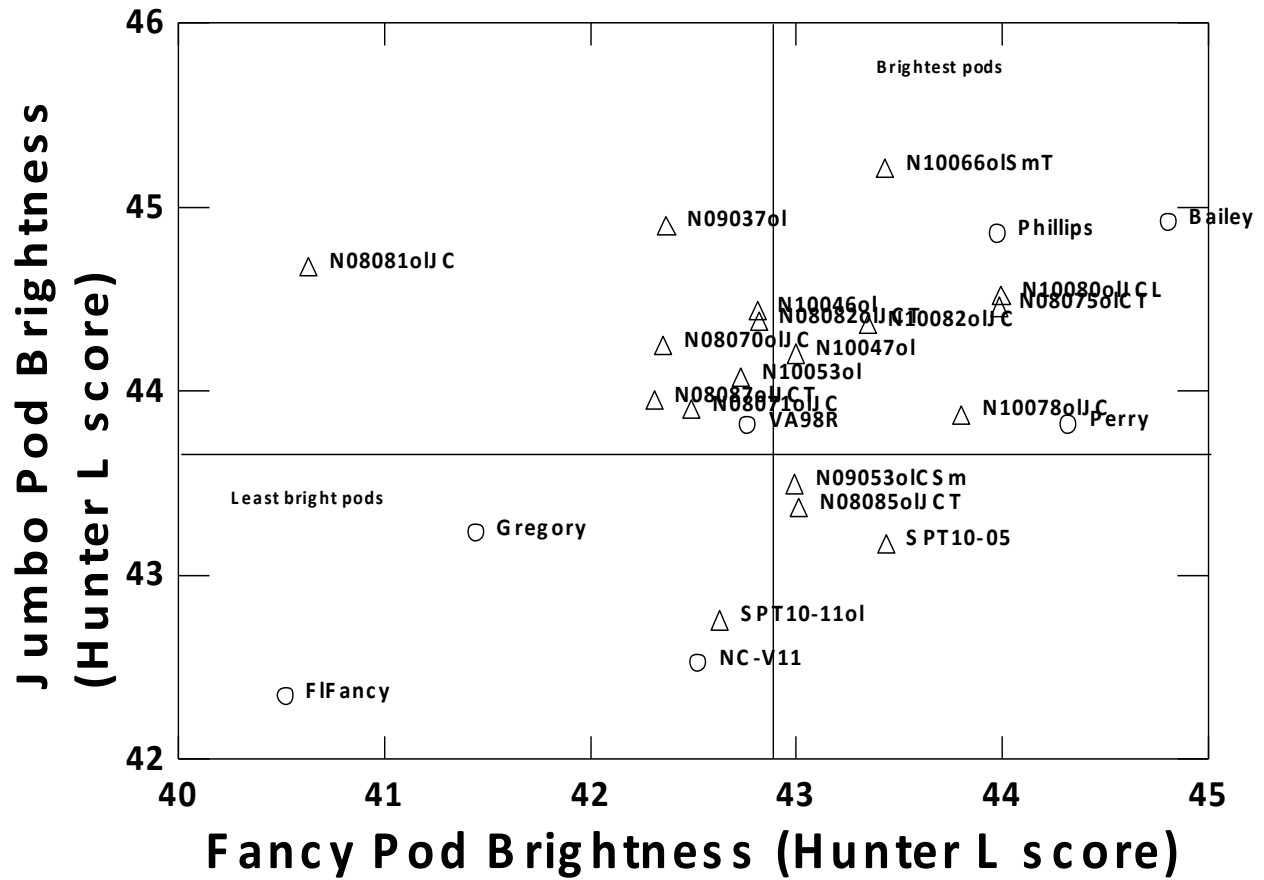


Figure 24. Brightness of jumbo and fancy pods across all test locations and digging dates in 2012. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 26 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness.

Two-year Averages by Location

RESULTS – TWO-YEAR AVERAGES

Table 29. Performance of genotypes at Tidewater AREC (Suffolk), VA. Two-year averages (2011-2012).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.6	1.2	84 e	7.7	41 f	1.1	2.8	3.0	64 c	71 c-e	\$16.36 de	5423 a	\$889 a
Gregory	1.1	1.0	96 ab	7.8	53 a	0.9	1.5	2.9	65 bc	70 ef	16.69 c-e	5527 a	922 a
VA 98R	0.9	0.9	84 e	7.5	45 de	1.5	2.2	3.1	65 bc	72 ab	17.13 a-d	5090 a	871 a
Perry	0.6	1.0	86 de	7.9	47 c-e	1.2	2.5	2.9	66 ab	73 a	16.94 b-d	5246 a	888 a
Phillips	0.6	0.7	94 ab	8.0	53 a	1.0	1.6	1.8	68 a	72 ab	17.91 a	5250 a	942 a
Bailey	0.9	0.7	89 cd	8.0	46 de	1.4	2.6	1.4	66 ab	72 a-c	17.68 ab	5564 a	983 a
Florida Fancy	0.9	1.0	96 ab	8.4	48 c-e	1.1	2.0	2.0	65 bc	70 f	17.06 a-d	5380 a	919 a
N08070oIJC	0.8	0.8	95 ab	8.0	45 de	1.9	2.8	3.9	62 c	70 c-f	15.80 e	5681 a	895 a
N08075oIJCT	0.5	0.9	89 cd	8.3	49 b-d	1.1	2.5	1.3	66 ab	71 b-d	17.72 ab	5341 a	949 a
N08081oIJC	1.0	0.8	92 bc	7.9	50 a-c	1.2	2.1	2.1	65 bc	71 c-f	17.25 a-d	5580 a	963 a
N08082oIJCT	0.8	0.7	97 a	8.1	52 ab	1.1	1.9	2.4	65 bc	71 c-f	17.32 a-c	5581 a	965 a
N08085oIJCT	0.6	0.6	92 bc	7.9	46 de	1.6	2.1	2.3	65 bc	71 c-f	17.09 a-d	5429 a	930 a
N08087oIJCT	0.7	0.7	96 ab	8.0	48 c-e	1.4	2.0	2.6	64 bc	70 d-f	17.01 a-d	5586 a	949 a
N09037oI	0.8	0.8	95 ab	7.9	53 a	1.1	2.3	1.7	66 ab	72 a-c	17.70 ab	5174 a	918 a
N09053oICSm	0.8	0.6	92 bc	8.3	45 e	1.2	2.1	2.1	65 bc	70 ef	16.97 b-d	5493 a	930 a
Mean	0.7	0.8	92	8.0	48	1.3	2.2	2.4	65	71	17.11	5423	928
LSD_{0.05}³	0.3	0.3	4	1.2	4	0.9	0.6	1.3	2	1	0.01	647	123

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05.

Two-year Averages by Location

Table 30. Performance of genotypes at Martin Co., NC. Two-year averages (2011-2012).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.3	0.9	80 c	7.1	36 g	1.9	3.3	2.5	64 b	71 a-d	\$16.91 de	4316 a	\$729 ab
Gregory	0.5	0.8	94 a	7.0	54 a	1.2	2.3	2.6	67 ab	72 a-c	17.57 a-e	4757 a	838 ab
VA 98R	0.4	0.8	84 c	7.0	44 c-f	2.4	1.8	2.2	67 ab	73 a	17.81 ab	4416 a	789 ab
Perry	0.6	1.2	83 c	7.1	40 f	1.6	3.2	2.2	65 ab	72 a-c	17.34 a-e	4364 a	760 ab
Phillips	0.3	1.1	85 bc	7.1	48 bc	1.9	2.2	1.4	67 a	72 a-c	17.97 a	4395 a	791 ab
Bailey	0.4	0.8	84 c	7.3	45 b-e	1.6	2.6	1.5	67 a	72 a-c	17.89 a	4922 a	882 a
Florida Fancy	0.5	0.9	92 a	7.4	42 d-f	1.2	1.9	2.6	65 ab	70 d	16.83 e	4390 a	747 ab
N08070olJC	0.4	0.6	92 a	7.1	44 d-f	2.2	3.0	2.8	64 b	72 a-c	17.02 c-e	4665 a	794 ab
N08075olCT	0.3	1.1	85 bc	7.7	47 b-d	1.5	3.1	2.0	66 ab	73 a-c	17.59 a-e	4745 a	840 ab
N08081olJC	0.6	0.6	92 a	7.1	49 b	1.4	2.0	2.3	67 ab	72 a-c	17.65 a-d	4803 a	851 ab
N08082olJCT	0.8	0.8	92 a	7.2	49 b	1.2	2.2	2.1	67 a	72 a-c	17.69 a-c	4324 a	765 ab
N08085olJCT	0.3	0.7	89 ab	7.0	45 c-f	2.4	2.0	2.4	65 ab	72 a-d	17.39 a-e	4604 a	803 ab
N08087olJCT	0.6	0.8	91 a	7.4	45 b-f	2.0	2.6	2.1	64 ab	71 cd	17.24 a-e	4309 a	746 ab
N09037ol	0.4	0.8	89 ab	7.5	48 bc	1.2	2.6	1.8	67 a	73 ab	17.88 a	4424 a	792 ab
N09053olCSm	0.4	0.7	90 a	7.1	42 ef	1.7	2.5	2.5	64 ab	71 b-d	17.04 b-e	4457 a	762 ab
Mean	0.4	0.8	88	7.2	45	1.7	2.5	2.2	66	72	17.45	4524	972
LSD_{0.05}³	0.3	0.4	5	0.6	5	0.9	1.0	1.0	3	2	0.01	697	142

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05.

Two-year Averages by Location

Table 31. Performance of genotypes at Rocky Mount, NC. Two-year averages (2011-2012).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.4	1.1	85 f	6.4	28 d	2.8	4.1	4.9	57 cd	68 cd	\$13.85 bc	4389 de	\$624 cd
Gregory	0.9	1.3	95 ab	6.3	39 a-c	2.2	2.7	6.2	55 d	67 d	12.79 c	4239 e	592 d
VA 98R	0.7	0.9	88 d-f	6.3	40 a-c	3.5	2.8	3.2	62 ab	71 ab	16.38 ab	4314 de	719 b-d
Perry	0.4	0.9	87 d-f	6.3	39 a-c	3.0	3.3	1.7	64 a	72 a	17.49 a	4867 a-e	851 a-c
Phillips	0.6	0.9	90 cd	6.2	45 a-c	3.0	2.4	3.1	63 a	71 ab	16.46 ab	4799 b-e	789 a-d
Bailey	0.5	0.7	87 ef	6.3	38 a-c	2.2	3.5	1.6	64 a	71 ab	17.20 a	5821 a	1001 a
Florida Fancy	0.9	1.2	94 ab	6.2	38 a-c	3.5	2.7	3.4	61 a-c	70 a-c	16.10 ab	4673 b-e	752 b-d
N08070oJCT	0.4	0.7	95 ab	6.4	41 a-c	3.9	2.8	3.8	60 a-c	71 ab	15.88 ab	5409 ab	862 a-c
N08075oJCT	0.5	0.8	89 de	6.5	39 a-c	2.6	3.5	2.5	62 ab	70 a-c	16.43 ab	5483 ab	907 ab
N08081oJCT	1.0	0.6	95 ab	6.4	44 a-c	2.8	2.6	3.2	63 a	71 ab	16.41 ab	5259 a-d	872 ab
N08082oJCT	0.8	0.7	97 a	6.3	47 ab	3.2	2.2	2.6	64 a	72 ab	16.98 a	5353 a-c	915 ab
N08085oJCT	0.5	0.7	93 bc	6.5	37 cd	5.2	2.7	4.3	58 b-d	70 a-c	15.31 a-c	4417 c-e	679 b-d
N08087oJCT	1.7	0.8	95 ab	6.4	40 a-c	3.2	2.5	4.4	60 a-d	70 bc	15.01 a-c	4987 a-e	757 b-d
N09037oI	0.8	0.8	94 ab	6.3	47 a	2.0	2.6	3.5	63 a	71 ab	15.91 ab	4855 b-e	785 a-d
N09053oICSm	0.5	0.8	93 b	6.4	38 bc	4.0	2.3	3.6	61 a-c	70 a-c	15.82 ab	5372 a-c	861 a-c
Mean	0.7	0.8	92	6.3	40	3.1	2.8	3.5	61	70	15.87	4946	798
LSD_{0.05}³	0.9	0.4	3	0.4	9	2.9	1.2	3.0	5	2	0.03	965	238

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05.

Two-year Averages by Location

Table 32. Performance of genotypes at Bladen, NC. Two-year averages (2011-2012).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.8	0.6	84 f	7.3	30 g	2.5	1.4	2.3	66 ab	72 a-c	\$17.25 a-d	4731 ab	\$804 ab
Gregory	1.3	0.8	94 a-c	7.1	44 a-c	2.1	1.1	2.8	63 bc	69 e	16.76 c-e	4853 ab	815 ab
VA 98R	0.8	0.8	88 d-f	7.2	39 c-f	3.1	1.3	3.0	65 a-c	72 a-c	17.13 a-d	4664 ab	802 ab
Perry	0.8	0.9	86 ef	7.5	38 d-f	1.6	1.5	3.2	66 ab	72 a-c	17.10 a-d	4649 ab	799 ab
Phillips	0.8	0.6	89 c-f	7.1	42 b-e	1.5	1.5	2.0	66 ab	71 b-e	17.38 a-d	4881 ab	849 ab
Bailey	0.8	0.6	89 b-f	7.0	41 b-e	2.5	1.1	1.4	67 a	72 ab	18.02 ab	5302 a	957 a
Florida Fancy	1.1	0.7	93 a-d	7.0	40 b-f	3.8	1.1	3.1	63 b-d	71 c-e	16.77 c-e	4467 ab	749 b
N08070olJC	1.3	0.8	95 a	7.3	37 ef	4.7	1.1	4.2	60 d	71 a-c	15.76 e	5271 ab	832 ab
N08075olCT	0.7	0.9	91 a-e	7.3	49 a	2.4	1.3	1.5	67 a	73 a	18.14 a	5250 ab	953 a
N08081olJC	1.1	0.7	94 ab	7.5	43 b-d	3.7	1.2	3.5	63 b-d	71 a-c	16.48 de	4825 ab	797 ab
N08082olJCT	1.3	0.7	95 a	8.2	44 ab	2.5	1.3	3.0	64 a-c	71 a-d	16.95 a-e	4294 b	729 b
N08085olJCT	1.0	0.8	92 a-e	7.2	35 f	3.9	1.4	2.4	63 b-d	70 de	17.01 a-d	5056 ab	860 ab
N08087olJCT	1.3	0.6	95 a	7.4	43 b-d	3.5	2.0	3.5	62 cd	71 a-d	16.52 de	4731 ab	783 ab
N09037ol	1.0	0.7	91 a-e	7.3	44 a-c	3.1	1.2	2.1	66 ab	72 ab	17.78 a-c	4794 ab	855 ab
N09053olCSm	1.1	0.5	91 a-e	7.5	39 b-f	2.4	1.1	2.9	65 a-c	71 a-d	16.85 b-e	4826 ab	817 ab
Mean	1.0	0.7	91	7.3	40	2.9	1.3	2.7	64	71	17.06	4836	827
LSD_{0.05}³	0.4	0.3	6	0.8	5	1.4	0.8	1.4	3	2	0.01	988	192

⁴ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

⁵ Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

⁶ Fisher's least significant difference (LSD) at P = 0.05.

Two-year Averages at All Locations

Table 33. Performance of genotypes at all locations. Two-year averages (2011-2012).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ¹ lb/A	Value \$/A
NC-V 11	0.5	1.1	83 i	7.0	35 f	2.2	2.8	3.4	62 ef	71 c-e	\$16.01 f	4608 e	\$744 e
Gregory	0.9	1.0	94 ab	7.0	48 a	1.7	1.9	3.9	63 ef	70 f	15.79 f	4778 b-e	772 de
VA 98R	0.6	0.9	85 gh	6.9	42 de	2.8	1.9	3.2	64 b-e	72 ab	16.87 b-e	4561 e	774 c-e
Perry	0.6	1.1	84 hi	7.1	41 de	2.0	2.5	2.8	65 a-c	72 a	17.05 a-e	4642 de	794 c-e
Phillips	0.5	0.8	89 f	7.1	48 a	2.0	1.8	2.4	66 ab	72 ab	17.27 a-c	4732 b-e	820 b-e
Bailey	0.6	0.7	87 fg	7.1	44 c-e	2.0	2.3	1.5	66 a	72 ab	17.76 a	5287 a	939 a
Florida Fancy	0.8	1.0	93 a-d	7.2	42 de	2.5	1.9	2.9	63 d-f	70 ef	16.53 c-f	4688 c-e	780 c-e
N08070oLJC	0.7	0.8	94 a-c	7.1	43 de	3.3	2.4	3.6	62 f	71 b-d	16.31 ef	5141 ab	836 b-d
N08075oLCT	0.4	1.0	88 fg	7.4	47 a-c	2.0	2.5	1.8	65 ab	72 ab	17.54 ab	5077 a-c	893 ab
N08081oLJC	0.9	0.7	93 a-d	7.2	47 ab	2.3	1.9	2.8	64 b-d	71 bc	16.98 b-e	5040 a-d	840 a-c
N08082oLJCT	0.8	0.7	95 a	7.3	48 a	2.2	1.9	2.7	65 a-c	71 b-d	17.09 a-d	4875 a-e	835 b-d
N08085oLJCT	0.6	0.7	91 de	7.1	41 e	3.1	2.0	3.2	62 f	70 ef	16.38 d-f	4771 b-e	788 c-e
N08087oLJCT	0.9	0.7	94 a-c	7.3	44 b-d	2.5	2.2	3.3	63 ef	71 d-f	16.35 d-f	4866 b-e	798 c-e
N09037oI	0.7	0.8	92 b-d	7.3	48 a	1.7	2.2	2.2	66 ab	72 ab	17.38 ab	4810 b-e	840 b-d
N09053oLCSm	0.6	0.7	91 c-e	7.3	41 e	2.4	2.0	3.0	63 c-f	71 c-e	16.52 c-f	4861 b-e	808 b-e
Mean	0.7	0.8	90	7.2	44	2.3	2.2	2.9	64	71	16.78	4850	819
LSD_{0.05}³	0.2	0.2	2	0.5	3	0.9	0.5	0.9	2	1	0.01	413	86

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

³ Fisher's least significant difference (LSD) at P = 0.05.

Multi-Year Averages Across Locations

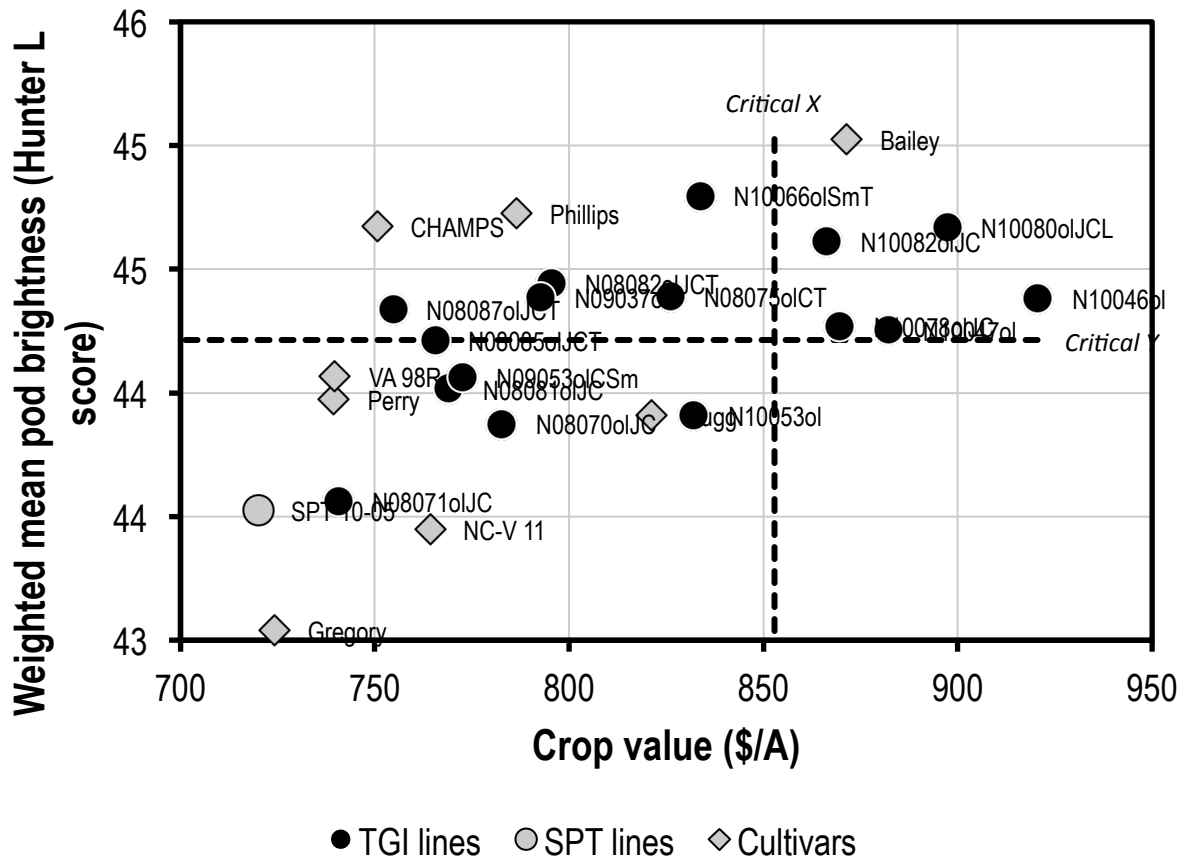


Figure 25. Mean pod brightness and crop value for lines and cultivars including all PVQE tests from 2000 to 2012. Breeding lines developed by Isleib (TGI) and Tallury (SPT) are marked by circles and cultivars are marked by diamonds. Dotted lines represent critical values for crop value (*Critical X*) and pod brightness (*Critical Y*) and they were derived by subtracting the least significant difference (LSD) from the maximum values for crop value and pod brightness.

Multi-Year Averages Across Locations

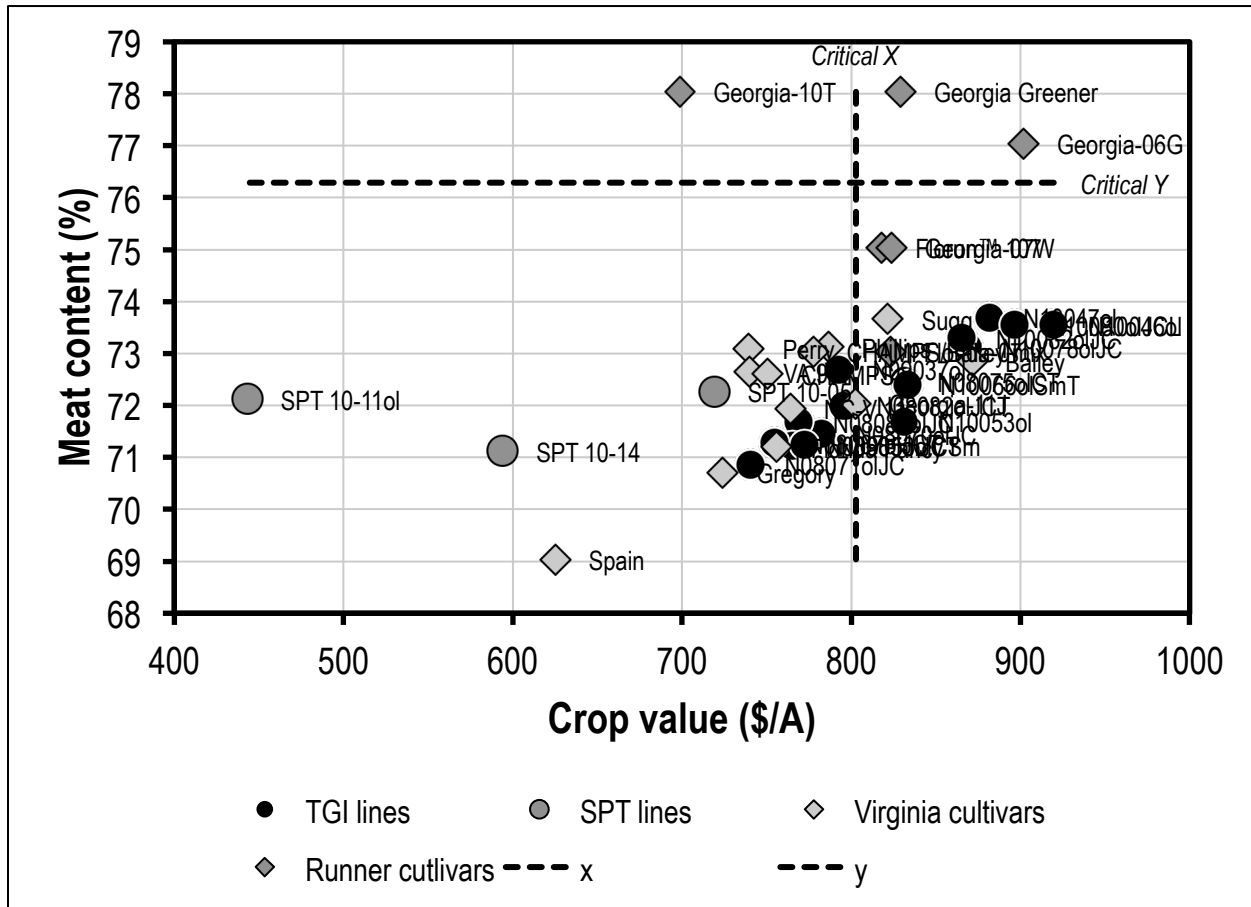


Figure 26. Meat content and crop value for lines and cultivars, virginia-type and runners, including all PVQE tests from 2000 to 2012. Breeding lines developed by Isleib (TGI) and Tallury (SPT) are marked by circles and cultivars are marked by diamonds. Dotted lines represent critical values for crop value (*Critical X*) and pod brightness (*Critical Y*) and they were derived by subtracting the least significant difference (LSD) from the maximum values for crop value and meat content.

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