2011

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

VSU Virginia State

AREC-5

PEANUT VARIETY AND QUALITY EVALUATION RESULTS 2011

I. Agronomic and Grade Data

Maria Balota, Ph.D.
Assistant Professor Crop Physiology

TECHNICAL SUPPORT:
F. Bryant, Ag Specialist
D. Redd, Ag Specialist
P. Copeland, Office Services Specialist
C. Daughtrey, Ag Technician
B. Kennedy, Ag Technician
T. Balotte, Lab Assistant

Virginia Polytechnic Institute and State University
Virginia Agricultural Experiment Station
Tidewater Agricultural Research and Extension Center
Suffolk, Virginia 23437

Information Series No 497
January 2012

ACKNOWLEDGEMENTS

FINANCIAL SUPPORT

The authors gratefully acknowledge financial support from the following institutions and organizations:

Virginia Tech

VCPA

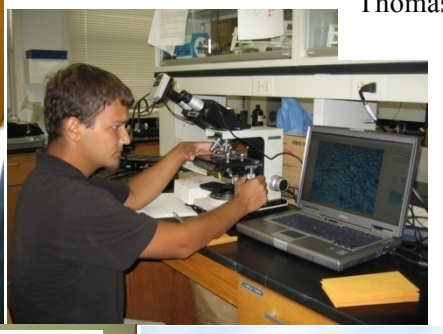
SC PEANUT GROWERS

NC STATE UNIVERSIT

CLEMSON UNIVERSITY

TECHNICAL SUPPORT

The following agricultural specialists, technicians, and lab assistants are gratefully acknowledged for their professionalism, and dedication to achieve tasks on time and in a collegial manner: F. Bryant, D. Redd, C. Daughtrey, B. Kennedy, P. Copeland, and T. Balotte. Appreciation is extended to Dr. Allen Harper for his support with implementing collegiality in the PVQE group, and Dr. Pat Phipps for his technical advice and mentoring role of a new faculty member, Dr. Maria Balota.



Pam Copeland, left, and Thomas Balotte, right.

Carolyn Daughtrey, below

Doug Redd (left) and Frank Bryant (right)

Brenda Kennedy, above

All of the following cooperators are also acknowledged for their various support provided to the PVQE program in 2011.

LIST OF COOPERATORS

Virginia Tech, Virginia Agricultural Experiment Station, and VCIA

- Mr. R. D. Ashburn, Farm Manager, Tidewater AREC
- Dr. P. Phipps, Tidewater AREC
- Dr. D. A. Herbert, Jr., Tidewater AREC
- Mr. Bruce Beahm, VCIA

Other universities

- Dr. T. Isleib, NCSU
- Dr. Barry Tillman, University of Florida
- Mr. C. Bogle, Upper Coastal Plain Research Station, NCSU
- Dr. J. Chapin, Clemson University
- Dr. Scott Manfort, Clemson University
- Mr. J. Farmer, PeeDee Research and Education Center, Farm Manager, Clemson University
- Mr. D. Gunter, Extension Associate, PeeDee Research and Education Center, Clemson University

Growers

- Mr. T. Slade, Martin Co., NC
- Mr. D. McDuffie, Bladen Co., NC

County Agents

- Ms. S. Sharp, Suffolk, VA
- Ms. B. Council, Greensville/Emporia, VA
- Mr. G. Slade, Surry Co., VA
- Mr. K. Wells, Sussex Co., VA
- Mr. A. Cochran, Martin Co., NC

Commodity Groups

- Mr. D. Cotton, Virginia Peanut Board
- Mr. B. Sutter, North Carolina Peanut Board

Companies

- Mr. F. Garner, Birdsong Peanut
- Mr. K. Bennett, Birdsong Peanut
- Mr. J. Laine, Wakefield Peanut Company
- Mr. B. Gwaltney, Indika Farms, Inc.

Amadas Industries	DuPont	AMVAC
BASF Corporation	Dow Agro Sciences LLC	
Bayer Crop Science	Helena	
Coastal Chemical Corporation	Syngenta Crop Protection	
Monsanto	Valent USA Corporation	

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 ($358.26 per ton for Virginia-type and $354.52 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)

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

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 and North Carolina generally grow Virginia-type cultivars. More recently, farmers in South Carolina started to grow the large-seeded Virginia-type cultivars, too. For example in 2010, production of Virginia-type peanut in South Carolina averaged 72,952 tons from 87,360 in total. 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 standard varieties throughout their production regions. The objectives of this project are: 1) to determine yield, grade, quality, and disease response of released peanut varieties 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 2011.

Plant Material and Test Locations

PLANT MATERIAL AND TEST LOCATIONS

In 2011, PVQE included 28 genotypes: 9 commercial varieties and 19 advanced breeding lines developed by the North Carolina peanut breeding programs (Table 1). All 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. Due to extended wet weather after digging, plots at Blackville, SC were lost. The commercial varieties are used as checks for the performance of the breeding lines as the ultimate objective is development of new Virginia-type peanut varieties. 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 2011.

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	CHAMPS	VA 8911215 / VA-C 92R
6	Phillips	N90014E / N91024
7	Bailey	NC 12C*2 / N96076L
8	Sugg	Gregory // X98006 (F1)
9	Florida Fancy	F87 x 8-2-1 / F 85410 / 93Q10
10	N07018JCSm	N99133CSm / N00035J
11	N07019JCSm	N99133CSm / N00035J
12	N08070olJC	N03079FT*2 / N02059ol (Per)
13	N08074olC	N03079FT*2 / N02059ol (Per)
14	N08075olCT	N03079FT*2 / N02059ol (Per)
15	N08081olJC	Bailey*2 / Brantley
16	N08082olJCT	Bailey*2 / Brantley
17	N08085olJCT	Bailey*2 / Brantley
18	N08087olJCT	Bailey*2 / Brantley
19	N09019olJ	N00091ol (7) / N99067J
20	N09024olJ	N00052 / N00098ol (Gre)
21	N09026olJ	N00052 / N00098ol (Gre)
22	N09031ol	N02009*2 / N00088ol (92R)
23	N09032ol	N02009*2 / N00088ol (92R)
24	N09037ol	N03079FT*2 / N00090ol (7)
25	N09049olC	N03075FT / N00098ol (Gre)
26	N09053olCSm	N03075FT / N00098ol (Gre)
27	N09056olC	N03075FT / N00098ol (Gre)
28	N09068olCSm	N04052FCSmT / N02051ol (9)

Plant Material and Test Locations

Table 2. Planting, digging and combining dates for each test location in 2011. Dig I was considered an early planting, and Dig II and optimum planting time for peanut in V-C area.

	Planting Date		Digging Date		Combining Date	
Locations	**I**	**II**	**I**	**II**	**I**	**II**
Tidewater AREC, VA	May 9	May 20	Oct. 3	Oct. 11	Oct. 14	Oct. 21
Martin Co., NC	May 19	May 19	Oct. 6	Oct. 17	Oct. 17	Oct. 27
Rocky Mount, NC	May 11		Oct. 13		Oct. 18	
Bladen Co., NC	May 10		Oct. 15		Oct. 25	

Weather Conditions

WEATHER CONDITIONS

The 2011 growing season was dry and hot until mid July in Suffolk and Rocky Mount, and beginning August at Martin and Bladen, NC. The last part of the growing season was relatively wet at all locations. Irrigation was applied to the plots at all locations with the exception of Martin County and Bladen County, NC. 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), light (photosynthetic active radiation – PAR), air relative humidity (RH), and precipitation at Tidewater AREC, Suffolk VA, in 2011 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[1]	RH	Rain
		°F			°F d	µmol m^{-2} s^{-1}	%	inch
May	69	84	56	71	175	583	72	2.36
June	78	91	65	81	761	643	71	3.53
July	81	96	70	85	1465	644	73	6.84
August	78	90	67	81	2225	563	61	18.08
September	73	84	64	76	2797	396	38	8.79
October	59	72	48	63	3139	336	38	2.53
Mean	**73**	**86**	**62**	**76**	**3139**	**528**	**59**	**42.13**

[1] Light is important for peanut growth and development. On a fully sunny day, maximum PAR approaches 2500 µmol m^{-2} s^{-1} and average PAR (average from sunrise to sunset) is approximately 600µmol m^{-2} s^{-1}. 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, air relative humidity (RH), and precipitation at Martin County, NC, in 2011 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	RH	Rain
	°F				°F d	µmol m^{-2} s^{-1}	%	inch
May	69	81	58	71	413	531	71	2.41
June	78	89	67	79	1076	602	69	1.90
July	81	92	71	82	1862	581	72	4.36
August	78	88	69	80	2570	481	76	15.66
September	72	82	64	75	3090	321	84	7.14
October	60	72	50	65	3236	249	80	1.14
Mean	**73**	**84**	**63**	**76**	**3236**	**461**	**75**	**32.61**

[1] Light is important for peanut growth and development. On a fully sunny day, maximum PAR approaches 2500 µmol m^{-2} s^{-1} and average PAR (average from sunrise to sunset) is approximately 600µmol m^{-2} 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 2011 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	µmol m^{-2} s^{-1}	%	inch
May	69	81	58	70	427	491	70	1.72
June	78	89	68	79	1098	591	69	5.08
July	81	94	70	82	1727	560	70	2.79
August	78	90	69	77	2450	490	74	14.20
September	73	83	65	69	2993	411	77	2.92
October	60	72	50	57	3139	283	70	2.03
Mean	**73**	**85**	**63**	**72**	**3139**	**471**	**72**	**28.92**

[1] Light is important for peanut growth and development. On a fully sunny day, maximum PAR approaches 2500 µmol m^{-2} s^{-1} and average PAR (average from sunrise to sunset) is approximately 600µmol m^{-2} 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), light (photosynthetic active radiation – PAR), air relative humidity (RH), and precipitation at Bladen County, NC, in 2011 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	61	486	73	2.07
June	81	91	72	965	67	1.82
July	82	93	73	1742	71	2.19
August	80	91	70	2503	74	6.93
September	73	83	64	3009	83	4.69
October	61	73	48	3190	79	1.82
Mean	**75**	**86**	**65**	**3190**	**75**	**19.52**

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 2011 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	73	85	60	--	69	1.60
June	82	95	70	242	65	3.35
July	83	94	73	1105	72	2.04
August	82	93	72	1937	74	2.93
September	75	87	65	2532	75	2.90
October	61	74	49	2738	74	2.12
Mean	**76**	**88**	**65**	**2738**	**72**	**14.94**

CULTURAL PRACTICES

Cultural practices were performed according to Virginia and North Carolina recommendations. Plots were 30 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 2011.

Planting /Harvest Dates Dig I	May 9 / October 3						
Planting/Harvest Dates Dig II	May 20 / October 11						
Soil Type	Eunola, Dragston & Rains						
Soil Test Results	pH	P	K	Ca	Mg	Zn	Mn
	6.17	37	65	318	40	0.8	3.8
Cultivation	6/8; 6/16						
Soil Fumigant	4/13 – Metam 10 gal/A						
Landplaster	6/14 – 1200 lbs/A Gypsum 420						
Irrigation	7/20 – 1”/A; 6/24 - 1” on .6 of an acre; 7/1 – same area 1.25”/A; 7/19 – same area 1”/A						

HERBICIDES		
Date	Product	Rate/Ac
4/11	Prowl	1.5 pt.
4/13	Dual Magnum	1 pt.
4/29	Intro	1 qt.
4/29	Gromoxone	1 pt.
6/15	Storm	1.5 pt.
6/15	Basagran	1 pt.
6/30	Intro	1 qt.

INSECTICIDES		
Date	Product	Rate/Ac
4/25	Temik	7 lbs.
4/25	Orthene 97	12 oz.
4/25	Proline	5.8 oz.
5/27	Orthene 97	8 oz.
7/27	Lorsban	13 lbs.
7/28	Danitol	10 oz.
8/10	Danitol	10 oz.

FERTILITY		
Date	Product	Rate/Ac
4/3	Boron	1 qt.
4/14	Boron	1 qt.
4/25	Optimize Lift (in furrow)	16 oz.
7/1	Manganese	1 qt.
7/28	Manganese	1 qt.

FUNGICIDES		
Date	Product	Rate/Ac
7/5	Bravo	1 pt.
7/28	Provost	10 oz.
8/11	Provost	10 oz.

Cultural Practices

Table 9. Cultural practices at Martin Co., NC, for Digs I and II, in 2011.

Planting/Harvest Dates Dig I	May 19 / May 19
Planting/Harvest Dates Dig II	October 6 / October 17
Soil Type	Norfolk loamy fine sand
Cultivation	7/1
Soil Fumigant	None
Landplaster	6/30 – Gypsum 1300 lbs/A

HERBICIDES			INSECTICIDES		
Date	Product	Rate/Ac	Date	Product	Rate/Ac
5/19	Dual Magnum	1 pt.	5/19	Orthene 97	12 oz.
5/19	Prowl	1.5 pt.	6/22	Orthene 97	8 oz.
4/29	Intro	1 qt.	5/19	Lorsban	13 lbs.
7/1	Intro	1 qt.	7/1	Danitol	10 oz.
5/19	Gromoxone	1 pt.	8/11	Danitol	10 oz.
6/22	Storm	1.5 pt			
6/22	Basagran	1 pt.			

FERTILITY			FUNGICIDES		
Date	Product	Rate/Ac	Date	Product	Rate/Ac
5/12	Boron	1 qt.	7/1	Bravo	1 pt.
7/1	Manganese	1 qt.	7/26	Provost	10 oz.
8/10	Boron	1 qt.	8/10	Provost	10 oz.
8/10	Maganese	1 qt.	9/13	Bravo	1.5 pt.
5/19	Optimium Lift	16 oz.			

Cultural Practices

Table. 10 Cultural practices at Rocky Mount, NC in 2011.

Planting Date	May 11
Harvest Date	October 13
Soil Type	Aycock very fine sandy loam

Soil Test Results	pH	P	K	Ca	Mg	Zn	Mn
	5.7	48	71	60	11	39	60

Cultivation	5/9 and 6/28
Soil Fumigant	None
Landplaster	6/27 – 850 lbs./A
Magnesium	7/5 @ 2.5 lbs./A; 7/14 @ 1 qt./A; 8/3 @1 qt./A; 8/17 @ 1 qt./A; 8/26 @ 1 qt./A
Irrigation	5/27 @ 1/2 "/A; 6/6 @ 1"/A; 7/18 @1"/A

HERBICIDES		
Date	Product	Rate/Ac
5/9	Prowl	1 qt.
5/11	Dual Magnum	1 pt.
7/1	Basagran	2 pts.
7/1	Select	32 oz.

INSECTICIDES		
Date	Product	Rate/Ac
6/3	Acephate 97	¾ lb.
7/14	Danitol	10 oz.
8/8	Karate Z	1.9 oz.
8/17	Danitol	16 oz.
8/26	Asana XL	5.5 oz.

FERTILITY		
Date	Product	Rate/Ac
3/25	Fertilizer DAP (18-46-0)	45 lbs.
7/5	Solubor (Boron)	2.5 lbs.

FUNGICIDES		
Date	Product	Rate/Ac
7/5	Bravo	2 pts.
7/14	Folicur	7.2 oz.
8/3	Omega 500	1 pt.
8/3	Headline	10 oz.
8/17	Provost	10 oz.
8/18	Omega 500	1 pt.
8/26	Headline	9 oz.
9/12	Tilt Bravo	1.5 pts.

Cultural Practices

Table 11. Cultural practices at Bladen County, NC in 2011.

Planting Date	May 10						
Harvest Date	October 25						
Soil Type	Goldsboro Sandy Loam						
Soil Test Results	**pH**	**P**	**K**	**Ca**	**Mg**	**Zn**	**Mn**
		Index	Index	%	%	Index	Index
	5.5	97	53	45	12	71	59
Cultivation	7/15						
Soil Fumigant	None						
Landplaster	7/7 – Gypsum (Southport by product) @ 2400 lbs/A						

HERBICIDES		
Date	**Product**	**Rate/Ac**
5/5	Dual	1 1/3 pt.
5/25	Intro	1 qt.
6/16	Cadre	4 oz.
6/16	Crop oil	1 qt.
6/30	2-4-D-B	1 pt.
6/30	Blazer	1.5 pt.

INSECTICIDES		
Date	**Product**	**Rate/Ac**
5/25	Orthene 97	4 oz.
7/12	Lorsban	11 lbs.
7/28	Bifenture	4 oz.
8/24	Bifenture	6 oz.
10/5	Bifenture	6 oz.

FERTILITY		
Date	**Product**	**Rate/Ac**
7/11	Manganese (37% Mn)	6 oz.
7/28	10% Boron	1 qt.
8/24	10% Boron	1 qt.
9/14	37% Ele-max Mn.	3 oz.

FUNGICIDES		
Date	**Product**	**Rate/Ac**
7/11	Tilt Bravo	1.5 pt.
7/28	Abound	1 pt.
9/14	Headline	9 oz.
10/5	Bravo Weather Stick	1 qt.

2011 Results by Location

RESULTS

Seedcoat color and maturity rating are presented in Table 12. This year, disease incidence was evaluated only at Suffolk and Martin (Tables 13-14). But in general, the disease incidence was very low at all locations. 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 15 to 30 and figures 1 through 21 for individual locations and all locations combined. Two-year averages are presented in Tables 27-29 for Tidewater AREC (Suffolk), VA, Martin County, NC and Rocky Mount, NC, for genotypes grown in 2010 and 2011. Average of 2 years (2010-2011) for all common locations and genotypes are in Table 30.

2011 Results by Location

RESULTS – COLOR AND MATURITY

Table 12. Seedcoat color and maturity rating of the peanut entries averaged for all locations in 2011.

Variety or Line	Seedcoat[1] Color	Maturity Rating[2] ELK	Maturity Rating[2] Medium
NC-V 11	LP	1	2
Gregory	LP	1	2
VA 98R	LP	1	2
Perry	LP	1	2
CHAMPS	LP	1	2
Phillips	LT	1	2
Bailey	LT	1	2
Sugg	LP	1	2
Florida Fancy	LT	1	2
N07018JCSm	LP	1	3
N07019JCSm	LP	1	2.5
N08070olJC	LT	1	2
N08074olC	LT	1	2
N08075olCT	LT	1	2
N08081olJC	LT	1	2
N08082olJCT	LT	1	2
N08085olJCT	LT	1	2
N08087olJCT	LT	1	2
N09019olJ	LP	1	2
N09024olJ	P,LP	1	2
N09026olJ	P,LP	1	2
N09031ol	LP	1	2
N09032ol	LP	1	2
N09037ol	LT	1	2
N09049olC	LT	1	2
N09053olCSm	LT	1	2
N09056olC	LT	1	2
N09068olCSm	P,LP	1	2

[1] T = tan, LP = light pink, P = pink, LT = Light Tan, and RP = Reddish Pink

[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.

2011 Results by Location

RESULTS – DISEASE

Table 13. Disease incidence at the Tidewater AREC (Suffolk), VA, evaluated on 12 August 2011.

	Tomato Spotted Wilt Virus[1]	
Variety or Line	**Dig I**	**Dig II**
Phillips	15.00 a[2]	19.50 a
VA 98R	11.50 a-c	8.00 b-g
Perry	9.50 a-e	15.00 ab
Sugg	6.00 b-g	6.00 c-g
Gregory	5.00 c-g	8.50 b-g
CHAMPS	4.50 d-g	7.00 c-g
NC-V 11	3.50 e-g[2]	9.50 b-e
Bailey	3.00 e-g	2.50 e-g
Florida Fancy	2.50 fg	2.50 e-g
N09026olJ	12.50 ab	19.50 a
N09068olCSm	11.00 a-d	8.00 b-g
N07018JCSm	9.50 a-e	8.50 b-g
N09024olJ	8.00 b-f	13.00 a-c
N07019JCSm	6.50 b-g	8.00 b-g
N09037ol	6.00 b-g	2.00 fg
N09032ol	5.50 c-g	8.50 b-g
N08085olJCT	5.00 c-g	6.50 c-g
N09019olJ	5.00 c-g	11.00 b-d
N09031ol	4.00 e-g	9.00 b-f
N09056olC	4.00 e-g	3.50 e-g
N08070olJC	3.50 e-g	5.00 d-g
N08074olC	3.50 e-g	5.00 d-g
N08075olCT	3.50 e-g	3.00 e-g
N09049olC	3.00 e-g	5.00 d-g
N08081olJC	2.50 fg	1.50 g
N08087olJCT	2.50 fg	4.00 d-g
N09053olCSm	2.50 fg	5.00 d-g
N08082olJCT	1.00 g	4.00 d-g
Mean	**5.70**	**7.45**

[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.

2011 Results by Location

Table 14. Disease incidence at Martin County, NC, evaluated on 4 August, 2011.

	Tomato Spotted Wilt Virus[1]	
Variety or Line	**Dig I**	**Dig II**
Perry	7.00 ab[2]	3.50 de
Phillips	6.50 a-c	8.00 a-c
CHAMPS	4.50 b-e	4.50 b-e
Florida Fancy	4.50 b-e	2.00 e
VA 98R	3.50 b-e	3.00 e
Gregory	3.50 b-e	8.00 a-c
NC-V 11	2.50 de[2]	4.50 b-e
Bailey	1.50 e	2.00 e
Sugg	1.50 e	4.50 b-e
N09026olJ	8.50 a	8.50 ab
N09024olJ	5.50 a-d	9.50 a
N09068olCSm	5.50 a-d	5.00 b-e
N07018JCSm	4.00 b-e	6.00 a-e
N07019JCSm	4.00 b-e	7.50 a-d
N08085olJCT	4.00 b-e	5.00 b-e
N08074olC	3.50 b-e	2.00 e
N08082olJCT	3.50 b-e	2.50 e
N09031ol	3.50 b-e	3.50 de
N09037ol	3.00 c-e	2.50 e
N09056olC	3.00 c-e	4.00 c-e
N08081olJC	2.50 de	3.00 e
N09019olJ	2.50 de	8.50 ab
N09049olC	2.50 de	5.50 a-e
N08087olJCT	2.00 de	3.50 de
N09032ol	2.00 de	5.50 a-e
N08070olJC	1.50 e	2.00 e
N08075olCT	1.50 e	2.50 e
N09053olCSm	1.00 e	2.50 e
Mean	**3.52**	**4.61**

[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.

2011 Results by Location

RESULTS – PODS

Table 15. Average percent of jumbo pods[1] based on farmers' grade at all locations in 2011.

Variety or Line	Suffolk, VA		Martin Co., NC		Rocky Mount, NC	Bladen, NC	Average of all locations
	Dig I	Dig II	Dig I	Dig II			
Gregory	82 a-c[2]	85 a-c	85 a-c	79 b-d	83 ab	63 de	78 cd
Florida Fancy	79 a-d	81 b-d	73 e-i	77 cd	73 c-e	62 de	73 de
Phillips	64 fg	70 f-g	64 k-n	55 h-j	55 g-k	42 ij	57 hi
Sugg	66 e-g	69 f-h	55 o-q	50 i-k	52 h-l	48 g-i	55 h-j
CHAMPS	62 f-h	62 h-j	59 m-p	49 i-l	61 fg	30 k	53 i-k
Perry	57 g-i	55 jk	57 n-q	47 kl	47 kl	42 ij	50 jk
VA 98R	57 g-i	56 i-k	49 q	50 i-k	48 j-l	38 jk	49 k
Bailey	57 g-i	56 i-k	50 q	48 j-l	44 l	44 h-j	49 k
NC-V 11	49 i	46 k	40 r	42 l	50 i-l	30 k	42 l
N07018JCSm	87 a	93 a	88 ab	83 a-c	89 a	83 a	87 ab
N07019JCSm	88 a	90 ab	89 a	89 a	89 a	82 ab	87 a
N09019olJ	86 ab	88 ab	87 ab	82 a-d	82 ab	67 cd	81 bc
N09024olJ	82 a-c	78 c-f	77 c-f	85 ab	83 ab	69 cd	79 cd
N09026olJ	82 a-c	82 b-d	72 e-j	79 b-d	79 bc	74 bc	78 cd
N08087olJCT	81 a-d	83 a-d	82 a-d	79 b-d	77 b-d	67 cd	77 cd
N08082olJCT	82 a-c	85 a-c	80 b-e	79 b-d	80 bc	56 ef	76 c-e
N08081olJC	79 a-d	74 d-g	76 d-h	75 c-e	74 c-e	65 de	73 de
N09068olCSm	81 a-d	81 b-e	77 d-g	75 de	71 de	63 de	73 de
N08070olJC	76 b-e	74 d-g	72 f-k	67 f	71 de	66 cd	70 e
N09037ol	74 c-e	74 d-g	66 i-m	69 ef	70 de	41 ij	64 f
N09053olCSm	71 d-f	65 g-i	68 h-l	62 f-h	68 ef	52 f-h	64 fg
N09032ol	63 fg	71 e-h	61 l-n	64 fg	69 de	52 f-h	63 fg
N08085olJCT	56 g-i	68 f-g	65 j-m	64 fg	56 g-i	58 ef	60 f-h
N09031ol	57 g-i	68 f-g	69 g-l	65 f	55 g-j	45 g-j	58 f-i
N09056olC	61 f-h	68 f-g	63 l-n	56 g-i	59 gh	45 g-j	58 g-i
N08075olCT	64 fg	56 i-k	52 pq	51 i-k	48 j-l	53 fg	53 i-k
N08074olC	58 g-i	57 ij	60 m-p	52 i-k	51 i-l	43 ij	52 i-k
N09049olC	53 hi	61 h-j	50 q	42 l	49 i-l	43 ij	49 k
Mean	**70**	**71**	**67**	**65**	**65**	**54**	**65**
LSD $_{0.05}$[3]	**10**	**10**	**9**	**8**	**8**	**9**	**6**

[1]Pods that rode a 38/64 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.

2011 Results by Location

Table 16. Average percent of fancy pods[1] based on farmers' grade at all locations in 2011.

Variety or Line	Suffolk, VA		Martin Co., NC		Rocky Mount, NC	Bladen, NC	Average of all locations
	Dig I	Dig II	Dig I	Dig II			
NC-V 11	38 a[2]	37 a	44 a	43 b	37 b-d	46 ab	41 ab
Bailey	30 b-d	34 ab	38 a-c	41 bc	44 a	41 b-d	39 a-c
VA 98R	30 cd	32 a-c	40 ab	36 cd	40 a-c	44 a-c	38 a-d
Perry	31 a-d	35 a	33 c-e	39 bc	39 a-c	40 b-e	37 a-e
Sugg	29 cd	27 b-e	35 bc	40 bc	41 a-c	42 b-d	36 b-e
CHAMPS	30 b-d	25 de	34 b-d	38 b-d	30 de	49 a	35 c-f
Phillips	30 cd	26 c-e	25 f-h	33 de	34 cd	44 a-c	33 e-g
Florida Fancy	17 e-g	16 fg	19 h-k	16 i-k	22 f-h	30 g-i	21 jk
Gregory	14 f-i	12 g-i	11 l-n	16 i-k	13 jk	27 hi	16 lm
N09049olC	38 ab	31 a-d	43 a	49 a	43 ab	41 b-d	41 a
N08075olCT	30 b-d	36 a	36 bc	41 bc	42 ab	35 e-g	37 a-e
N08074olC	32 a-c	32 a-c	26 fg	33 de	38 a-c	42 b-d	35 c-f
N09031ol	35 a-c	27 b-e	26 fg	29 e-g	37 b-d	42 b-d	33 d-g
N09056olC	32 a-c	27 b-e	27 e-g	36 cd	34 cd	39 c-f	33 e-g
N08085olJCT	35 a-c	26 c-e	27 d-g	29 e-g	36 b-d	33 f-h	31 f-h
N09032ol	31 a-d	24 de	31 c-f	29 e-g	25 ef	36 d-f	30 gh
N09053olCSm	24 de	25 c-e	24 g-i	30 ef	26 ef	34 e-g	28 hi
N09037ol	21 ef	22 ef	24 g-i	24 gh	23 e-g	44 a-c	27 hi
N08070olJC	21 ef	22 ef	23 g-j	25 f-h	26 ef	26 ij	24 ij
N09068olCSm	15 f-i	16 fg	18 i-l	18 ij	23 f-h	30 g-i	21 jk
N08081olJC	17 e-h	12 g-i	17 i-l	20 hi	21 f-i	27 hi	20 j-l
N08082olJCT	15 g-i	12 g-i	15 k-m	15 i-k	17 g-j	35 e-g	19 kl
N08087olJCT	16 f-i	13 g-i	12 k-n	17 i-k	17 g-j	26 ij	17 k-m
N09026olJ	15 f-i	12 g-i	19 h-k	16 i-k	16 g-j	20 j	17 k-m
N09024olJ	14 f-i	15 f-h	17 j-l	9 l	16 h-j	25 ij	16 l-m
N09019olJ	11 g-i	9 hi	10 mn	13 j-l	14 i-k	25 ij	14 m
N07018JCSm	9 hi	6 i	9 mn	12 kl	8 k	13 k	9 n
N07019JCSm	8 i	8 i	8 n	9 l	8 k	14 k	9 n
Mean	**24**	**22**	**24**	**27**	**28**	**34**	**27**
LSD $_{0.05}$[3]	**8**	**7**	**7**	**6**	**7**	**6**	**5**

[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

2011 Results by Location

Table 17. Average of pod brightness[1] (Hunter L Score) for jumbo pods in 2011.

Variety or Line	Suffolk, VA		Martin Co., NC		Rocky Mount, NC	Bladen, NC	Average of all locations
	Dig I	Dig II	Dig I	Dig II			
Bailey	46.11 a[2]	45.16 ab	40.16 ab	43.74 a-c	44.55 ab	44.41 b-f	44.09 a
CHAMPS	44.17 ab	45.10 a-c	40.87 a	42.90 a-d	43.84 a-f	43.86 b-h	43.51 ab
Phillips	42.70 b-i	44.49 a-d	38.22 a-e	45.91 a	43.33 a-f	44.35 b-f	43.26 ab
Sugg	42.00 b-i	43.75 a-d	39.35 a-c	44.20 a-c	43.52 a-f	44.14 b-g	42.97 a-c
VA 98R	43.36 b-e	44.52 a-d	38.70 a-d	42.79 b-d	44.22 a-c	41.77 h-j	42.62 bc
Perry	42.19 b-i	43.82 a-d	39.34 a-c	43.91 a-c	43.20 a-f	42.82 d-i	42.61 bc
NC-V 11	43.61 b-d	44.49 a-d	40.15 ab	43.06 a-d	41.75 f-h	42.55 d-i	42.54 b-d
Gregory	41.59 d-j	45.41 a	39.44 a-c	42.36 b-d	42.98 a-f	42.82 d-i	42.50 b-d
Florida Fancy	41.03 f-l	38.91 fg	35.44 e	40.59 de	40.31 h	41.48 ij	39.81 f
N08075olCT	42.07 b-i	45.27 a	40.29 ab	44.24 a-c	44.68 ab	47.17 a	44.24 a
N09053olCSm	44.05 ab	43.76 a-d	39.83 ab	45.06 ab	44.92 a	44.15 b-g	43.76 ab
N09056olC	44.01 a-c	44.17 a-d	38.49 a-d	44.16 a-c	44.00 a-e	45.48 ab	43.58 ab
N09031ol	43.10 b-g	45.60 a	40.18 ab	43.57 a-d	44.03 a-e	44.29 b-f	43.56 ab
N09037ol	43.03 b-h	45.53 a	39.52 a-c	43.60 a-c	43.75 a-f	44.04 b-g	43.34 ab
N09049olC	43.66 b-d	42.38 b-e	39.95 ab	43.77 a-c	43.90 a-e	44.51 b-e	43.19 ab
N08081olJC	41.37 d-k	44.84 a-c	39.86 ab	44.10 a-c	43.51 a-f	44.35 b-f	43.14 ab
N08082olJCT	42.30 b-i	44.14 a-d	39.59 a-c	42.84 b-d	44.16 a-d	44.50 b-f	43.12 ab
N08087olJCT	42.57 b-i	43.42 a-d	40.14 ab	42.77 b-d	43.23 a-f	45.28 a-c	43.10 ab
N09068olCSm	43.28 b-f	42.99 a-e	38.77 a-d	45.12 ab	43.84 a-f	43.31 c-i	42.98 a-c
N08074olC	43.12 b-g	43.41 a-d	40.80 a	43.30 a-d	42.09 c-h	44.67 b-d	42.97 a-c
N08085olJCT	41.07 e-l	45.57 a	40.12 ab	43.12 a-d	42.72 b-g	44.40 b-f	42.93 a-c
N09032ol	40.51 i-l	44.31 a-d	40.00 ab	44.11 a-c	44.68 ab	42.37 f-j	42.79 a-c
N08070olJC	41.72 c-i	44.12 a-d	39.12 a-c	43.18 a-d	42.96 a-f	43.13 d-i	42.47 b-d
N09019olJ	40.94 g-l	42.28 c-e	38.54 a-d	41.24 c-e	42.76 b-g	42.45 e-i	41.54 c-e
N09024olJ	40.70 h-l	43.28 a-d	37.50 b-e	41.86 cd	40.82 gh	42.04 g-j	41.09 d-f
N09026olJ	38.95 l	41.74 d-f	35.89 de	42.87 a-d	40.22 h	43.18 c-i	40.65 ef
N07019JCSm	39.28 j-l	38.70 g	37.29 b-e	41.60 cd	41.93 e-h	42.39 e-i	40.48 ef
N07018JCSm	39.23 kl	40.39 e-g	36.65 c-e	38.24 e	42.05 d-h	40.26 j	39.71 f
Mean	**42.20**	**43.62**	**39.08**	**43.15**	**43.14**	**43.58**	**42.59**
LSD $_{0.05}$[3]	**2.33**	**2.84**	**3.03**	**3.01**	**2.13**	**2.13**	**1.46**

[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

2011 Results by Location

Table 18. Average of pod brightness[1] (Hunter L Score) for fancy pods in 2011.

Variety or Line	Suffolk, VA		Martin Co., NC		Rocky Mount, NC	Bladen, NC	Average of all locations
	Dig I	Dig II	Dig I	Dig II			
Bailey	40.14 a-e[2]	41.98 a-d	40.40 ab	43.52 a-c	44.14 ab	45.06 ab	42.83 ab
VA 98R	41.34 ab	43.21 a	40.12 a-c	42.51 a-e	44.62 a	43.51 a-e	42.77 ab
Phillips	39.68 a-e	43.65 a	38.73 a-f	44.66 a	42.62 a-f	44.83 a-c	42.56 a-c
CHAMPS	40.09 a-e	41.68 a-f	41.11 a	42.37 a-f	42.89 a-e	44.05 a-d	42.24 a-d
Perry	40.61 a-d	41.73 a-e	38.86 a-f	43.11 a-c	42.73 a-e	42.70 b-f	41.78 a-e
Sugg	37.91 c-e	41.19 a-g	39.53 a-e	42.24 a-f	43.25 a-d	43.01 b-f	41.47 a-e
NC-V 11	41.78 a	40.11 a-g	38.28 b-h	41.75 b-g	41.90 c-g	40.94 e-g	40.44 c-f
Gregory	38.39 a-e	38.36 c-i	35.33 j-n	39.26 g-j	40.01 g-i	42.41 c-f	39.28 f-i
Florida Fancy	37.55 de	37.74 e-i	33.80 l-n	37.18 h-j	40.46 f-h	40.54 fg	38.39 h-j
N08074olC	39.40 a-e	41.07 a-g	37.99 b-j	42.88 a-d	41.25 d-g	44.64 a-c	4145 a-e
N09056olC	41.07 a-c	43.07 ab	37.62 c-k	44.46 a	43.64 a-c	45.86 a	42.92 a
N09049olC	41.19 a-c	43.51 a	39.70 a-d	42.45 a-e	43.38 a-d	43.67 a-d	42.49 a-c
N08075olCT	40.95 a-c	42.09 a-c	37.55 c-j	42.74 a-d	43.66 a-c	44.55 a-c	42.23 a-d
N09032ol	39.70 a-e	41.33 a-f	38.24 b-h	41.66 b-g	43.00 a-e	44.93 a-d	41.62 a-e
N08085olJCT	38.63 a-e	41.93 a-d	38.51 a-g	41.26 c-g	42.01 b-g	44.27 a-c	41.39 a-e
N09031ol	39.52 a-e	39.07 c-h	38.02 b-j	41.72 b-g	42.51 a-f	43.89 a-d	41.13 a-e
N09053olCSm	39.74 a-e	40.04 a-g	36.70 f-k	41.45 c-g	42.99 a-e	43.55 a-d	41.10 a-f
N08070olJC	37.41 de	42.17 a-c	36.88 e-k	41.39 c-g	42.42 a-f	43.80 a-d	41.02 b-f
N09068olCSm	38.05 b-e	40.74 a-g	35.46 i-m	44.08 ab	40.88 e-g	43.06 b-f	41 d-f
N08081olJC	38.52 a-e	37.70 f-i	37.33 d-k	42.70 a-d	42.24 b-f	44.46 a-c	40.90 c-f
N09037ol	38.83 a-e	41.39 a-f	38.13 b-i	40.47 d-h	41.56 c-g	43.11 b-f	40.83 c-f
N08082olJCT	38.93 a-e	38.07 d-i	36.57 f-k	39.96 e-i	42.02 b-g	44.08 a-d	40.38 e-g
N08087olJCT	38.80 a-e	39.17 b-h	35.66 h-l	39.78 f-i	41.90 c-g	43.54 a-d	40.22 e-h
N09019olJ	37.05 ef	38.33 c-i	36.16 f-l	38.15 h-j	38.56 h-j	42.29 c-f	38.71 g-i
N09024olJ	37.18 ef	37.29 g-i	34.69 k-n	37.72 ij	38.65 h-j	40.88 fg	38.02 ij
N09026olJ	37.15 ef	35.72 h-j	35.86 g-l	39.18 g-j	37.78 j	40.75 fg	37.95 ij
N07019JCSm	33.19 g	34.54 ij	32.62 n	37.16 j	37.80 ij	41.70 d-g	36.70 jk
N07018JCSm	33.81 fg	31.95 j	32.87 mn	34.31 k	37.52 j	39.67 g	35.53 k
Mean	**38.80**	**39.96**	**37.24**	**41.11**	**41.66**	**43.17**	**40.62**
LSD $_{0.05}$[3]	**3.40**	**4.00**	**2.76**	**2.61**	**2.22**	**2.58**	**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.

2011 Results by Location

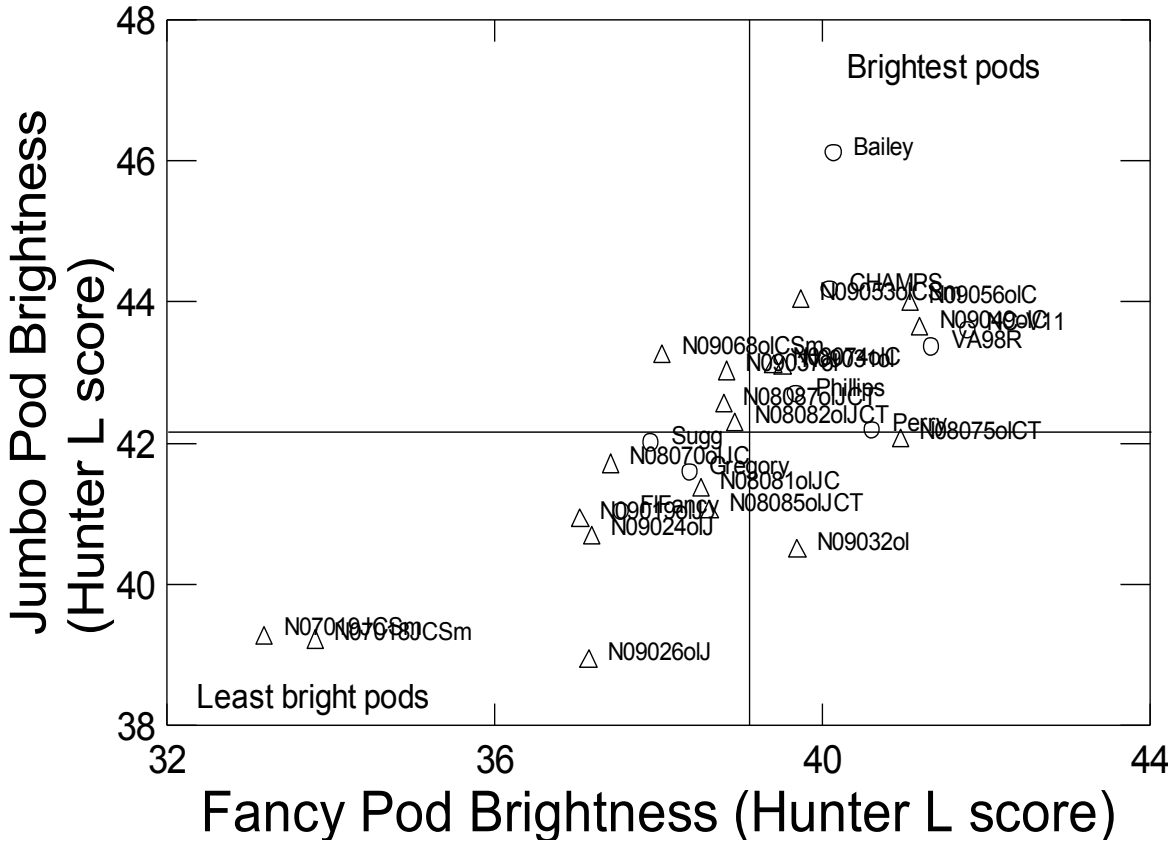


Figure 1. Brightness of jumbo and fancy pods of Digging Date I at Tidewater AREC, Suffolk, VA, in 2011. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 28 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness at this location and digging date.

2011 Results by Location

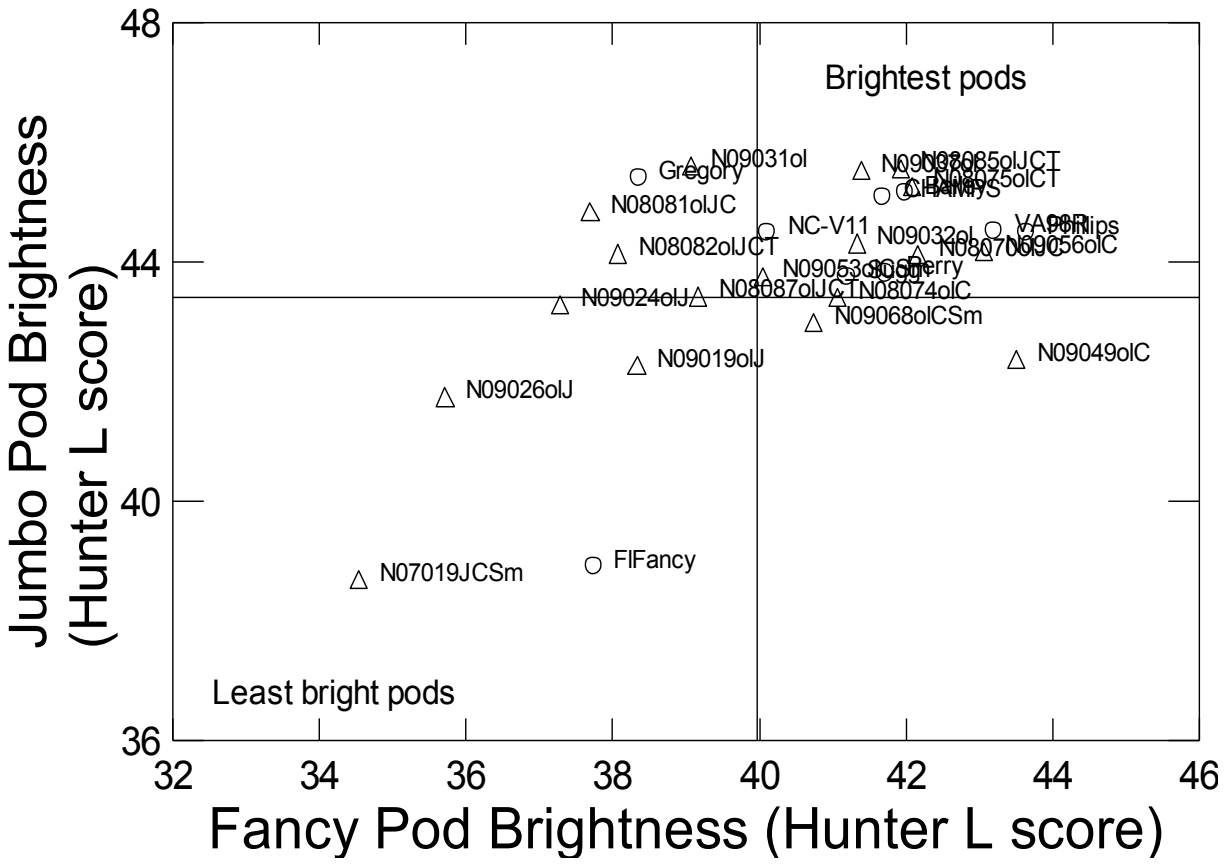


Figure 2. Brightness of jumbo and fancy pods of Digging Date II at Tidewater AREC, Suffolk, VA, in 2011. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 28 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness at this location and digging date.

2011 Results by Location

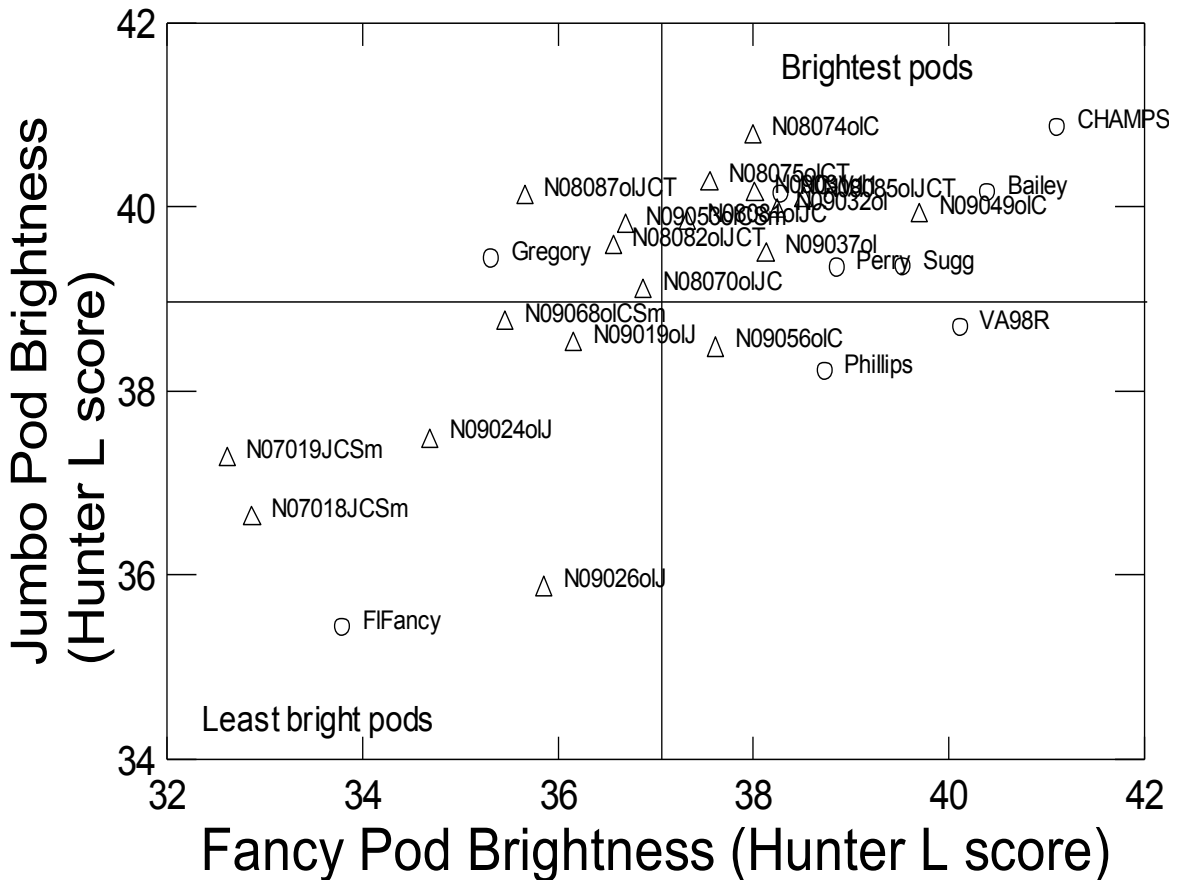


Figure 3. Brightness of jumbo and fancy pods of Digging Date I at Martin Co., NC, in 2011. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 28 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness at this location and digging date.

2011 Results by Location

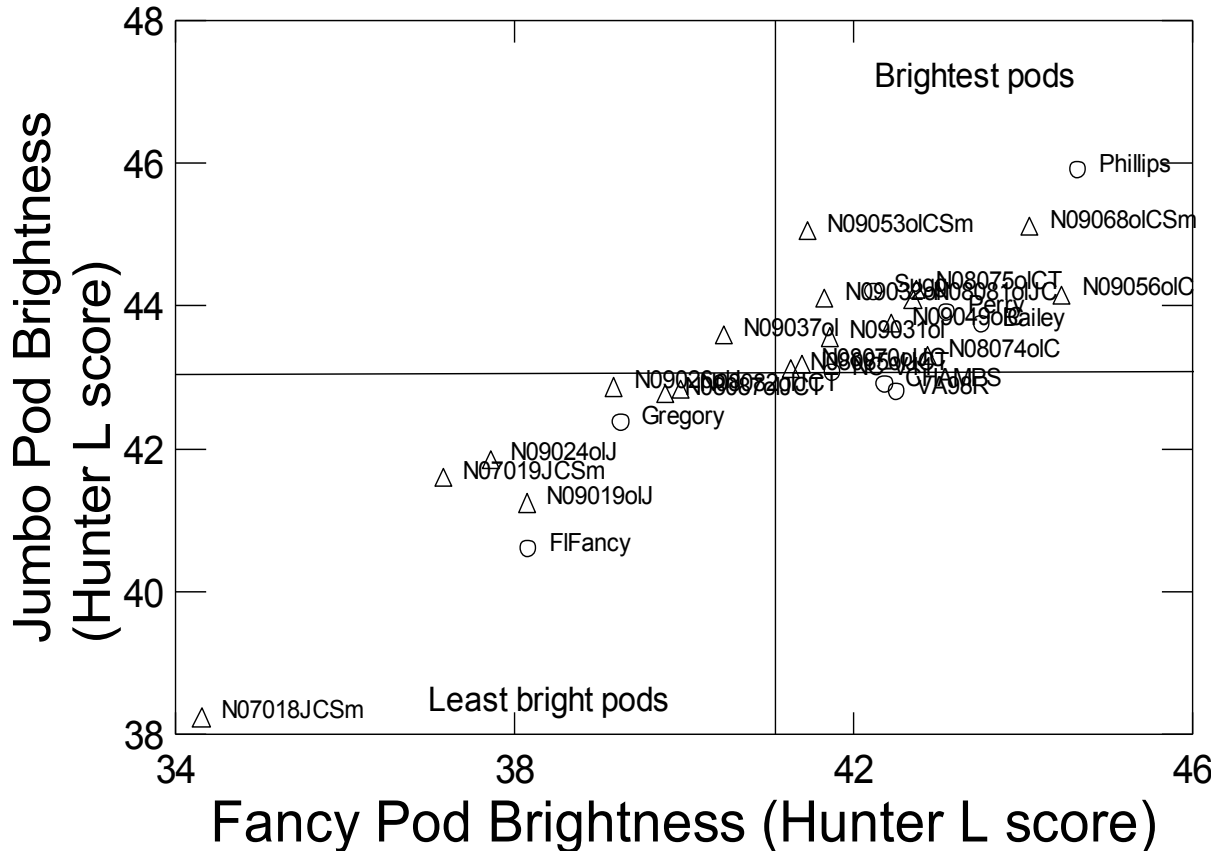


Figure 4. Brightness of jumbo and fancy pods of Digging Date II at Martin Co., NC, in 2011. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 28 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness at this location and digging date.

2011 Results by Location

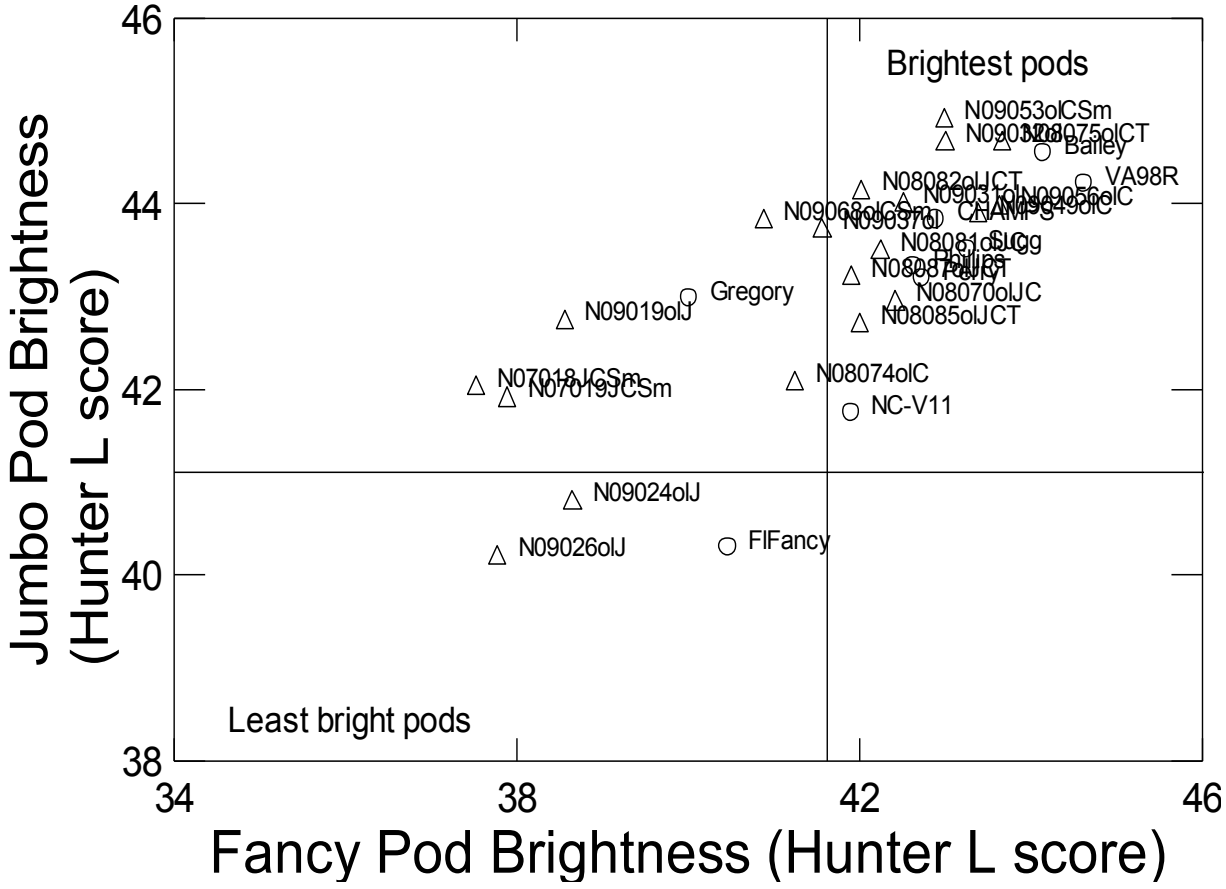


Figure 5. Brightness of jumbo and fancy pods at Rocky Mount, NC, in 2011. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 28 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness at this location.

2011 Results by Location

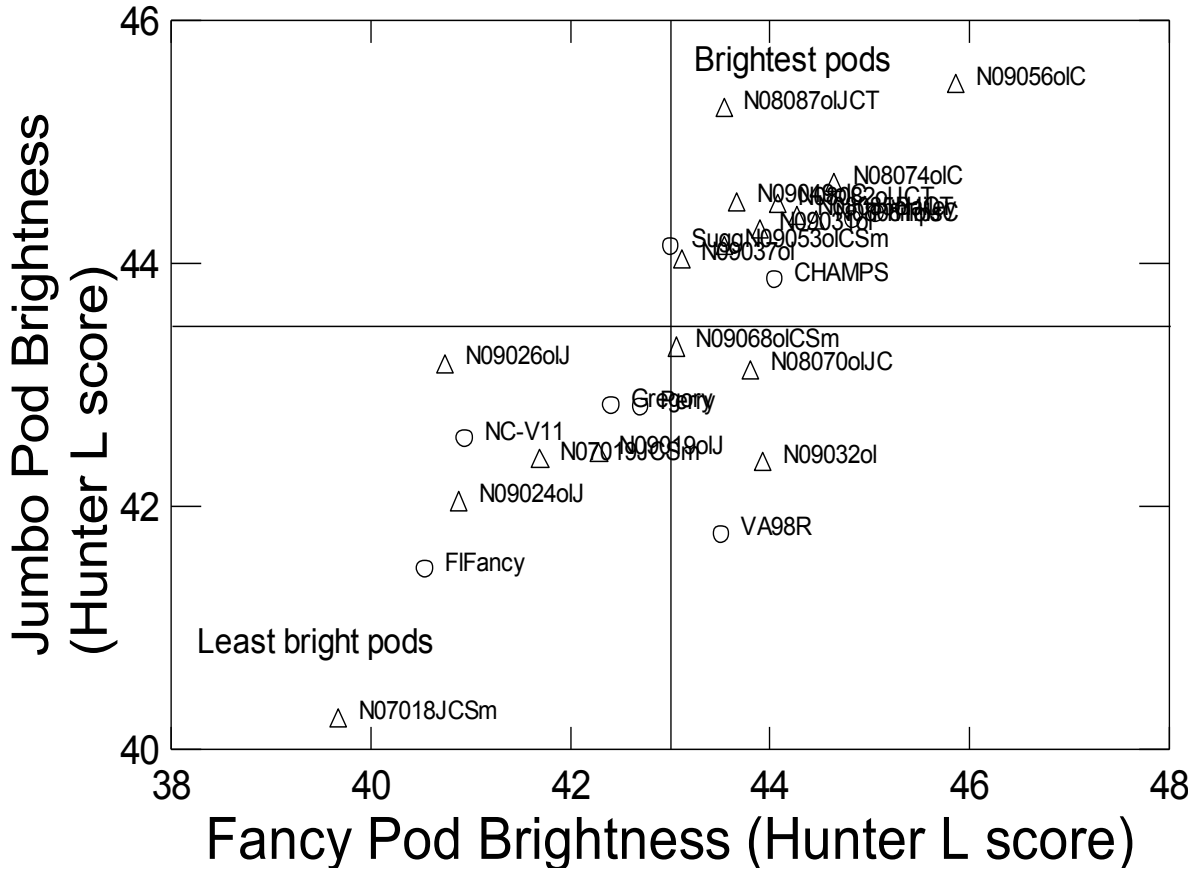


Figure 6. Brightness of jumbo and fancy pods at Bladen Co., NC, in 2011. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 28 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness at this location.

2011 Results by Location

RESULTS – YIELD AND GRADE BY LOCATION

Table 19. Performance of genotypes at Tidewater AREC (Suffolk), VA, in 2011. Dig I averages of two replicated plots planted on 9 May, dug on 3 October, and combined on 14 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price $/cwt	Yield[1] lb/A	Value $/A
Gregory	0.7	0.9	96 a-c[2]	7.1	51 bc	0.7	1.5	1.1	65 b-d	68 c-h	$17.27 b-f	5989 a-e	$1033 a-e
Bailey	0.9	0.9	87 gh	7.4	43 f-k	1.6	3.2	1.5	64 b-e	70 b-d	17.08 b-g	6017 a-e	1028 a-f
NC-V 11	1.0	1.0	87 h	7.7	41 i-k	1.3	3.0	1.1	64 b-e	69 b-g	16.95 b-g	5826 a-f	987 a-g
Phillips	0.5	0.8	93 a-e	7.3	50 b-e	0.7	2.0	0.9	67 ab	70 b	17.75 ab	5513 d-g	978 b-g
Perry	0.6	1.0	88 f-h	7.3	47 b-g	1.1	1.8	1.8	69 a	73 a	18.14 a	5316 e-g	963 c-h
CHAMPS	1.2	0.9	92 c-f	7.1	44 f-j	1.3	2.8	1.7	63 c-e	69 b-g	16.88 c-h	5650 b-g	954 c-h
Florida Fancy	1.0	0.9	96 a-c	8.0	47 b-g	1.4	1.9	2.1	63 c-e	68 d-h	16.64 c-h	5529 d-g	920 d-i
Sugg	0.8	0.7	94 a-e	7.4	47 c-h	1.8	2.3	3.2	63 c-e	70 bc	16.58 e-i	5540 d-g	918 e-i
VA 98R	0.8	1.3	87 h	7.1	42 h-k	1.8	2.4	3.0	63 c-e	70 b-d	16.53 f-i	5191 fg	860 g-k
N09056olC	0.9	0.4	93 b-e	7.3	52 ab	1.3	2.2	2.1	65 b-d	71 b	17.36 a-e	6401 a	1111 a
N09019olJ	0.9	1.0	97 ab	7.9	56 a	1.5	1.6	1.4	65 b-d	69 b-g	17.41 a-d	6315 a-c	1100 ab
N08081olJC	1.3	0.9	95 a-d	7.5	47 b-g	1.0	2.0	1.6	65 b-d	70 b-d	17.24 b-f	6356 ab	1095 ab
N09049olC	0.4	0.8	90 e-h	7.2	45 d-i	3.6	2.2	1.6	63 c-e	70 bc	17.35 a-e	6077 a-d	1055 a-c
N09053olCSm	1.0	0.6	94 a-e	7.4	43 f-k	0.6	2.2	1.9	63 c-e	68 d-h	16.62 d-h	6304 a-c	1048 a-d
N08087olJCT	0.5	0.5	96 ab	7.8	45 e-i	1.5	2.1	2.0	63 c-f	68 d-h	16.63 c-h	6070 a-d	1010 a-f
N08074olC	0.5	0.8	90 e-h	7.7	38 k	1.2	2.8	1.1	66 a-c	71 b	17.33 a-f	5740 a-g	993 a-f
N08082olJCT	1.0	0.6	97 a	7.7	47 c-h	1.5	2.0	2.9	63 c-e	69 b-g	16.64 c-h	5958 a-e	991 a-f
N08075olCT	0.5	0.7	94 a-e	7.1	48 b-f	1.4	2.3	1.3	65 b-d	70 b-d	17.44 a-c	5602 c-g	977 b-g
N09037ol	1.2	0.8	95 a-d	7.4	49 b-e	0.5	2.4	1.9	65 b-d	70 b-d	17.13 b-g	5582 c-g	957 c-h
N09032ol	0.6	0.9	94 a-e	8.1	50 b-e	0.9	2.7	1.6	64 b-e	69 b-f	17.10 b-g	5496 d-g	939 c-h
N08070olJC	0.7	1.2	96 ab	7.6	42 h-k	1.1	2.9	2.6	61 e-g	68 e-h	16.10 h-j	5628 b-g	907 e-i
N09024olJ	0.8	0.7	96 a-c	7.5	39 jk	0.7	2.3	1.9	63 c-e	67 f-h	16.36 g-i	5536 d-g	907 e-i
N08085olJCT	0.8	1.1	91 d-g	7.2	42 g-k	1.8	2.8	2.4	62 d-g	69 b-g	16.58 e-i	5430 d-g	902 f-j
N09026olJ	1.1	0.9	97 ab	7.5	43 f-k	0.7	2.1	1.5	63 c-e	67 gh	16.59 e-h	5094 fg	846 h-k
N09031ol	0.6	0.8	91 d-g	8.0	50 b-d	1.2	3.6	2.4	62 d-f	70 b-d	16.62 d-h	5028 g	836 h-k
N09068olCSm	0.8	0.9	96 a-c	7.3	41 i-k	1.6	3.1	2.4	59 f-h	66 hi	15.77 ij	5039 g	795 i-k
N07018JCSm	1.3	1.7	96 ab	8.0	48 b-f	1.0	1.9	3.4	59 gh	65 ij	15.46 jk	5008 g	775 jk
N07019JCSm	1.4	1.7	96 a-c	8.1	44 f-j	0.4	3.0	3.3	57 h	64 j	14.77 k	5044 g	746 k
Mean	**0.8**	**0.9**	**93**	**7.5**	**46**	**1.2**	**2.4**	**2.0**	**63**	**69**	**16.80**	**5653**	**951**
LSD $_{0.05}$[3]	**0.8**	**0.7**	**4**	**0.6**	**5**	**1.1**	**1.1**	**1.2**	**3**	**2**	**0.01**	**738**	**129**

[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.

2011 Results by Location

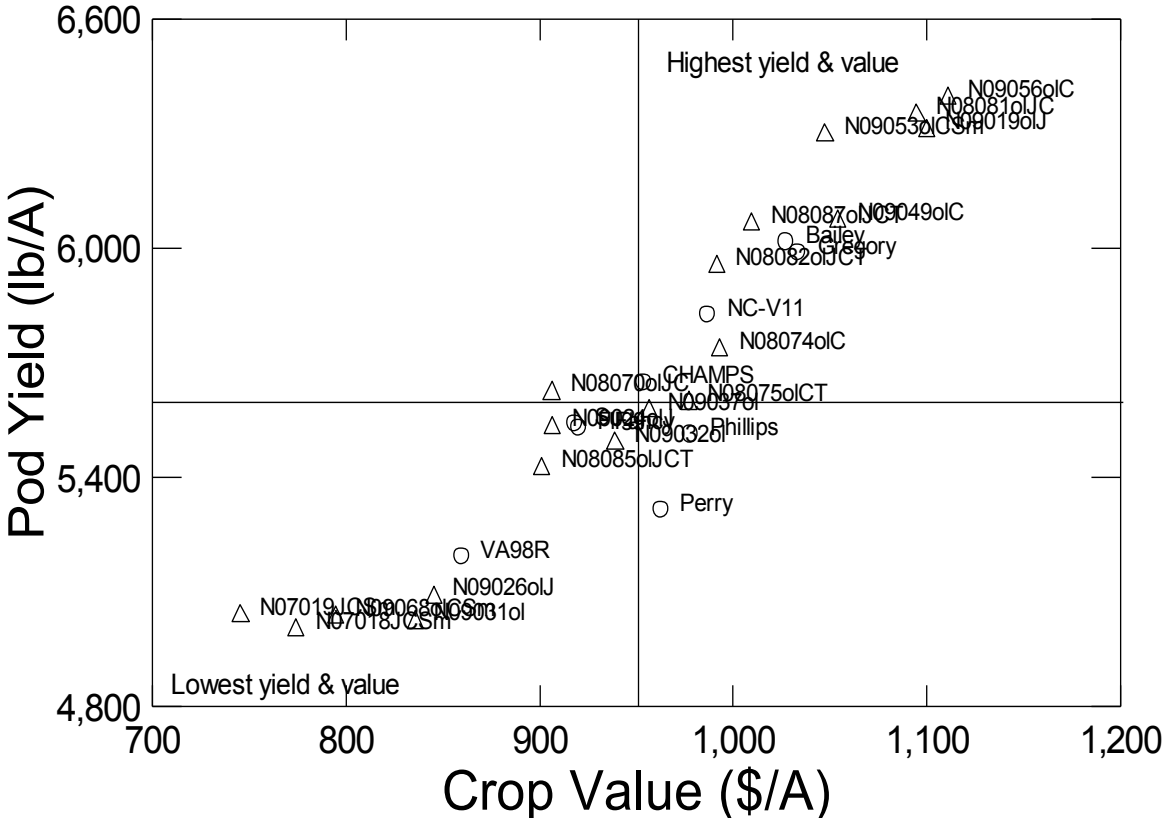


Figure 8. Summary of pod yield and crop value at Tidewater AREC (Suffolk), VA, Digging Date I in 2011. Vertical bar represents mean crop value and horizontal bar mean pod yield of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value at this location and digging date.

2011 Results by Location

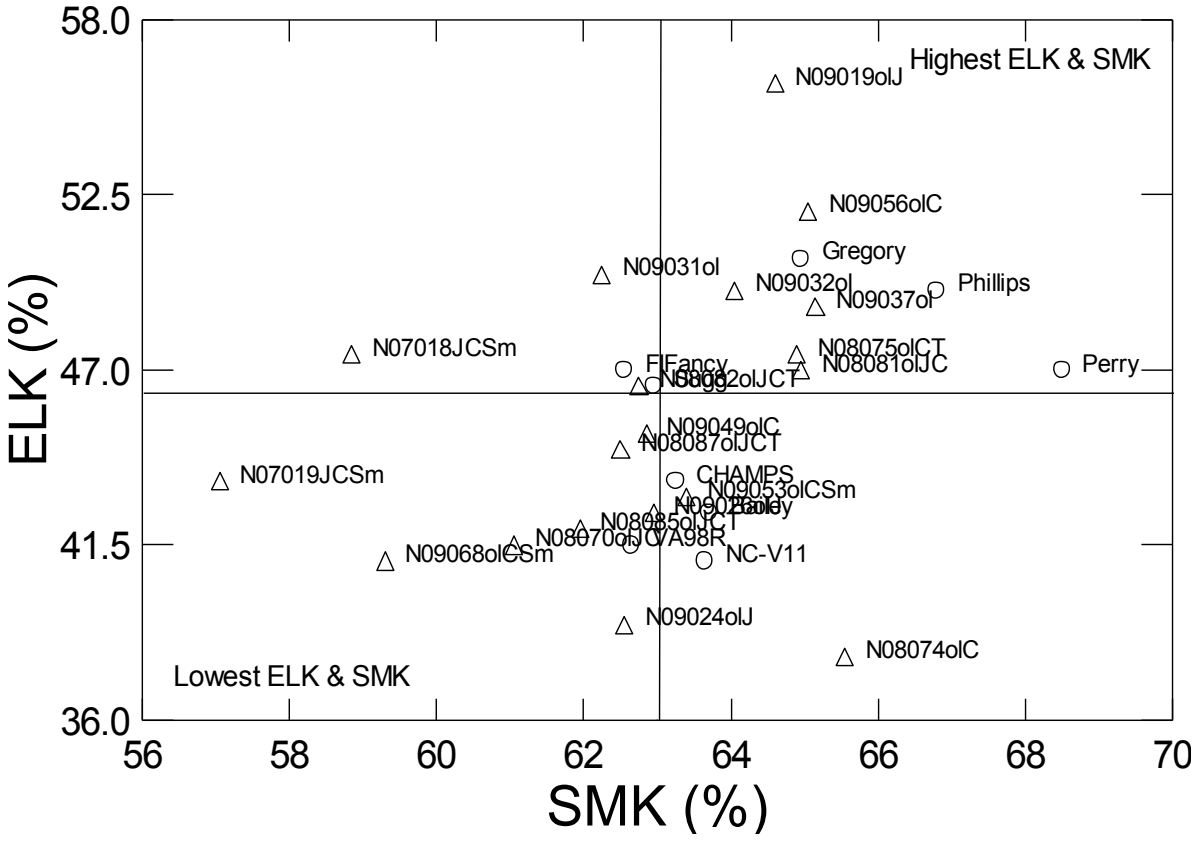


Table 8. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Tidewater AREC (Suffolk), VA, Digging Date I in 2011. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and digging date.

2011 Results by Location

Table 20. Performance of genotypes at Tidewater AREC (Suffolk), VA in 2011. Dig II averages of two replicated plots planted on 20 May, dug on 11 October, and combined on 21 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price $/cwt	Yield[1] lb/A	Value $/A
Gregory	1.3	0.8	97 a-c[2]	7.6	55 a-e	0.6	1.1	1.7	67 a-e	71 d-h	$17.68 a-d	5771 b-e	$1020 b-g
Florida Fancy	1.1	0.9	97 ab	8.8	49 d-g	0.5	1.8	0.8	66 c-i	69 f-i	17.50 b-d	5615 b-f	982 b-g
CHAMPS	0.8	0.7	86 de	8.1	46 fg	0.4	1.8	2.2	67 b-f	71 b-g	17.35 c-e	5628 b-f	977 b-g
Bailey	0.8	0.6	89 b-e	8.6	48 d-g	0.4	2.1	1.8	67 a-e	72 a-e	17.63 a-d	5528 b-f	974 b-g
Phillips	0.8	0.6	96 a-c	8.0	61 a	1.1	1.1	1.3	69 ab	73 a	18.55 ab	5204 d-f	965 b-g
Perry	0.7	0.8	89 b-e	8.4	48 d-g	1.1	1.5	1.0	69 a-c	73 a-c	18.33 a-c	5219 d-f	957 b-g
Sugg	0.7	0.5	96 a-c	8.4	55 a-e	0.7	1.7	2.5	68 a-d	73 a	17.80 a-d	5328 c-f	948 b-g
NC-V 11	0.5	1.0	83 e	7.7	38 h	0.5	2.7	2.2	65 d-i	71 c-h	16.92 de	5185 ef	882 e-g
VA 98R	1.0	0.5	88 c-e	7.3	48 d-g	1.1	1.5	2.6	67 a-e	73 a-c	17.67 a-d	4779 f	849 fg
N09056olC	0.5	0.4	94 a-d	7.4	57 a-c	1.8	1.6	1.6	68 a-d	73 a	18.31 a-c	6762 a	1234 a
N08075olCT	0.7	0.5	92 a-e	8.8	52 b-f	0.4	2.1	0.6	70 ab	73 ab	18.41 a-c	6219 a-c	1145 ab
N08085olJCT	0.5	0.5	94 a-d	8.1	53 a-f	0.9	1.5	1.4	67 a-e	71 a-f	17.86 a-d	6300 ab	1125 a-c
N09037ol	0.9	0.5	96 a-c	8.0	57 a-c	0.7	1.3	0.4	70 a	73 a-d	18.66 a	6021 a-e	1123 a-d
N08082olJCT	1.0	0.7	97 a-c	8.7	52 b-f	0.5	1.7	2.1	66 c-h	71 d-h	17.43 b-d	6351 ab	1107 a-d
N09049olC	0.4	0.8	92 a-e	8.0	49 c-g	1.4	1.7	2.2	66 d-i	71 b-g	17.42 c-e	6320 ab	1107 a-d
N08081olJC	1.0	0.6	83 e	8.6	54 a-e	0.4	1.6	2.1	67 a-e	71 a-f	17.62 a-d	6244 a-c	1100 a-d
N09019olJ	0.6	0.9	97 a-c	8.0	57 ab	0.7	1.6	2.1	66 d-i	70 e-h	17.47 b-d	6119 a-d	1069 a-e
N09032ol	0.3	0.8	95 a-d	8.3	55 a-d	0.5	1.4	2.1	67 b-f	71 c-h	17.57 a-d	6063 a-e	1068 a-e
N08070olJC	0.6	0.6	95 a-d	8.4	46 fg	1.9	2.6	2.9	63 g-i	71 c-h	16.81 de	6181 a-c	1039 a-f
N08087olJCT	0.9	0.6	96 a-c	7.9	48 d-g	1.5	2.0	2.1	65 e-i	70 e-h	17.17 de	6039 a-e	1036 a-f
N09031ol	0.7	0.6	95 a-d	9.6	58 ab	0.0	1.9	2.6	67 b-e	71 a-e	17.40 c-e	5661 b-f	985 b-g
N08074olC	0.4	0.7	89 b-e	8.2	42 gh	1.1	2.0	2.0	66 b-g	72 a-e	17.45 b-d	5631 b-f	983 b-g
N09024olJ	1.4	0.7	93 a-d	7.6	47 e-g	0.4	1.7	2.2	65 d-i	69 f-i	16.96 de	5790 b-e	983 b-g
N09053olCSm	0.9	0.7	90 a-e	9.0	42 gh	0.9	2.4	1.9	64 f-i	69 g-i	16.78 de	5835 a-e	979 b-g
N09068olCSm	0.5	0.7	97 a-c	7.7	48 d-g	1.5	1.6	2.4	63 hi	69 hi	16.77 de	5590 b-f	939 b-g
N09026olJ	1.5	0.8	94 a-d	9.5	44 gh	0.2	1.5	2.5	65 d-i	69 f-i	16.86 de	5481 b-f	926 c-g
N07019JCSm	0.9	1.0	98 ab	8.3	52 b-f	0.4	1.3	3.3	63 ij	68 ij	16.31 ef	5628 b-f	918 d-g
N07018JCSm	1.5	1.3	99 a	7.3	52 b-f	0.8	1.6	3.6	60 j	66 j	15.34 f	5356 c-f	822 g
Mean	**0.8**	**0.7**	**93**	**8.2**	**50**	**0.8**	**1.7**	**2.0**	**66**	**71**	**17.43**	**5779**	**1009**
LSD $_{0.05}$[3]	**0.8**	**0.4**	**9**	**1.6**	**8**	**0.8**	**1.0**	**1.3**	**3**	**2**	**0.01**	**931**	**206**

[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.

2011 Results by Location

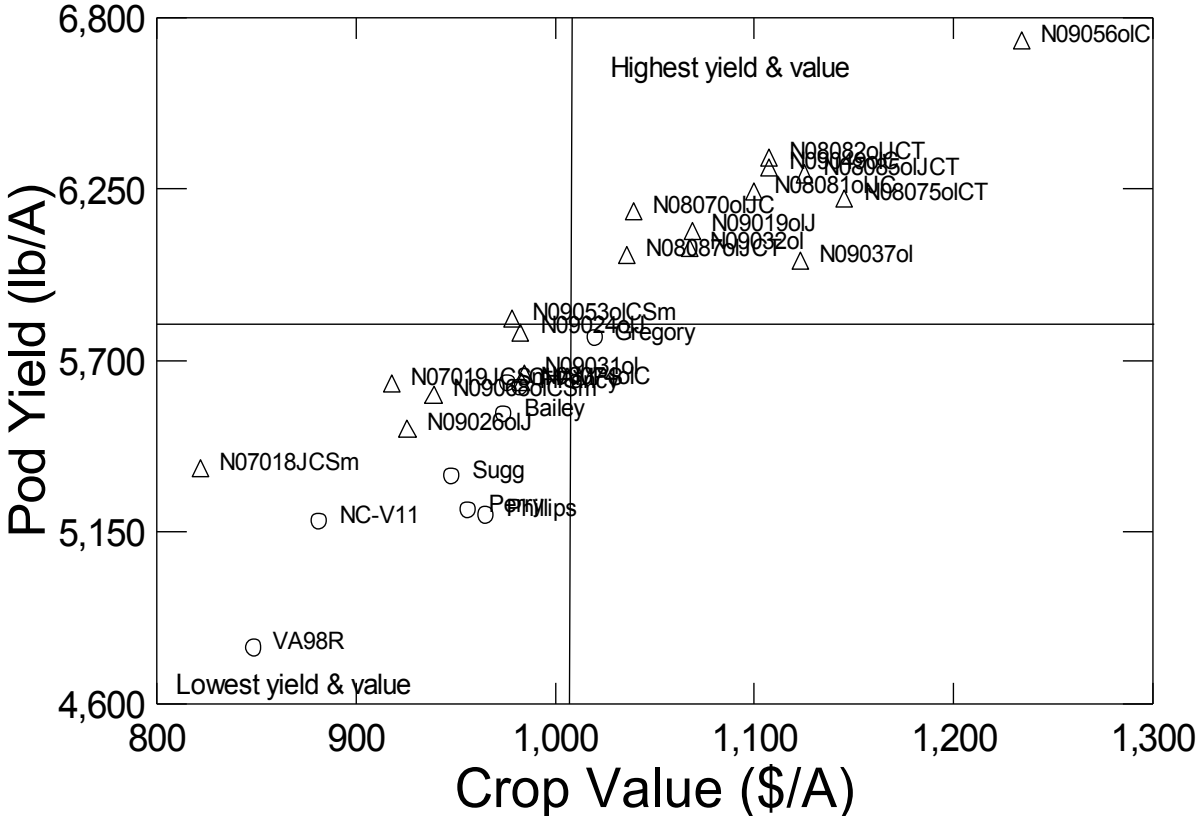


Figure 9. Summary of pod yield and crop value at Tidewater AREC (Suffolk), VA, Digging Date II in 2011. Vertical bar represents mean crop value and horizontal bar mean pod yield of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value at this location and digging date.

2011 Results by Location

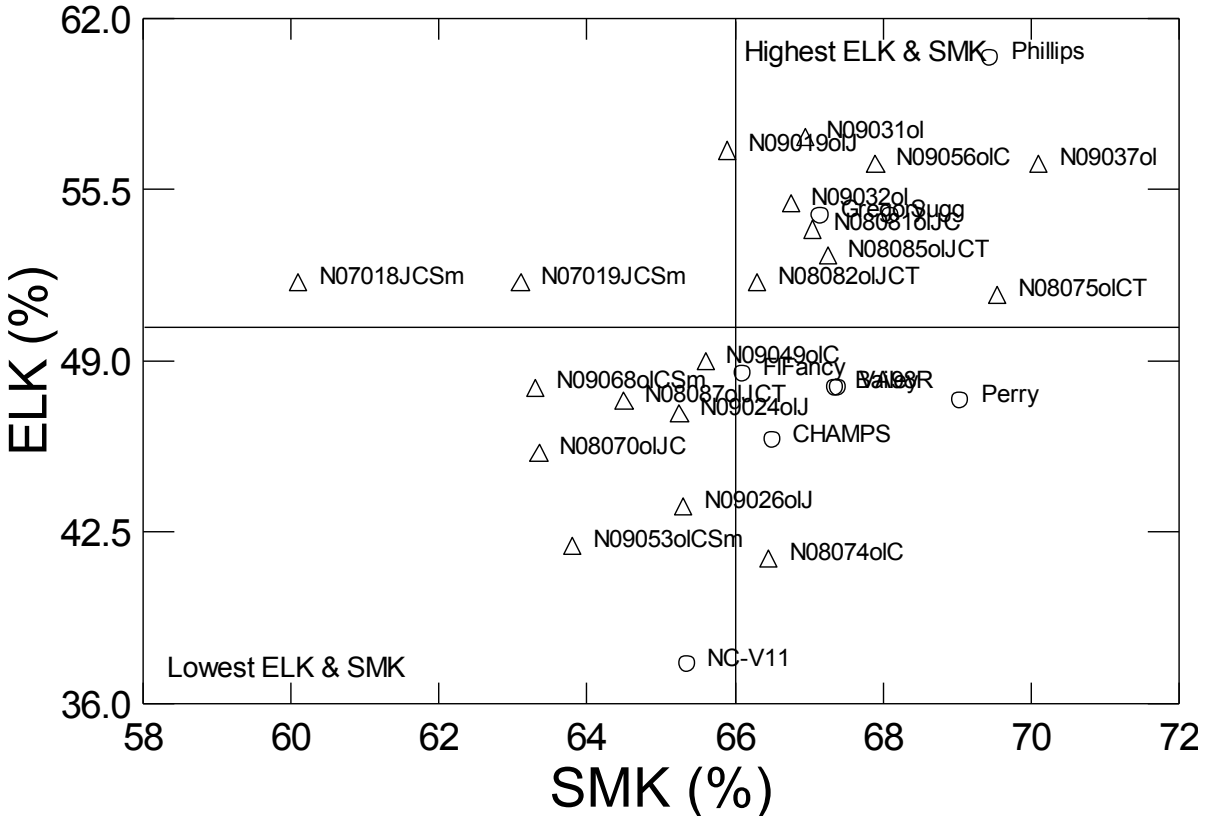


Table 10. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Tidewater AREC (Suffolk), VA, Digging Date II in 2011. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and digging date.

2011 Results by Location

Table 21. Performance of genotypes at Martin Co., NC, in 2011. Dig I averages of two replicated plots planted on 19 May, dug on 6 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
Sugg	0.7	0.8	90 f-k[2]	8.4	46 b-f	1.2	3.0	1.6	66 a-e	72 ab	$17.60 a-c	4949 ab	$872 a-c
Bailey	0.4	1.1	87 j-k	8.7	42 d-i	1.0	3.2	1.2	63 d-i	69 f-i	16.88 b-f	4927 ab	832 b-d
CHAMPS	0.3	1.2	93 a-h	8.3	43 d-h	0.7	2.8	1.9	64 b-h	70 c-h	16.92 b-f	4731 a-d	800 b-e
Gregory	0.5	1.0	96 a-c	8.1	52 ab	1.3	4.7	2.1	64 b-h	69 d-h	17.34 a-f	4536 b-d	787 b-e
Perry	0.3	2.0	90 e-k	7.9	42 d-i	1.2	3.1	2.2	65 b-h	71 a-e	17.09 b-f	4368 b-d	750 b-f
Phillips	0.3	1.7	89 h-k	8.5	45 c-f	1.0	2.6	1.2	66 b-f	70 a-g	17.42 a-e	4288 b-d	749 b-f
NC-V 11	0.3	1.4	84 l	8.1	38 h-j	1.2	2.5	2.3	64 b-h	70 a-g	16.94 b-f	4148 b-d	702 c-f
VA 98R	0.3	1.1	89 g-k	8.0	38 h-j	2.7	1.6	3.2	63 e-i	71 a-f	16.77 c-g	4066 b-d	682 c-f
Florida Fancy	0.5	1.6	92 c-j	8.8	35 j	1.2	3.1	4.0	58 jk	66 jk	14.94 h	3668 d	548 f
N09031ol	0.4	1.2	94 a-f	9.0	55 a	0.5	2.0	0.9	69 a	72 a	18.33 a	5690 a	1043 a
N09032ol	0.3	1.2	92 b-i	8.8	52 ab	0.8	2.7	1.8	67 a-d	72 a-c	17.71 a-c	5125 ab	908 ab
N08074olC	0.5	1.3	86 kl	8.2	42 d-i	1.4	2.5	1.0	67 ab	72 ab	17.96 ab	4803 a-c	863 a-c
N09053olCSm	0.4	1.3	92 c-j	7.4	44 c-h	1.5	2.1	2.5	64 c-h	70 b-h	16.88 b-f	5006 ab	845 a-d
N08075olCT	0.3	1.4	88 i-l	8.7	45 c-g	0.6	2.8	1.6	67 a-d	72 a-d	17.56 a-c	4685 a-d	823 b-d
N09049olC	0.2	0.8	93 a-h	8.7	42 d-i	2.2	2.2	3.3	63 e-i	71 a-f	16.38 d-g	4980 ab	816 b-e
N09019olJ	0.3	1.1	97 ab	8.3	55 a	1.7	1.5	2.4	65 b-g	70 a-h	17.26 a-f	4615 a-d	800 b-e
N08085olJCT	0.4	1.1	92 c-j	7.7	44 d-h	1.8	2.0	1.7	65 b-f	70 a-g	17.37 a-e	4588 a-d	799 b-e
N09037ol	0.5	0.9	89 g-k	8.6	44 d-h	0.7	3.0	1.6	66 a-e	71 a-e	17.44 a-e	4459 b-d	778 b-e
N08082olJCT	0.7	1.1	95 a-d	8.3	50 a-c	1.0	1.9	1.7	67 a-c	71 a-e	17.70 a-c	4314 b-d	764 b-e
N08081olJC	0.8	0.8	93 a-h	7.9	48 b-d	0.6	1.9	1.8	67 a-c	71 a-e	17.52 a-d	4240 b-d	743 b-f
N08070olJC	0.4	0.8	95 a-d	8.2	40 f-j	1.4	3.6	2.3	63 f-i	70 a-h	16.59 c-g	4394 b-d	727 b-f
N09068olCSm	0.4	2.2	94 a-f	7.6	39 g-j	1.1	2.4	3.1	60 i-k	67 i-k	15.69 gh	4455 b-d	699 c-f
N07019JCSm	0.5	1.5	97 a	8.8	47 b-e	1.6	2.2	3.8	58 k	65 k	14.98 h	4648 a-d	698 c-f
N09056olC	0.4	1.2	90 f-k	8.2	41 e-i	2.4	3.5	2.9	61 h-j	70 b-h	16.39 d-g	4231 b-d	694 c-f
N08087olJCT	0.8	1.0	94 a-f	8.2	43 d-i	1.5	2.4	2.9	61 g-i	68 g-j	16.18 fg	4215 b-d	682 c-f
N09024olJ	0.4	1.2	94 a-g	8.4	38 h-j	0.7	2.4	3.8	62 f-i	69 e-h	15.67 gh	4189 b-d	658 d-f
N09026olJ	0.5	1.2	91 d-j	8.2	37 ij	1.0	2.2	2.3	63 f-i	68 h-j	16.28 e-g	3781 cd	616 ef
N07018JCSm	0.8	2.1	97 ab	8.1	47 b-e	1.0	2.6	5.8	57 k	67 i-k	13.45 i	4103 b-d	552 f
Mean	**0.4**	**1.2**	**92**	**8.3**	**44**	**1.2**	**2.6**	**2.4**	**64**	**70**	**16.76**	**4507**	**758**
LSD $_{0.05}$[3]	**0.4**	**0.7**	**5**	**1.2**	**6**	**1.2**	**1.6**	**1.8**	**3**	**2**	**0.01**	**1108**	**204**

[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.

2011 Results by Location

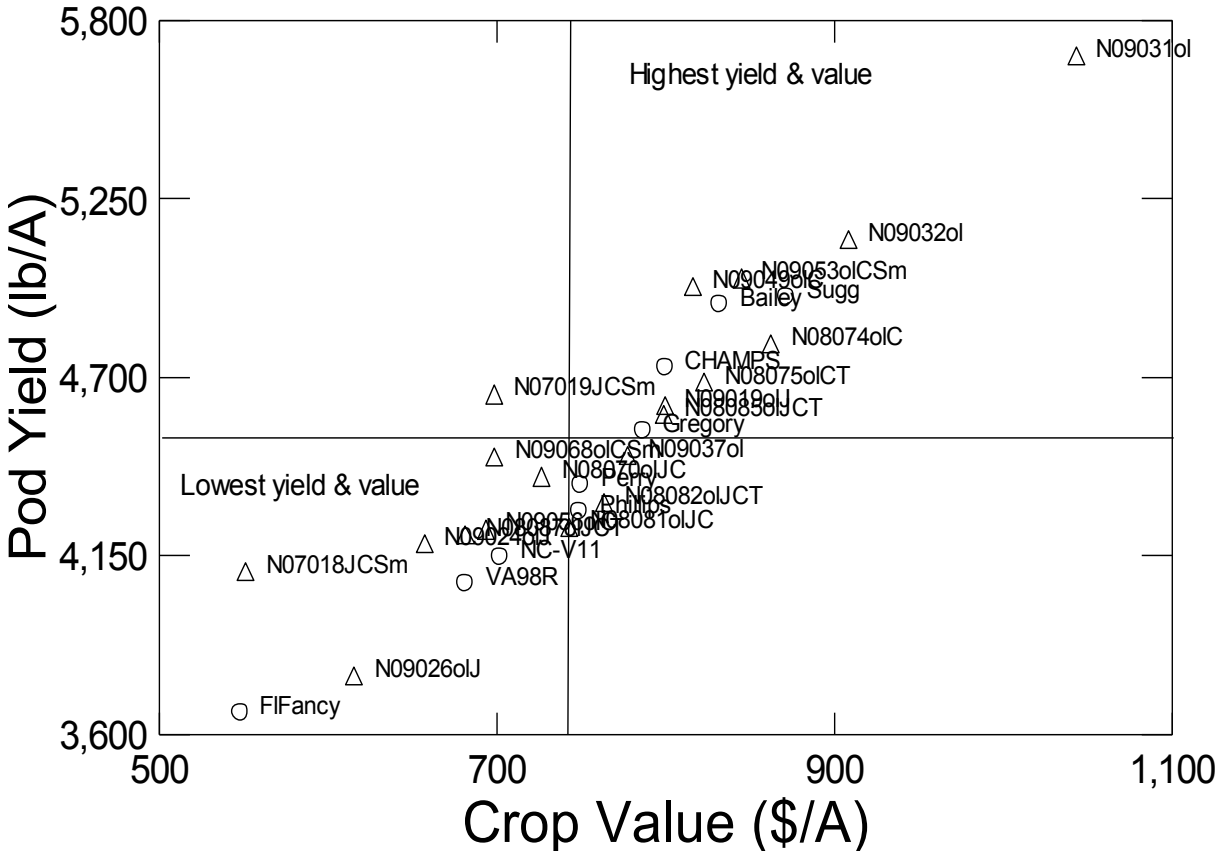


Figure 11. Summary of pod yield and crop value at Martin Co., NC, Digging Date I in 2011. Vertical bar represents mean crop value and horizontal bar mean pod yield of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value at this location and digging date.

2011 Results by Location

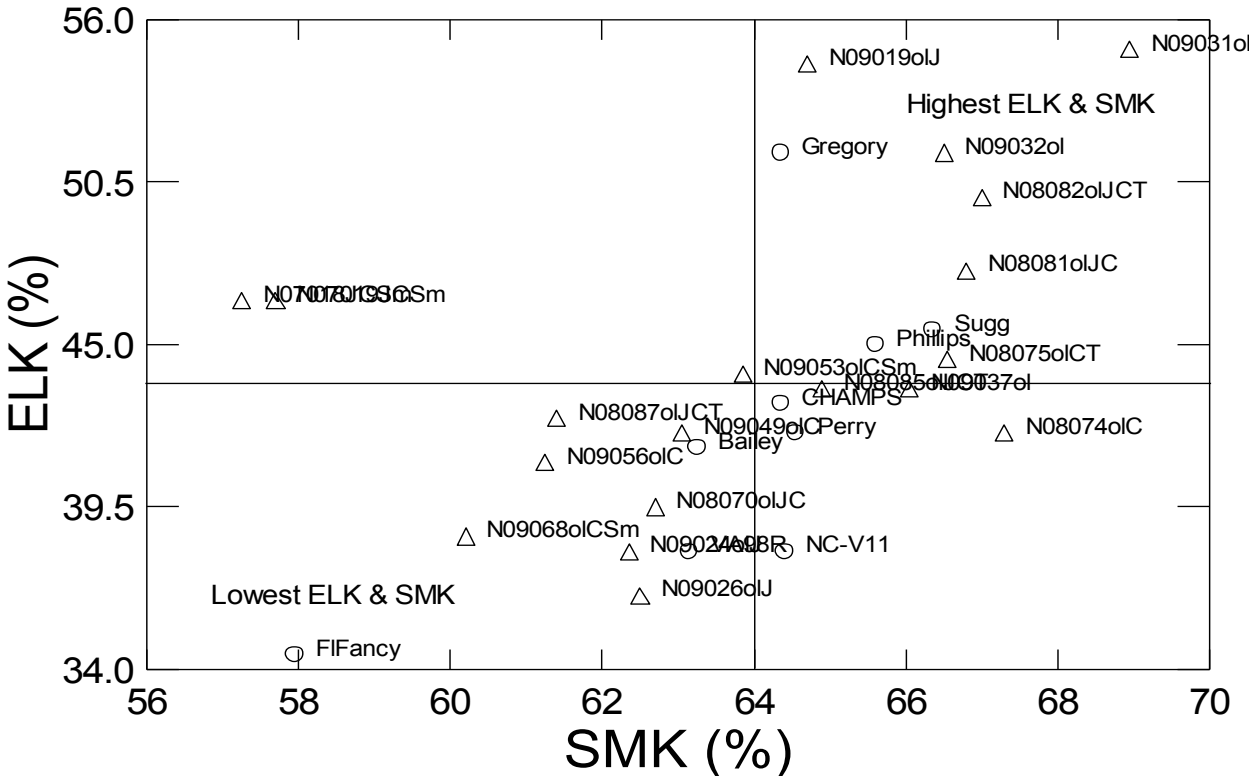


Table 12. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Martin Co., NC, Digging Date I in 2011. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and digging date.

2011 Results by Location

Table 22. Performance of genotypes at Martin Co., NC, in 2011. Dig II averages of two replicated plots planted on 19 May, dug on 17 October, and combined on 27October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price $/cwt	Yield[1] lb/A	Value $/A
Bailey	0.5	1.1	89 d-h[2]	6.9	50 b-g	1.6	1.2	1.0	70 a	74 a	$18.69 ab	4794 c-f	$ 896 b-e
Sugg	0.7	1.0	90 c-g	6.8	51 b-f	2.6	1.6	2.1	68 ab	74 a	18.35 a-e	4654 d-h	854 c-g
Perry	0.5	1.6	86 g-i	6.7	44 f-i	1.2	1.8	1.9	68 ab	73 a-d	17.88 a-f	4490 e-h	804 e-i
Phillips	0.4	0.7	88 e-i	6.5	50 b-f	1.6	1.7	1.5	67 ab	72 a-e	17.93 a-f	4294 e-g	768 e-i
VA 98R	0.6	0.9	86 hi	6.8	46 f-h	2.0	1.2	2.3	67 ab	73 a-d	17.81 a-f	4247 e-h	756 e-i
Florida Fancy	0.5	0.9	93 a-d	6.8	44 f-i	1.3	1.3	3.2	64 b-d	70 d-f	16.39 g-i	4329 e-h	712 f-i
Gregory	0.5	1.0	95 ab	6.9	54 a-d	0.8	1.5	3.1	66 a-c	71 a-e	17.25 e-h	4115 f-h	710 f-i
CHAMPS	0.4	1.3	87 f-i	6.8	43 g-i	1.4	2.5	2.5	66 a-c	73 a-d	17.47 c-g	3927 g-i	686 hi
NC-V 11	0.3	1.3	84 i	6.6	40 hi	1.9	2.6	2.6	65 bc	72 a-d	17.24 e-h	3867 hi	668 i
N08081olJC	0.5	0.6	95 a	6.9	55 a-c	0.8	1.5	1.6	68 ab	72 a-d	18.08 a-f	6044 a	1093 a
N08075olCT	0.3	1.2	92 a-e	7.3	55 a-c	1.5	1.8	0.9	70 a	74 a	18.74 a	5827 a	1092 a
N09031ol	0.1	1.0	93 a-d	8.2	58 a	0.4	1.5	2.4	69 a	73 ab	18.12 a-f	5750 ab	1043 ab
N09056olC	0.3	0.6	92 a-e	7.1	56 ab	1.8	1.1	1.6	69 a	73 ab	18.54 a-c	5343 a-d	989 a-c
N08070olJC	0.6	0.7	91 a-f	6.9	47 e-h	1.7	1.7	2.5	67 ab	73 a-d	17.60 b-f	5521 a-c	971 a-d
N08074olC	0.5	0.8	85 i	7.2	45 f-h	1.2	1.9	1.1	69 a	74 ab	18.44 a-d	4903 c-f	905 b-e
N08085olJCT	0.3	0.7	93 a-d	6.7	50 b-g	2.0	1.3	2.0	67 ab	72 a-e	17.81 a-f	5015 b-e	894 b-e
N09049olC	0.4	0.6	91 b-f	6.9	46 e-h	1.7	1.8	2.0	66 a-c	72 a-e	17.67 a-f	4889 c-f	864 c-f
N08082olJCT	0.8	1.1	94 a-c	7.1	53 a-e	0.9	1.9	2.7	67 a-c	72 a-d	17.53 c-h	4711 d-g	826 d-h
N08087olJCT	0.7	1.2	95 a	7.7	51 b-f	1.4	1.8	1.2	67 ab	72 a-e	18.06 a-f	4486 e-h	810 e-i
N09024olJ	0.3	0.7	94 a-c	7.0	49 b-g	0.9	1.2	2.3	66 a-c	71 b-e	17.34 d-g	4568 d-h	793 e-i
N09053olCSm	0.6	1.1	95 ab	7.4	49 c-g	1.6	1.7	2.7	64 b-d	70 c-f	17.03 f-i	4618 d-h	790 e-i
N09068olCSm	0.3	1.2	93 a-d	6.9	38 i	1.3	2.2	2.7	61 de	67 fg	16.02 i	4922 c-f	789 e-i
N07019JCSm	0.4	0.8	95 a	8.1	47 e-h	1.2	1.4	3.7	63 cd	69 e-g	16.19 hi	4788 c-f	773 e-i
N09026olJ	0.4	0.5	95 ab	6.8	49 c-g	0.5	1.2	3.0	67 ab	71 a-e	17.28 e-h	4377 e-h	767 e-i
N09037ol	0.2	1.1	93 a-d	7.2	50 b-f	0.9	2.2	2.0	68 ab	73 a-c	17.95 a-f	4259 e-h	765 e-i
N09032ol	0.2	0.8	93 a-d	8.9	55 a-c	1.9	1.7	2.1	66 a-c	72 a-e	17.77 a-f	4229 e-h	751 e-i
N09019olJ	1.1	1.5	95 ab	7.3	58 a	1.6	1.3	2.3	67 ab	72 a-e	17.89 a-f	3912 g-i	700 g-i
N07018JCSm	0.9	1.9	95 ab	7.1	47 d-g	1.7	1.9	5.5	58 e	69 g	14.10 j	3294 i	464 j
Mean	**0.5**	**1.0**	**91**	**7.1**	**49**	**1.4**	**1.6**	**2.3**	**66**	**72**	**17.54**	**4649**	**818**
LSD $_{0.05}$[3]	**0.6**	**0.5**	**4**	**1.1**	**7**	**1.5**	**0.9**	**1.4**	**4**	**3**	**0.01**	**801**	**158**

[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.

2011 Results by Location

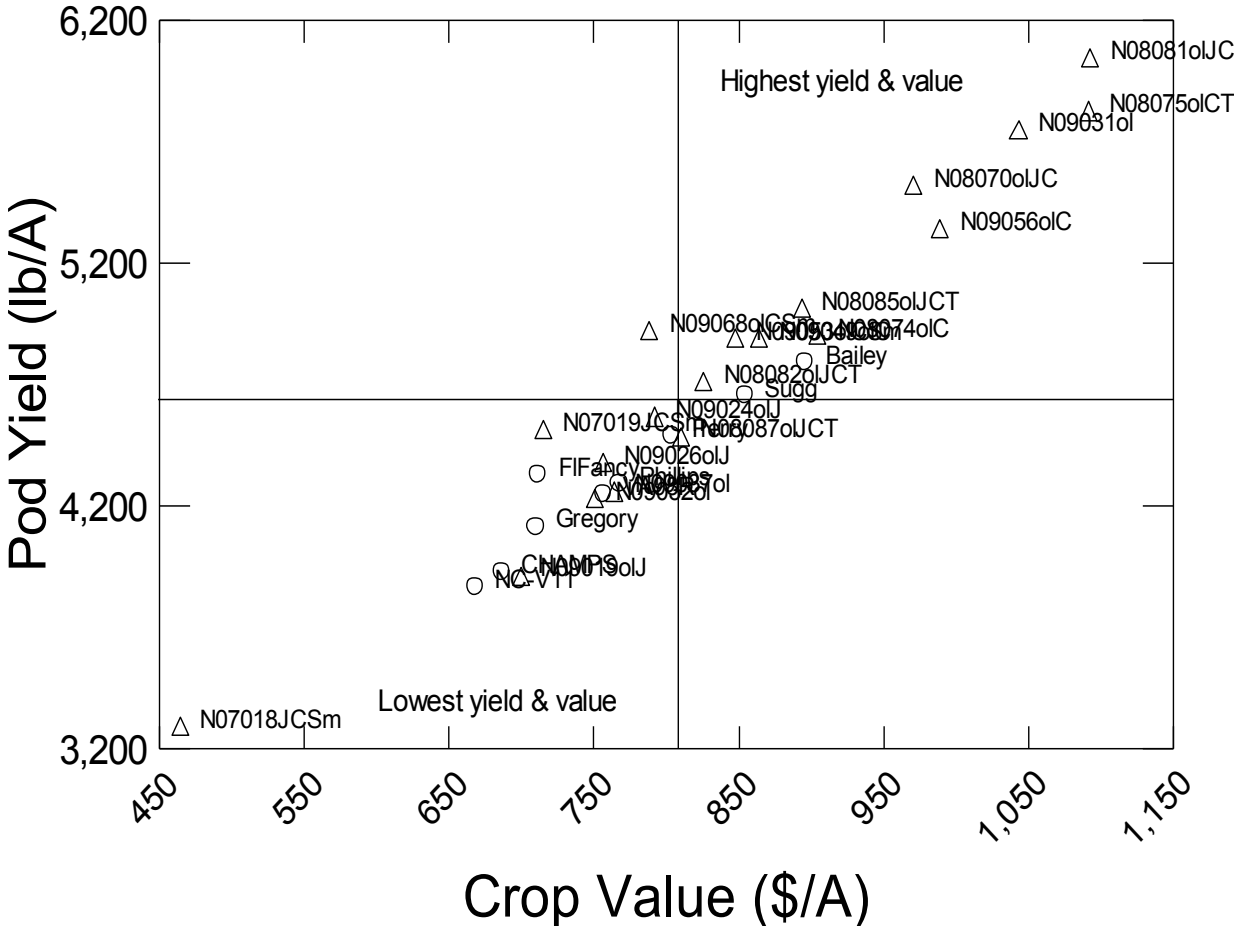


Figure 13. Summary of pod yield and crop value at Martin Co., NC, Digging Date II in 2011. Vertical bar represents mean crop value and horizontal bar mean pod yield of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value at this location and digging date.

2011 Results by Location

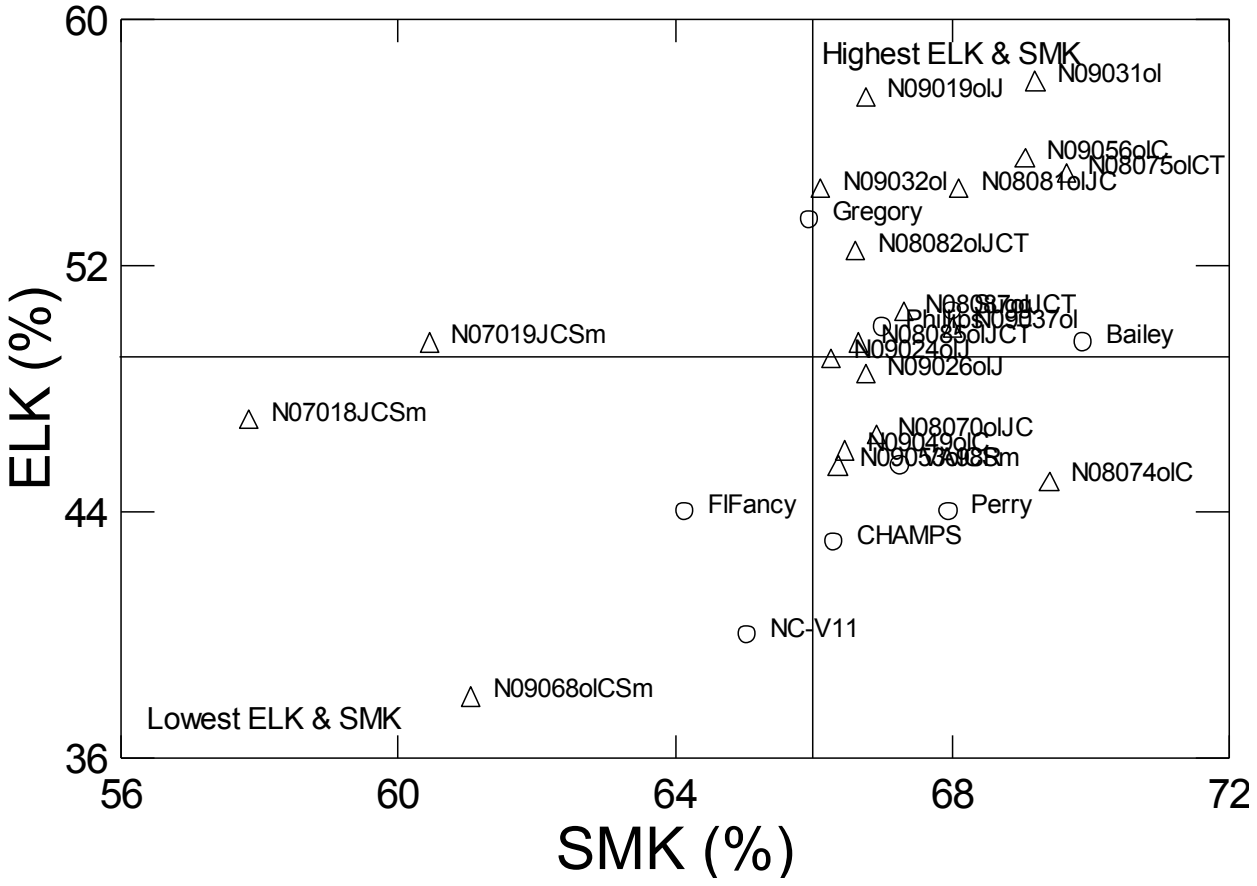


Table 14. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Martin Co., NC, Digging Date II in 2011. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and digging date.

2011 Results by Location

Table 23. Performance of genotypes at Rocky Mount, NC, in 2011. Averages of three replicated plots planted on 11 May, dug on 13 October, and combined on 18 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price $/cwt	Yield[1] lb/A	Value $/A
Bailey	0.5	0.7	89 h-k[2]	5.9	32 h-k	3.3	2.7	0.9	64 a-c	71 a-e	$17.52 ab	5860 a-c	$1026 a-c
Gregory	0.8	0.9	96 a-d	6.0	44 c-f	3.4	1.6	1.6	63 a-f	69 d-i	17.19 a-c	5354 a-g	920 a-h
Perry	0.5	1.0	86 k	6.0	30 i-l	4.9	3.0	1.9	61 b-g	71 a-d	17.07 a-c	5294 b-g	903 a-i
Phillips	0.8	1.0	89 g-k	5.9	38 f-h	4.4	2.6	1.5	61 b-g	69 e-i	16.97 a-c	5100 b-g	868 b-j
VA 98R	0.9	0.7	88 i-k	6.0	36 g-i	5.9	2.2	2.0	62 a-g	72 a-c	17.32 ab	4886 c-h	847 c-j
Sugg	0.6	0.8	92 c-h	6.3	36 g-i	5.0	3.2	2.7	61 b-g	71 a-c	16.79 b-d	4984 b-h	836 d-j
Florida Fancy	0.8	1.5	95 a-e	6.0	31 i-l	5.4	2.3	2.5	59 e-g	69 d-i	16.22 c-f	5088 b-g	819 e-j
NC-V 11	0.4	0.8	87 jk	6.1	24 l	4.4	3.0	3.4	58 gh	69 g-i	15.51 f	5012 b-h	783 g-k
CHAMPS	1.1	0.9	91 e-j	6.0	29 j-l	4.3	2.7	3.2	58 f-h	69 hi	15.71 d-f	4009 h	632 k
N09053olCSm	0.5	0.8	94 b-e	6.1	30 i-l	6.5	2.3	1.6	60 d-g	70 b-i	16.95 a-c	6337 a	1073 a
N08075olCT	0.5	0.5	89 f-k	6.2	37 g-i	4.2	2.4	0.9	64 a-c	72 a-c	17.71 ab	5975 ab	1058 a
N08082olJCT	0.9	0.5	97 a-c	6.0	45 b-e	5.3	1.1	1.9	64 ab	73 a	17.96 a	5821 a-d	1046 ab
N08081olJC	0.9	0.4	95 a-e	6.1	41 d-g	4.3	2.4	1.9	63 a-e	72 a-c	17.48 ab	5926 ab	1034 ab
N09056olC	0.5	1.0	93 b-h	6.1	39 e-g	7.9	2.0	2.0	58 gh	70 b-h	17.05 a-c	5973 ab	1019 a-d
N09037ol	0.9	0.8	94 b-f	6.1	48 a-d	2.6	1.8	1.3	66 a	72 ab	17.95 a	5538 a-f	995 a-e
N07018JCSm	1.1	1.0	97 a-c	6.1	53 a	5.3	1.3	1.3	61 b-g	69 f-i	17.45 ab	5638 a-e	984 a-f
N08074olC	1.0	1.0	88 h-k	6.1	35 g-k	3.3	3.4	1.4	64 a-d	72 ab	17.36 ab	5648 a-e	982 a-f
N08070olJC	0.4	0.6	96 a-d	6.1	36 g-j	5.5	2.4	2.3	60 b-g	71 b-g	16.71 b-e	5802 a-d	970 a-f
N07019JCSm	1.0	1.1	97 ab	6.1	52 ab	5.5	1.1	2.0	61 b-g	69 e-i	17.20 a-c	5556 a-f	956 a-g
N09019olJ	0.9	0.8	97 a-c	6.1	47 a-d	6.5	1.8	2.3	60 c-g	71 b-g	17.16 a-c	5401 a-g	931 a-h
N09031ol	0.4	0.9	92 c-h	6.1	44 c-f	4.5	3.2	2.3	61 b-g	71 a-f	16.99 a-c	5451 a-g	925 a-h
N08087olJCT	0.7	0.6	94 b-e	6.2	36 g-i	5.0	2.1	2.0	61 b-g	70 b-h	16.99 a-c	5419 a-g	920 a-h
N09032ol	0.3	0.9	94 b-e	6.0	49 a-c	4.3	2.2	2.0	63 a-e	72 a-c	17.54 ab	5059 b-g	898 a-j
N09068olCSm	0.5	1.0	93 b-g	6.1	36 g-j	4.0	2.5	2.6	59 e-g	68 ij	16.18 c-f	5146 b-g	833 e-j
N09049olC	0.4	0.6	92 c-h	6.3	35 g-k	4.4	2.1	2.5	61 b-g	70 c-i	16.63 b-e	4846 d-h	805 f-k
N08085olJCT	0.6	0.8	92 d-i	6.2	30 i-l	9.1	2.8	2.2	54 h	68 ij	16.19 c-f	4651 e-h	758 h-k
N09024olJ	0.5	0.7	99 a	6.2	32 h-k	2.5	3.1	3.1	61 b-g	70 b-i	16.19 c-f	4492 gh	728 i-k
N09026olJ	0.9	0.9	95 a-e	6.0	28 kl	3.4	2.7	2.5	58 gh	67 j	15.62 ef	4546 f-h	715 jk
Mean	**0.7**	**0.8**	**93**	**6.1**	**38**	**4.8**	**2.4**	**2.1**	**61**	**70**	**16.91**	**5316**	**902**
LSD $_{0.05}$[3]	**0.5**	**0.4**	**4**	**0.2**	**7**	**3.0**	**1.0**	**1.5**	**4**	**2**	**0.01**	**1014**	**184**

[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.

2011 Results by Location

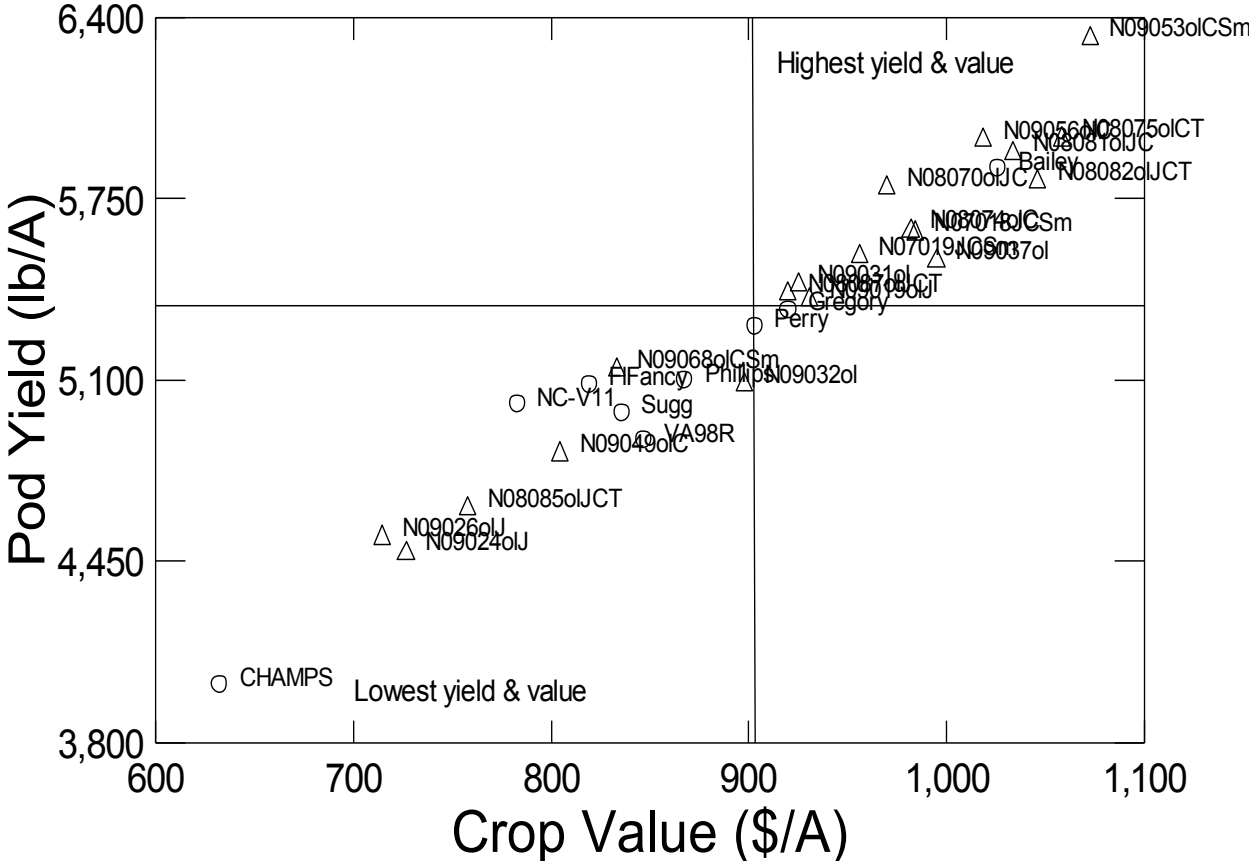


Figure 15. Summary of pod yield and crop value at Rocky Mount, NC, in 2011. Vertical bar represents mean crop value and horizontal bar mean pod yield of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value at this location.

2011 Results by Location

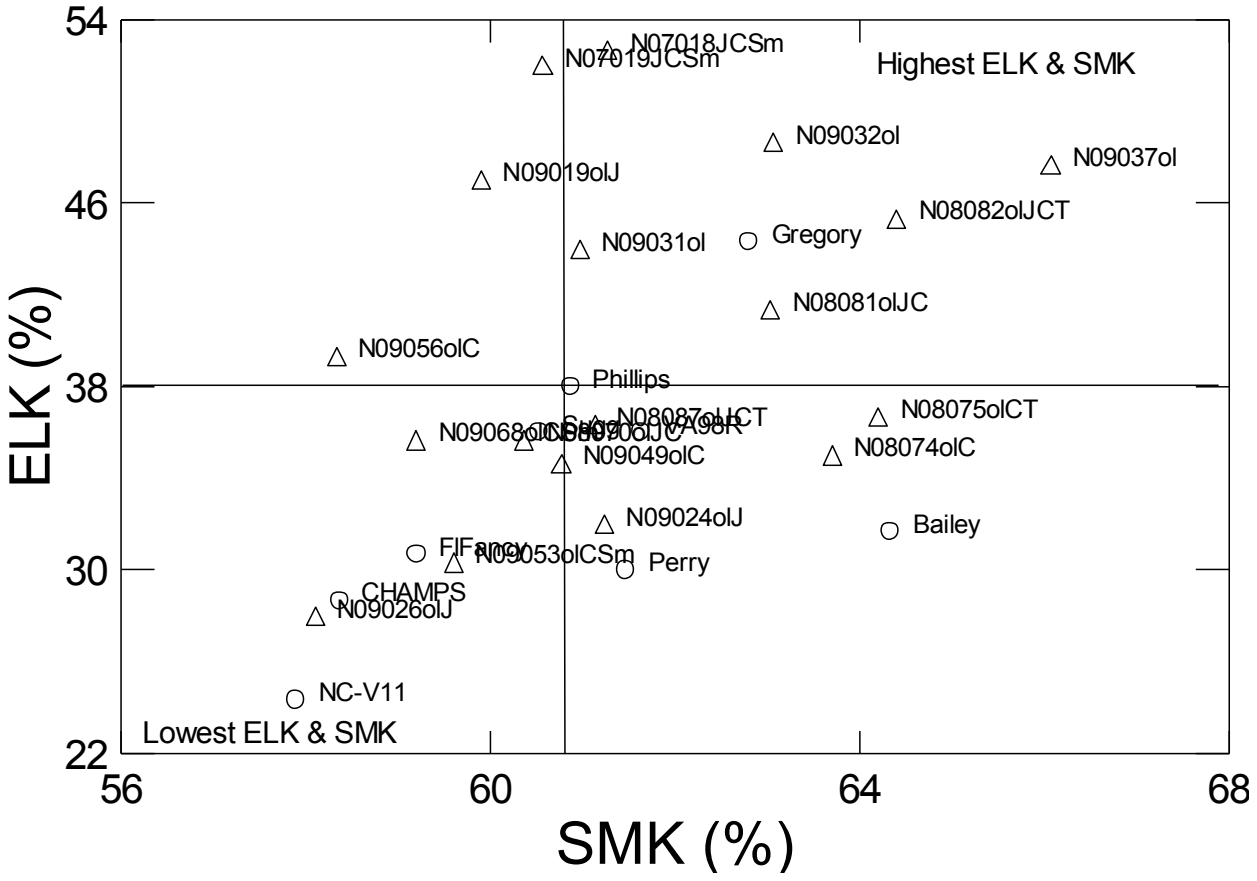


Table 16. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Rocky Mount, NC in 2011. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location.

2011 Results by Location

Table 24. Performance of genotypes at Bladen County, NC, in 2011. Averages of three replicated plots planted on 10 May, dug on 15 October, and combined on 25 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price $/cwt	Yield[1] lb/A	Value $/A
Phillips	1.0	0.9	85 h-k[2]	7.0	45 a-f	1.4	1.7	2.0	66 a-d	71 c-e	$17.48 a-e	4482 a-e	$785 a-d
Bailey	0.7	0.7	85 h-k	6.8	41 c-h	2.5	1.4	1.5	67 ab	72 a-d	17.85 a-c	4391 a-e	785 a-d
Sugg	0.8	0.9	90 b-h	6.4	45 a-f	2.3	1.8	3.2	66 a-c	73 a	17.46 a-e	4391 a-e	767 a-d
NC-V 11	0.6	0.7	76 m	7.0	32 kl	3.3	1.6	1.8	66 a-c	73 a-c	17.72 a-d	4259 a-e	755 b-d
Gregory	0.9	0.7	90 b-h	6.6	41 c-h	1.9	1.5	3.0	63 c-e	69 e-g	16.55 d-h	4130 c-e	685 cd
VA 98R	0.8	0.9	82 kl	6.8	35 h-l	3.0	1.7	3.5	64 b-e	72 a-d	16.63 c-h	4040 c-e	671 cd
CHAMPS	0.8	1.2	79 lm	7.3	33 j-l	1.4	2.2	3.0	65 b-e	72 a-d	16.90 b-f	3924 c-e	664 cd
Perry	0.8	1.2	82 j-l	7.0	34 i-l	1.6	1.6	3.3	65 b-e	71 b-d	16.79 b-f	3898 de	656 cd
Florida Fancy	1.2	0.8	92 a-e	6.7	42 b-g	4.5	1.2	2.8	62 d-f	71 d-f	17.02 b-e	3720 e	635 d
N08075olCT	0.6	0.9	88 d-i	7.1	51 a	1.8	1.5	0.8	69 a	73 ab	18.53 a	5023 ab	931 a
N08085olJCT	0.9	0.9	90 b-g	6.7	40 d-i	3.1	1.3	2.7	64 b-e	71 d-f	16.95 b-e	5077 a	863 ab
N08081olJC	0.8	0.6	92 a-d	6.7	46 a-d	2.7	1.0	2.1	67 ab	73 a-c	18.00 ab	4748 a-c	857 ab
N09032ol	0.7	0.9	88 c-i	7.5	50 a	1.6	1.7	2.2	66 a-d	71 b-d	17.50 a-e	4587 a-d	806 a-c
N08074olC	0.7	0.9	85 h-k	6.9	36 g-l	1.9	1.4	2.1	67 ab	72 a-d	17.56 a-e	4452 a-e	782 a-d
N09031ol	0.8	0.8	87 e-j	7.4	48 ab	2.4	1.6	2.1	65 b-e	71 b-e	17.52 a-e	4425 a-e	775 a-d
N08070olJC	0.9	0.8	93 a-c	6.8	38 f-k	4.3	1.3	4.2	59 g-i	72 a-d	15.43 g-i	4740 a-c	732 b-d
N09056olC	0.9	0.6	84 i-k	7.2	41 c-h	2.6	1.4	3.2	65 b-e	72 a-d	17.11 b-e	4223 b-e	723 b-d
N09024olJ	1.4	1.0	93 ab	7.0	30 l	1.1	1.6	2.8	64 b-e	69 fg	16.34 e-h	4379 a-e	720 b-d
N09037ol	0.7	0.7	86 g-k	7.3	42 b-g	2.1	1.5	2.9	66 a-d	72 a-d	17.42 a-e	3927 c-e	682 cd
N09026olJ	1.1	0.8	94 ab	7.0	31 l	2.4	1.5	2.5	62 e-h	68 g	16.30 e-h	4028 c-e	657 cd
N09049olC	0.7	0.4	84 i-k	7.2	36 g-l	3.5	1.1	4.9	62 e-h	71 b-d	15.64 f-i	4192 c-e	656 cd
N08082olJCT	1.3	0.7	91 a-f	7.5	44 b-f	3.0	1.6	2.4	65 b-e	72 a-d	17.44 a-e	3720 e	653 cd
N09019olJ	0.9	0.7	92 a-d	6.8	47 a-c	4.4	1.1	3.5	62 e-h	71 d-f	16.65 c-g	3910 de	652 cd
N08087olJCT	1.2	0.6	93 a-c	6.9	41 c-h	2.3	3.3	3.2	62 e-g	71 d-f	16.46 d-h	3940 c-e	651 cd
N09068olCSm	0.7	1.0	93 ab	7.4	32 kl	3.8	2.0	4.0	58 hi	68 g	15.37 hi	4164 c-e	639 cd
N07019JCSm	1.4	1.0	96 a	7.1	46 a-d	2.9	1.2	5.3	58 g-i	69 g	14.79 i	4254 a-e	629 d
N07018JCSm	2.0	1.2	95 a	6.6	45 a-e	3.5	1.3	5.1	58 i	68 g	14.82 i	4163 c-e	623 d
N09053olCSm	1.2	0.5	86 f-k	7.0	39 e-j	3.3	1.1	4.1	64 b-e	72 a-d	16.42 e-h	3785 de	618 d
Mean	**0.9**	**0.8**	**88**	**7.0**	**40**	**2.7**	**1.5**	**3.0**	**64**	**71**	**16.81**	**4249**	**716**
LSD $_{0.05}$[3]	**0.6**	**0.5**	**5**	**0.8**	**6**	**1.2**	**1.0**	**1.5**	**4**	**2**	**0.01**	**825**	**170**

[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.

2011 Results by Location

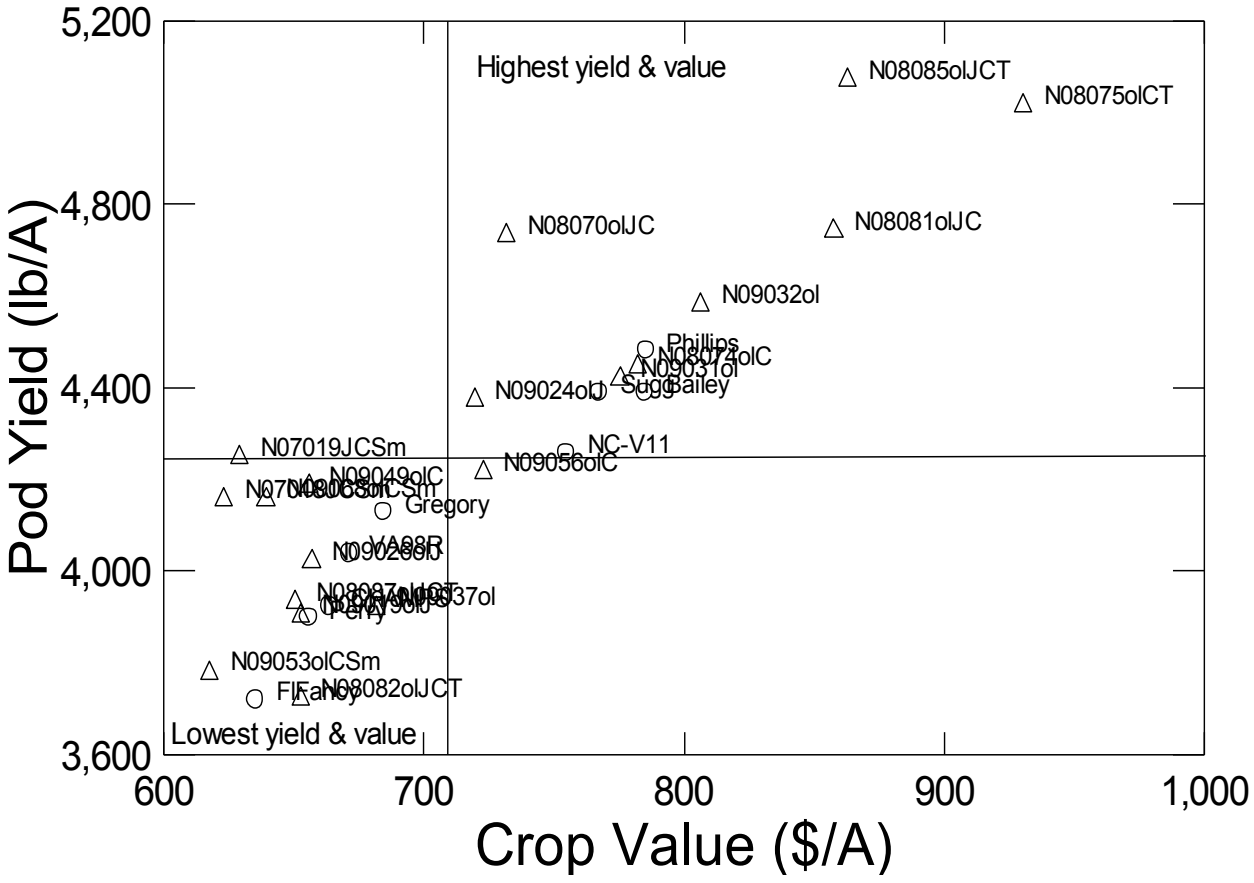


Figure 17. Summary of pod yield and crop value at Bladen Co., NC, in 2011. Vertical bar represents mean crop value and horizontal bar mean pod yield of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value at this location.

2011 Results by Location

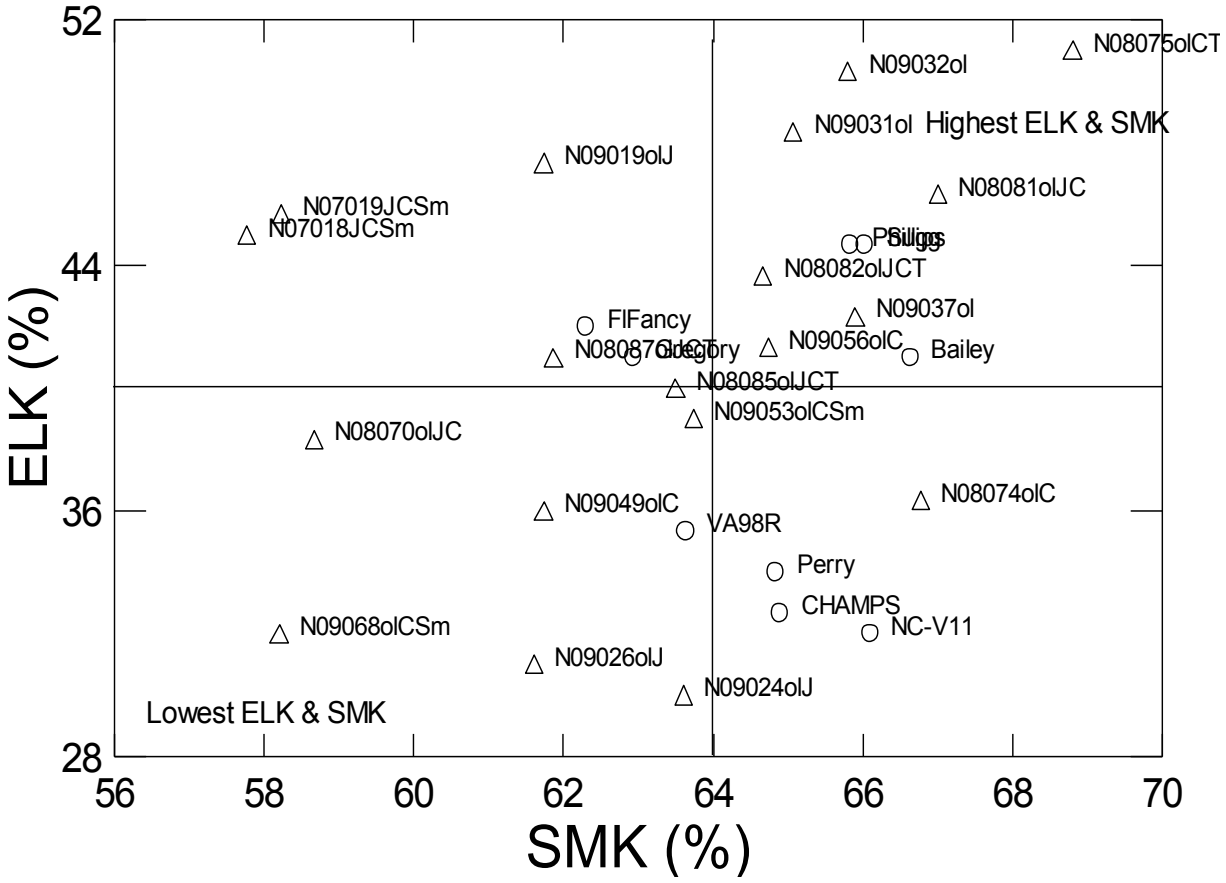


Table 18. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Bladen, NC, in 2011. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location.

2011 Results across Locations

Table 25. Performance of genotypes averaged across test locations in 2011.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price $/cwt	Yield[1] lb/A	Value $/A
Bailey	0.6	0.8	88 j-l[2]	7.2	42 e-h	1.9	2.2	1.3	66 a-d	71 b-f	$17.62 a-d	5235 a-f	$921 a-d
Sugg	0.7	0.8	92 e-i	7.1	45 c-e	2.5	2.3	2.6	65 b-h	72 a	17.39 b-f	4933 c-i	857 c-i
Gregory	0.8	0.9	94 a-c	6.9	48 a-c	1.6	1.9	2.1	64 c-i	70 i-k	17.16 c-g	4948 a-i	851 c-i
Phillips	0.6	0.9	90 i-k	7.1	47 b-d	1.9	2.0	1.4	66 a-f	71 c-h	17.62 a-d	4810 c-i	848 c-i
Perry	0.6	1.2	87 l	7.1	40 f-h	2.1	2.1	2.1	66 a-e	72 a-c	17.46 b-d	4740 d-i	830 d-j
NC-V 11	0.5	1.0	83 m	7.1	34 i	2.3	2.5	2.3	63 f-j	71 e-i	16.84 f-i	4705 e-i	792 e-j
VA 98R	0.7	0.9	86 l	6.9	40 f-h	3.0	1.8	2.8	64 d-i	72 a-e	17.10 c-g	4525 hi	775 f-j
CHAMPS	0.8	1.0	87 kl	7.2	38 g-i	1.8	2.5	2.5	64 e-j	70 f-j	16.79 g-i	4548 hi	766 g-j
Florida Fancy	0.9	1.1	94 b-f	7.3	40 f-h	2.7	1.9	2.6	62 jk	69 kl	16.47 h-j	4621 g-i	763 h-j
N08075olCT	0.5	0.8	90 h-j	7.4	47 b-d	1.8	2.1	1.0	67 a	72 ab	18.07 a	5547 a	1003 a
N08081olJC	0.9	0.6	93 c-g	7.2	48 a-c	1.9	1.7	1.9	66 a-d	71 a-e	17.67 a-c	5556 a	981 ab
N09056olC	0.6	0.7	90 g-i	7.1	47 cd	3.3	1.9	2.3	64 d-i	71 a-f	17.40 b-f	5428 ab	949 a- c
N09031ol	0.5	0.9	92 e-i	7.9	51 ab	1.8	2.3	2.1	65 a-g	71 a-f	17.46 b-e	5277 a-e	922 a-d
N08074olC	0.6	0.9	87 l	7.2	39 f-h	1.8	2.3	1.5	66 a-c	72 ab	17.65 a-c	5175 a-g	913 a-d
N09053olCSm	0.8	0.7	91 g-i	7.2	40 f-h	2.7	1.9	2.6	63 g-j	70 f-j	16.80 g-i	5317 a-d	893 a-e
N08082olJCT	1.0	0.7	95 a-c	7.4	48 a-c	2.3	1.6	2.3	65 a-h	71 a-f	17.48 b-d	5094 a-i	891 a-e
N09032ol	0.4	0.9	92 c-h	7.8	51 ab	1.8	2.0	2.0	65 a-g	71 b-g	17.53 a-d	5062 a-i	889 a-f
N08070olJC	0.6	0.8	94 a-d	7.2	41 f-h	3.0	2.3	2.9	62 jk	71 e-i	16.47 ij	5362 a-c	885 b-f
N08085olJCT	0.6	0.8	92 d-i	7.0	42 e-g	3.5	2.0	2.1	62 ij	70 g-k	17.05 d-h	5132 a-h	878 b-g
N09037ol	0.7	0.8	92 f-i	7.3	48 bc	1.4	2.0	1.7	67 ab	72 a-d	17.75 ab	4931 c-i	877 b-h
N09019olJ	0.8	0.9	95 ab	7.3	52 a	3.1	1.5	2.4	63 f-j	70 e-i	17.25 b-g	4989 a-i	863 c-h
N09049olC	0.4	0.6	90 h-k	7.3	41 e-h	3.0	1.8	2.9	63 h-j	71 d-i	16.75 g-i	5117 a-i	862 c-h
N08087olJCT	0.8	0.7	94 a-c	7.3	43 d-f	2.4	2.3	2.3	63 ij	70 h-k	16.89 e-i	4978 a-i	842 d-i
N09024olJ	0.8	0.8	95 a-c	7.2	38 g-i	1.1	2.1	2.7	63 g-j	69 j-l	16.44 ij	4770 c-i	787 e-j
N07019JCSm	1.0	1.2	97 a	7.6	48 a-c	2.4	1.6	3.5	60 l	67 mn	15.70 kl	4935 b-i	779 e-j
N09068olCSm	0.5	1.1	94 b-e	7.1	38 g-i	2.4	2.3	2.9	60 kl	68 mn	15.94 jk	4853 b-i	776 f-j
N09026olJ	0.9	0.8	94 a-e	7.4	37 hi	1.6	1.9	2.4	62 ij	68 lm	16.41 ij	4513 i	743 ij
N07018JCSm	1.3	1.0	96 ab	7.1	49 a-c	2.5	1.7	4.0	59 l	67 n	15.25 l	4637 f-i	717 j
Mean	**0.7**	**0.9**	**92**	**7.2**	**44**	**2.3**	**2.0**	**2.3**	**64**	**70**	**17.01**	**4991**	**852**
LSD $_{0.05}$[3]	**0.3**	**0.3**	**3**	**0.7**	**5**	**1.4**	**0.6**	**0.7**	**2**	**1**	**0.01**	**610**	**114**

[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.

2011 Results across Locations

Table 26. Effect of genotype on value per acre with and without penalties due to segregation in 2011.

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											
Gregory	$1033 ab[1]	$1033 a-e	$ 683 a-c	$1020 b-g	$ 786 a-c	$787 b-e	$ 249 cd	$ 710 h-k	$240 e	$ 685 cd	$ 743 a-d	$ 920 a-h
Bailey	1028 ab	1028 a-f	341 bc	974 b-g	832 a-c	832 b-d	896 ab	896 b-f	275 de	785 a-d	565 b-d	1026 a-c
NC-V 11	987 a-d	987 a-g	882 a-c	882 e-g	702 a-c	702 c-f	478 b-d	668 k	429 b-e	755 b-d	783 a-d	783 g-k
Phillips	978 a-d	978 b-g	965 a	965 b-g	749 a-c	749 b-f	767 a-c	767 e-i	785 a	785 a-d	868 a-c	868 b-j
Perry	963 a-d	963 c-h	957 a	957 b-g	543 b-d	750 b-f	804 ab	804 e-k	360 c-e	656 cd	724 a-d	903 a-i
CHAMPS	954 a-d	954 c-h	977 a	977 b-g	800 a-c	800 b-e	470 b-d	686 jk	664 a-c	664 cd	632 a-d	632 k
Florida Fancy	920 a-d	920 d-i	344 bc	982 b-g	192 d	548 f	505 b-d	711 h-k	222 e	635 d	819 a-c	819 e-j
Sugg	321 e	918 e-i	948 ab	948 b-g	602 a-d	872 a-c	595 a-d	854 c-h	450 a-e	767 a-d	654 a-d	836 d-j
VA 98R	301 e	860 g-k	849 a-c	849 fg	238 d	682 c-f	484 b-d	756 e-k	235 e	671 cd	847 a-c	847 c-j
N09056olC	1111 a	1111 a	875 a-c	1234 a	477 b-d	694 c-f	989 ab	989 a-c	253 de	723 b-d	588 a-d	1019 a-d
N09019olJ	1100 a	1100 ab	709 a-c	1069 a-e	593 a-d	800 b-e	700 a-c	700 i-k	229 e	652 cd	326 d	931 a-h
N08081olJC	1095 a	1095 ab	758 a-c	1100 a-d	743 a-c	743 b-f	1093 a	1093 a	656 a-c	857 ab	821 a-c	1034 ab
N09049olC	1055 ab	1055 a-c	686 a-c	1107 a-d	567 b-d	816 b-e	864 ab	864 c-g	229 e	656 cd	620 a-d	805 f-k
N09053olCSm	1048 ab	1048 a-d	979 a	979 b-g	572 b-d	845 a-d	598 a-d	848 c-i	216 e	618 d	859 a-c	1073 a
N08074olC	993 a-c	993 a-f	983 a	983 b-g	862 a-c	862 a-c	904 ab	904 b-e	782 a	782 a-d	982 ab	982 a-f
N08075olCT	977 a-d	977 b-g	1145 a	1145 ab	823 a-c	823 b-d	1091 a	1091 a	728 ab	931 a	1058 a	1058 a
N09037ol	957 a-d	957 c-h	789 a-c	1123 a-d	778 a-c	778 b-e	764 a-c	764 e-k	239 e	682 cd	782 a-d	995 a-e
N09032ol	939 a-d	939 c-h	1068 a	1068 a-e	908 ab	908 ab	751 a-c	751 f-k	651 a-c	806 a-c	898 a-c	898 a-j
N09024olJ	907 a-d	907 e-i	693 a-c	983 b-g	230 d	658 d-f	521 b-d	792 e-k	543 a-e	720 b-d	563 b-d	728 i-k
N09026olJ	846 a-d	846 h-k	653 a-c	926 c-g	422 cd	616 ef	265 cd	757 e-k	531 a-e	657 cd	446 cd	715 jk
N08087olJCT	686 a-e	1010 a-f	1036 a	1036 a-f	239 d	682 c-f	810 ab	810 e-k	360 c-e	651 cd	719 a-d	920 a-h
N08082olJCT	680 a-e	991 a-f	1107 a	1107 a-d	764 a-c	764 b-e	579 a-d	826 d-j	380 b-e	653 cd	1046 a	1046 ab
N08085olJCT	630 b-e	902 f-j	1125 a	1125 a-c	799 a-c	799 b-e	893 ab	893 b-f	491 a-e	863 ab	545 b-d	758 h-k
N08070olJC	629 b-e	907 e-i	714 a-c	1039 a-f	458 b-d	727 b-f	664 a-d	971 a-d	595 a-d	732 b-d	776 a-d	970 a-f
N09031ol	577 c-e	836 h-k	985 a	985 b-g	1043 a	1043 a	729 a-c	1043 ab	459 a-e	775 a-d	734 a-d	925 a-h
N09068olCSm	546 de	795 i-k	605 a-c	939 b-g	450 b-d	699 c-f	533 b-d	788 e-k	639 a-c	639 cd	635 a-d	833 e-j
N07018JCSm	271 e	775 jk	288 c	822 g	193 d	552 f	163 d	464 l	218 e	623 d	984 ab	984 a-f
N07019JCSm	261 e	746 k	321 c	918 d-g	499 b-d	698 c-f	250 cd	715 g-k	220 e	629 d	752 a-d	956 a-g
Mean	**814**	**951**	**802**	**1009**	**602**	**758**	**657**	**818**	**431**	**716**	**742**	**902**
LSD $_{0.05}$[2]	**443**	**129**	**608**	**206**	**463**	**204**	**537**	**150**	**353**	**170**	**471**	**184**

[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.

2011 Results across Locations

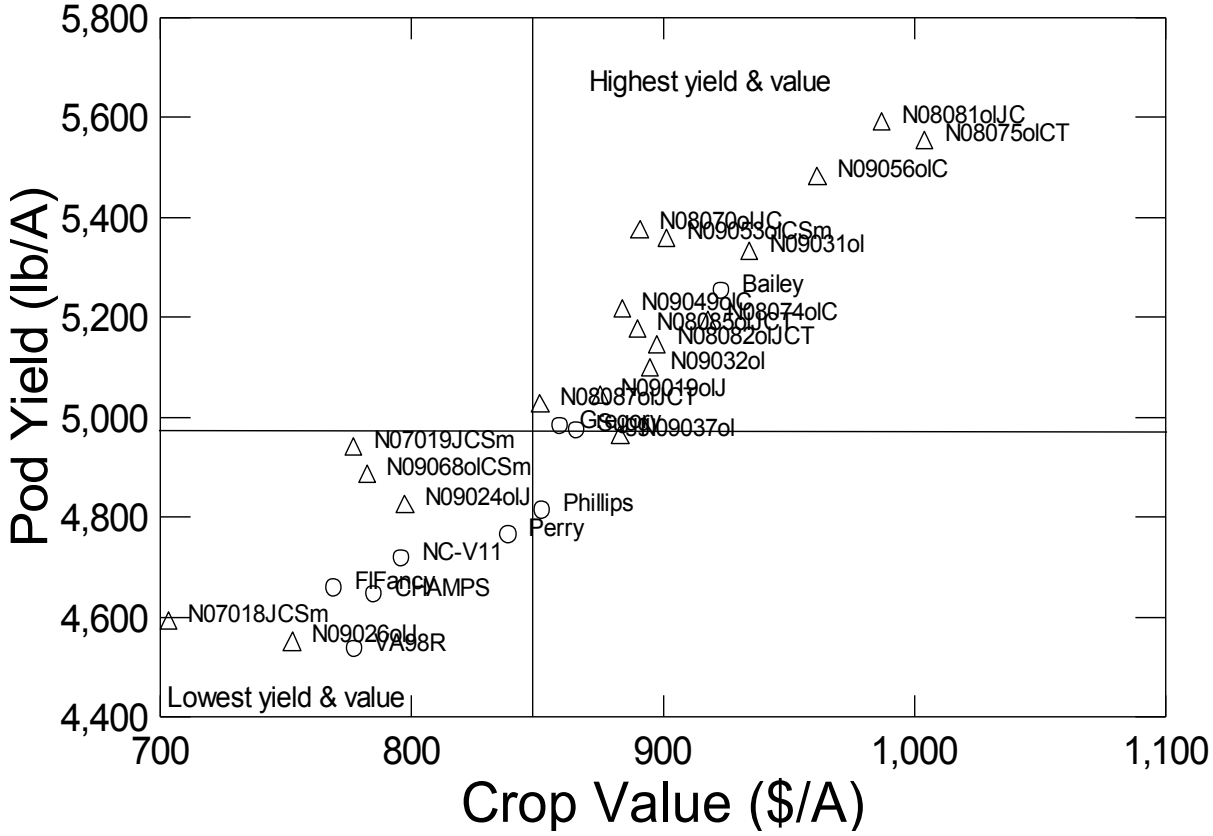


Figure 19. Summary of pod yield and crop value across locations and digging dates in 2011. Vertical bar represents mean crop value and horizontal bar mean pod yield of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right upper rectangle shows the best genotypes for yield and value.

2011 Results across Locations

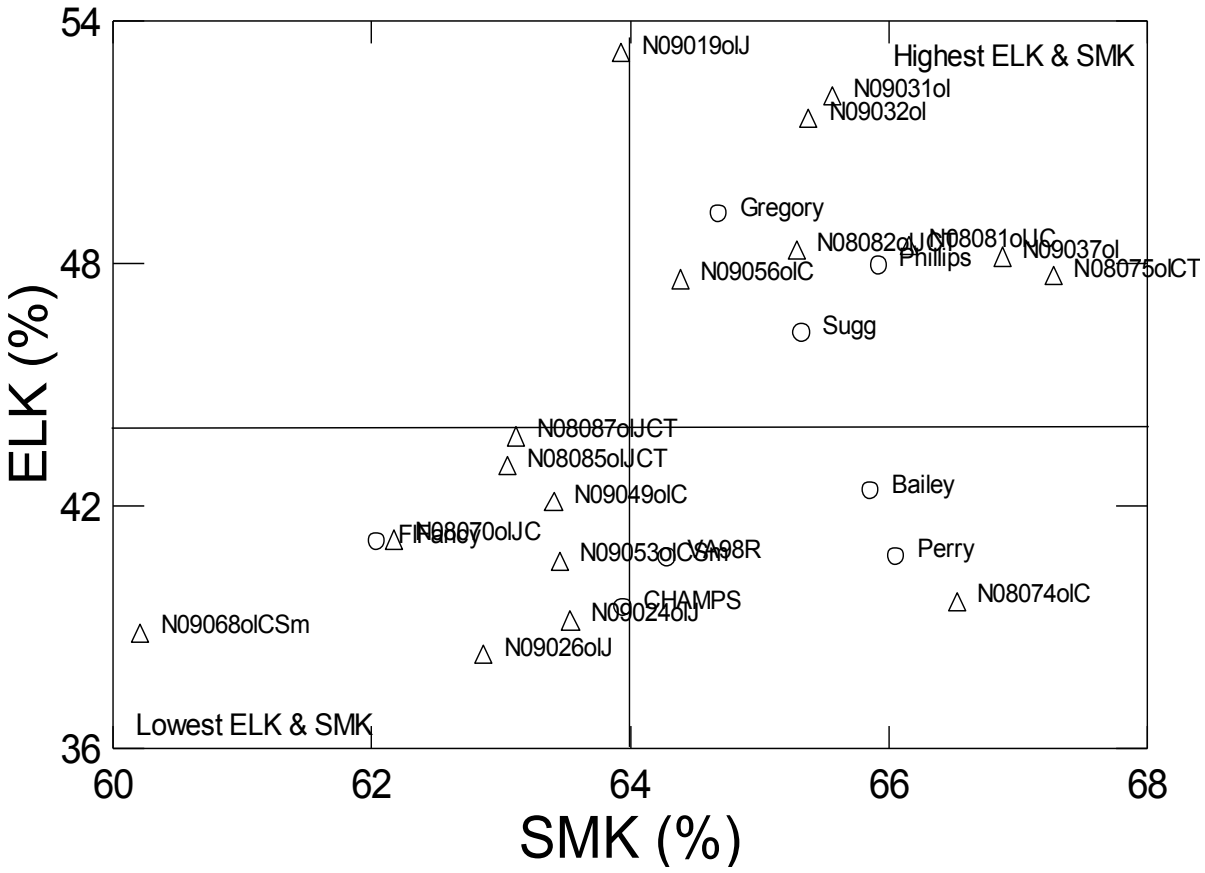


Table 20. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content across all locations and digging dates in 2011. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 28 genotypes. Circles represent commercial cultivars and triangles advanced breeding lines. The right and upper rectangle shows the best genotypes for ELK and SMK content.

2011 Results across Locations

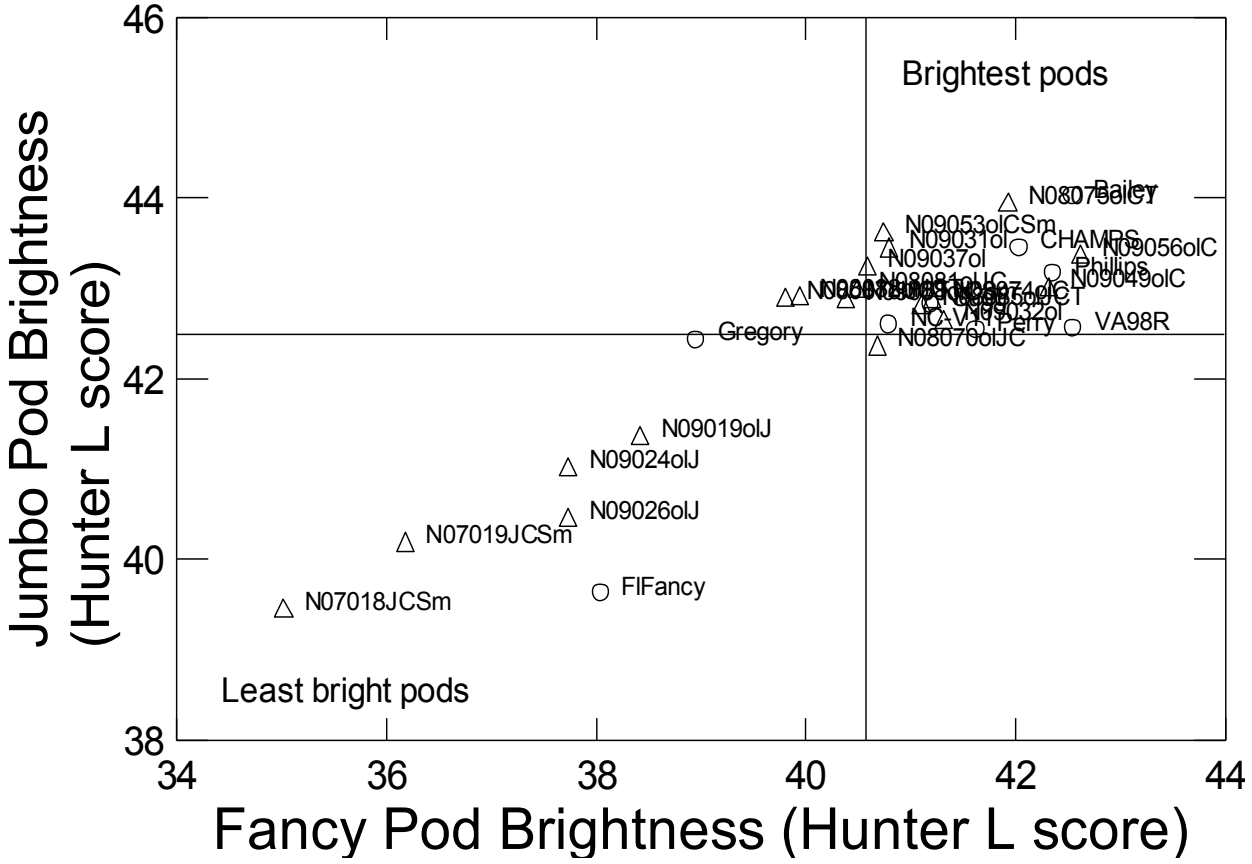


Figure 21. Brightness of jumbo and fancy pods across all test locations and digging dates in 2011. Circles represent commercial cultivars and triangles advanced breeding lines. Vertical bar represents mean fancy pod brightness and horizontal bar mean jumbo pod brightness of 28 genotypes. The right upper rectangle shows the best genotypes for jumbo and fancy pod brightness.

Two-year Averages by Location

RESULTS – TWO-YEAR AVERAGES

Table 27. Performance of genotypes at Tidewater AREC (Suffolk), VA. Two-year averages (2010-2011).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price $/cwt	Yield[1] lb/A	Value $/A
Gregory	1.8	1.7	93 ab[2]	7.6	52 ab	1.5	0.8	2.3	64 b-e	69 e-g	$16.87 a-d	4393 a	$744 ab
Phillips	1.5	0.9	92 a-c	7.6	54 a	1.5	0.9	1.9	67 a	72 a	17.71 a	4166 a	740 ab
CHAMPS	2.1	1.3	90 b-d	7.6	44 de	1.5	1.3	2.7	64 b-d	70 b-e	16.63 a-d	4386 a	732 ab
Bailey	2.1	1.5	87 e-g	7.5	42 de	2.0	1.5	1.7	65 b-d	70 b-e	17.19 a-c	4205 a	725 ab
NC-V 11	1.5	1.6	85 g	7.6	37 g	1.8	1.6	2.6	64 b-e	70 a-d	16.64 a-d	4330 a	722 ab
Florida Fancy	2.0	1.7	93 a-c	7.8	43 de	1.9	1.3	2.9	61 fg	68 g	16.02 cd	4343 a	700 ab
Perry	1.6	1.9	87 fg	7.6	45 cd	2.0	1.2	2.3	66 ab	71 ab	17.31 ab	3919 a	685 ab
Sugg	1.4	1.2	90 c-e	7.6	48 bc	1.8	1.3	3.4	64 b-d	71 a-c	16.59 a-d	4070 a	677 ab
VA 98R	1.5	1.5	87 fg	7.3	39 fg	2.6	1.4	5.4	60 gh	70 c-f	14.33 e	4022 a	591 b
N08085olJCT	1.9	1.2	90 a-d	7.5	43 de	2.4	1.4	2.2	63 c-f	69 d-g	16.79 a-d	4599 a	778 a
N08074olC	1.3	2.0	87 fg	8.0	42 de	2.1	1.5	1.8	65 bc	70 a-d	17.25 ab	4418 a	766 a
N08081olJC	2.2	1.5	92 a-c	7.6	48 bc	2.0	1.2	2.5	64 b-f	69 c-f	16.89 a-d	4490 a	760 a
N08075olCT	1.3	2.1	88 d-f	7.8	46 cd	1.7	1.5	1.7	65 bc	70 b-f	17.24 ab	4303 a	749 a
N08087olJCT	1.7	1.4	93 a-c	7.5	45 de	2.7	1.2	2.7	62 e-g	68 fg	16.41 b-d	4427 a	730 ab
N08082olJCT	2.0	1.4	93 a	7.5	46 cd	2.0	1.3	3.4	62 d-g	69 d-g	16.00 d	4424 a	717 ab
N08070olJC	1.3	1.7	93 a	7.9	42 ef	2.6	1.7	4.7	59 h	68 g	14.67 e	4505 a	674 ab
Mean	**1.7**	**1.5**	**90**	**7.6**	**45**	**2.0**	**1.3**	**2.8**	**63**	**70**	**16.53**	**4312**	**718**
LSD $_{0.05}$[3]	**0.8**	**0.7**	**3**	**0.7**	**3**	**1.2**	**0.5**	**1.3**	**2**	**1**	**0.01**	**805**	**156**

[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 28. Performance of genotypes at Martin Co., NC. Two-year averages (2010-2011).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price $/cwt	Yield[1] lb/A	Value $/A
Bailey	1.6	1.4	80 a-e[2]	7.0	36 c-g	1.8	2.0	2.7	64 a	70 a-c	$16.51 a	3747 a	$631 a
Sugg	1.2	1.5	83 ab	6.8	45 a	2.6	1.8	3.5	64 a	72 a	16.43 ab	3440 a	584 a
CHAMPS	1.5	2.1	81 a-d	7.0	36 d-g	1.7	2.4	3.7	62 a-d	69 b-f	15.51 a-c	3357 a	532 a
Perry	1.6	2.4	74 c-e	6.8	37 b-f	1.7	2.3	4.2	63 a-c	71 ab	15.61 a-c	3185 a	517 a
Phillips	0.9	1.6	76 b-e	6.9	41 a-d	1.9	2.0	4.2	62 a-d	70 a-e	15.29 a-c	3233 a	513 a
Gregory	1.7	2.0	86 a	6.8	43 ab	1.9	2.3	4.8	60 b-d	68 fg	14.69 a-c	3240 a	496 a
VA 98R	1.5	2.0	75 c-e	6.9	31 fg	3.1	2.1	5.3	59 cd	69 b-f	14.14 c	3128 a	468 a
NC-V 11	1.1	2.2	72 e	6.8	30 g	2.1	2.7	4.5	59 b-d	69 c-g	14.44 a-c	3030 a	455 a
Florida Fancy	1.9	2.4	86 a	7.0	35 d-g	2.1	2.3	4.9	58 d	67 g	14.10 c	2945 a	432 a
N08075olCT	0.8	2.3	79 b-e	7.2	41 a-d	1.7	2.3	2.7	63 ab	70 b-f	16.45 ab	3593 a	613 a
N08074olC	1.0	2.2	73 de	7.0	33 e-g	1.9	2.4	3.2	63 a-c	70 a-d	15.97 a-c	3515 a	582 a
N08085olJCT	1.5	1.6	81 a-c	6.8	35 d-g	2.2	2.3	3.2	61 a-d	68 d-g	15.74 a-c	3613 a	582 a
N08070olJC	1.1	1.5	85 a	7.0	35 d-g	2.4	2.6	4.2	60 b-d	69 c-g	14.75 a-c	3680 a	573 a
N08082olJCT	1.7	1.8	86 a	7.0	43 a-c	1.7	1.8	3.7	62 a-d	69 b-f	15.81 a-c	3317 a	540 a
N08081olJC	1.5	1.9	83 ab	6.8	40 a-d	1.5	2.1	5.1	60 b-d	68 e-g	14.06 c	3489 a	538 a
N08087olJCT	1.5	1.8	85 a	6.9	40 a-e	2.1	2.2	4.7	59 b-d	68 e-g	14.39 bc	3180 a	484 a
Mean	**1.4**	**1.9**	**80**	**6.9**	**38**	**2.0**	**2.2**	**4.0**	**61**	**69**	**15.24**	**3356**	**534**
LSD $_{0.05}$[3]	**1.2**	**0.9**	**8**	**0.7**	**7**	**0.9**	**0.6**	**2.1**	**4**	**2**	**0.02**	**960**	**205**

[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 29. Performance of genotypes at Rocky Mount, NC. Two-year averages (2010-2011).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price $/cwt	Yield[1] lb/A	Value $/A
Bailey	0.8	1.2	82 a-c[2]	5.9	33 c-f	2.9	2.7	2.0	62 a	69 a	$16.65 a	5170 a	$866 a
Gregory	1.1	1.6	88 ab	5.9	43 a	3.2	2.1	2.0	60 ab	68 a	16.44 a	4889 ab	807 ab
Phillips	1.0	1.2	84 a-c	5.9	39 a-c	3.6	2.3	2.0	61 ab	68 a	16.56 a	4685 ab	779 ab
NC-V 11	0.7	1.5	82 a-c	6.0	28 f	3.7	2.9	3.4	57 bc	67 a	15.28 a	5036 ab	773 ab
Perry	0.7	1.8	78 bc	6.0	29 f	3.7	3.1	2.4	60 ab	69 a	16.16 a	4731 ab	769 ab
Sugg	0.8	1.3	85 a-c	6.1	36 b-e	4.6	3.3	3.2	59 a-c	70 a	16.03 a	4744 ab	761 ab
VA 98R	1.1	1.2	79 bc	5.9	33 d-f	4.3	2.7	3.8	59 a-c	70 a	15.42 a	4552 ab	710 ab
Florida Fancy	1.2	1.9	87 a-c	5.9	30 ef	4.4	2.5	2.7	58 a-c	68 a	15.77 a	4437 ab	699 ab
CHAMPS	1.2	1.6	86 a-c	5.9	29 ef	3.5	2.9	2.9	57 bc	67 a	15.43 a	4436 ab	684 ab
N08075olCT	0.6	1.2	78 c	6.1	33 c-f	3.8	2.7	1.9	61 ab	70 a	16.70 a	5208 a	877 a
N08082olJCT	1.3	1.1	91 a	6.0	41 ab	4.1	1.9	2.9	61 ab	69 a	16.46 a	5165 a	860 a
N08070olJC	0.8	1.3	90 a	6.0	33 c-f	5.1	2.4	2.6	60 ab	70 a	16.39 a	5145 ab	845 ab
N08081olJC	1.0	1.1	87 a-c	6.0	38 a-d	3.4	2.5	3.6	59 ab	69 a	15.47 a	5305 a	832 ab
N08074olC	1.1	1.7	79 bc	6.0	32 d-f	3.5	3.7	1.8	61 ab	70 a	16.53 a	4940 ab	823 ab
N08087olJCT	1.4	1.5	88 a-c	6.1	34 c-f	4.6	2.5	3.3	58 bc	68 a	15.55 a	5002 ab	787 ab
N08085olJCT	1.5	1.4	87 a-c	6.1	30 ef	6.0	2.8	3.1	55 c	67 a	15.27 a	4222 b	647 b
Mean	**1.0**	**1.4**	**84**	**6.0**	**34**	**4.0**	**2.7**	**2.7**	**59**	**69**	**16.01**	**4854**	**783**
LSD $_{0.05}$[3]	**0.7**	**0.9**	**10**	**0.2**	**7**	**2.2**	**1.0**	**1.5**	**4**	**3**	**0.16**	**928**	**200**

[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 all locations. Two-year averages (2010-2011).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price $/cwt	Yield[1] lb/A	Value $/A
Bailey	1.5	1.6	83 d-f[2]	6.9	37 de	2.4	2.1	2.8	62 ab	69 a-d	$16.03 ab	3905 ab	$648 a
Phillips	1.1	1.3	84 d	6.9	44 a	2.3	1.8	3.3	63 a	70 ab	16.05 a	3736 ab	621 ab
Sugg	1.1	1.5	86 b-d	6.9	42 ab	2.8	2.1	4.4	61 a-d	70 a	15.38 a-d	3706 ab	596 ab
CHAMPS	1.6	1.7	85 cd	7.0	36 d-f	2.2	2.1	3.9	60 a-d	69 b-f	15.25 a-d	3754 ab	591 ab
Gregory	1.6	2.2	89 ab	6.9	43 ab	2.2	1.9	3.9	59 b-e	67 f	14.96 a-d	3704 ab	589 ab
NC-V 11	1.1	1.8	79 g	6.9	30 g	2.5	2.5	3.7	59 b-e	68 c-f	14.89 a-d	3743 ab	581 ab
Perry	1.3	2.3	80 e-g	6.9	37 de	2.5	2.1	3.8	62 ab	70 a	15.59 a-c	3445 b	565 ab
Florida Fancy	1.8	2.0	89 ab	7.0	36 d-f	3.1	2.1	4.0	58 de	67 f	14.71 b-e	3627 ab	558 ab
VA 98R	1.3	1.7	79 fg	6.8	32 fg	3.5	2.3	5.8	57 e	68 c-f	13.51 e	3541 ab	511 b
N08075olCT	1.0	2.1	83 de	7.1	40 b-d	2.6	2.2	2.8	61 a-c	69 a-e	15.92 ab	3862 ab	650 a
N08074olC	1.1	2.1	79 e-g	7.1	34 e-g	2.5	2.5	2.9	61 ab	69 a-c	15.90 ab	3873 ab	640 a
N08081olJC	1.6	1.7	88 a-c	6.9	41 a-c	2.5	1.9	4.3	59 b-e	68 c-f	14.92 a-d	3957 ab	628 a
N08085olJCT	1.5	1.6	86 b-d	6.9	36 ef	3.2	2.1	3.7	58 c-e	67 ef	15.03 a-d	3987 ab	623 ab
N08070olJC	1.1	1.9	88 a-c	7.1	35 ef	3.5	2.3	4.7	57 e	67 ef	14.13 de	4055 a	610 ab
N08082olJCT	1.7	1.6	90 a	6.9	42 ab	2.7	1.8	4.0	60 a-d	68 c-f	15.14 a-d	3881 ab	610 ab
N08087olJCT	1.5	1.7	88 a-c	6.9	38 c-e	3.2	2.2	4.4	58 de	68 d-f	14.53 c-e	3764 ab	577 ab
Mean	**1.4**	**1.8**	**85**	**6.9**	**38**	**2.7**	**2.1**	**3.9**	**60**	**68**	**15.12**	**3783**	**600**
LSD $_{0.05}$[3]	**0.4**	**0.5**	**4**	**0.4**	**4**	**0.7**	**0.5**	**1.2**	**40**	**2**	**0.01**	**590**	**115**

[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.

www.ext.vt.edu

Produced by Communications and Marketing, College of Agriculture and Life Sciences,
Virginia Polytechnic Institute and State University, 2012