

2009

PEANUT VARIETY AND QUALITY EVALUATION RESULTS

Agronomic and Grade Data

Tidewater Agricultural Research and Extension Center
Virginia Agricultural Experiment Station

Virginia
Cooperative
Extension



VIRGINIA STATE UNIVERSITY

 VirginiaTech
Invent the Future

www.ext.vt.edu



3001-1432

PEANUT VARIETY AND QUALITY EVALUATION RESULTS 2009

I. Agronomic and Grade Data

Maria Balota, Ph.D.
Assistant Professor Crop Physiology

TECHNICAL SUPPORT:

F. Bryant, Ag Specialist
P. Copeland, Office Services Specialist
C. Daughtrey, Ag Technician
B. Kennedy, Ag Technician
L. Mehalko, Lab Assistant
D. Redd, Ag Specialist

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

Information Series No. 491
January 2010

**ACKNOWLEDGEMENTS
FINANCIAL SUPPORT**

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



SC PEANUT GROWERS

**NC STATE
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, L. Mehalko, and T. Balota. 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.



Louis Mehalko, left, and
Pam Copland, 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 2009.

LIST OF COOPERATORS

Virginia Tech, Virginia Agricultural Experiment Station, and VCIA

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

Other universities

Dr. T. Isleib, NCSU
Mr. J. R. Horton, Border Belt Tobacco Research Station, NCSU
Mr. C. Bogle, Upper Coastal Plain Research Station, NCSU
Dr. J. Chapin, 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. J. Pond, Southampton Co., VA
Mr. J. Pope, Southampton Co., VA

County Agents

Mr. R. Cotten, Suffolk, VA
Ms. C. Estienne, 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

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 \$354.40 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:

$$\text{Value} = [\text{Yield} - (\% \text{ LSK})(\text{Yield})] [\text{Support Price}/\text{lb}] + \text{Yield} (\% \text{ LSK})(\$0.07/\text{lb LSK})$$

TABLE OF CONTENTS

Technical Support	i
List of Cooperators.....	iii
Abbreviations	iv
List of Tables.....	vi-vii
List of Figures	viii
Introduction	1
Plant Material and Test Location	2
Weather Conditions.....	5
Cultural Practices	9
2009 Results by Location.....	19
2009 Results across Locations	67
Two-year Averages by Location.....	71

List of Tables

1.	Names and pedigrees of the genotypes (advanced breeding lines and commercial varieties) evaluated in 2009	3
2.	Planting, digging, and combining dates for test locations in 2009	4
3.	Temperatures, heat units, and precipitation at Tidewater AREC (Suffolk), VA in 2009	5
4.	Temperatures, heat units, and precipitation at Southampton County, VA in 2009	6
5.	Temperatures, heat units, and precipitation at Martin County, NC in 2009	6
6.	Temperatures, heat units, and precipitation at Rocky Mount, NC in 2009.....	7
7.	Temperatures, heat units, and precipitation at Whiteville, NC in 2009.....	7
8.	Temperatures, heat units, and precipitation at Florence, SC in 2009	8
9.	Cultural practices used at Tidewater AREC (Suffolk), VA Planting Date I in 2009.....	10
10.	Cultural practices used at Tidewater AREC (Suffolk), VA Planting Date II in 2009	11
11.	Cultural practices used at Tidewater AREC (Suffolk), VA Planting Date III in 2009	12
12.	Cultural practices used at Southampton County, VA in 2009	13
13.	Cultural practices used at Martin County, NC in 2009.....	14
14.	Cultural practices used at Rocky Mount, NC in 2009	15
15.	Cultural practices used at Whiteville, NC in 2009	16
16.	Cultural practices used at Florence, SC in 2009.....	17
17.	Plant growth habit across locations in 2009	19
18.	Plant height and width for TAREC (Suffolk), VA in 2009	20
19.	Seedcoat color and maturing rating across locations in 2009	21
20.	Disease evaluation at Tidewater AREC in 2009.....	22
21.	Disease evaluation at Southampton County, VA, in 2009.....	23
22.	Disease evaluation at Martin County, NC in 2009	24
23.	Disease evaluation at Rocky Mount, NC in 2009.....	25
24.	Disease evaluation at Whiteville, NC in 2009.....	26
25.	Content of jumbo pods based on farmers' stock grades, 2009	27
26.	Content of fancy pods based on farmers' stock grades, 2009.....	28
27.	Pod brightness (Hunter L Score) for jumbo pods in 2009	29
28.	Pod brightness (Hunter L Score) for fancy pods in 2009	30
29.	Grade characteristics, yield, and value of genotypes at Tidewater AREC (Suffolk), VA, Planting Date I - 2009.....	40
30.	Grade characteristics, yield, and value of genotypes at Tidewater AREC (Suffolk), VA, Planting Date II - 2009	43
31.	Grade characteristics, yield, and value of genotypes at Tidewater AREC (Suffolk), VA, Planting Date III - 2009	46
32.	Grade characteristics, yield, and value of genotypes in Southampton County, VA - 2009	49
33.	Grade characteristics, yield, and value of genotypes in Martin County, NC, Planting Date I – 2009	52
34.	Grade characteristics, yield, and value of genotypes in Martin County, NC, Planting Date II – 2009.....	55
35.	Grade characteristics, yield, and value of genotypes in Rocky Mount, NC – 2009.....	58
36.	Grade characteristics, yield, and value of genotypes in Whiteville, NC – 2009.....	61
37.	Grade characteristics, yield, and value of genotypes in Florence, SC – 2009	64

38.	Grade characteristics, yield, and value of genotypes averaged across all locations – 2009.....	67
39.	Grade characteristics, yield, and value of genotypes at Tidewater AREC – two year averages 2008-2009	71
40.	Grade characteristics, yield, and value of genotypes at Southampton County, VA – two year averages 2008-2009	72
41.	Grade characteristics, yield, and value of genotypes at Martin County, NC – two year averages 2008-2009	73
42.	Grade characteristics, yield, and value of genotypes at Florence, SC – two year averages 2008-2009	74
43.	Grade characteristics, yield and value of genotypes at all locations- two year averages 2008-2009	75

LIST OF FIGURES

1. Brightness jumbo and fancy pods at Tidewater AREC (Suffolk), VA, Planting Date I, 2009 31

2. Brightness jumbo and fancy pods at Tidewater AREC (Suffolk), VA, Planting Date II, 2009 32

3. Brightness jumbo and fancy pods at Tidewater AREC (Suffolk), VA, Planting Date III, 2009..... 33

4. Brightness jumbo and fancy pods at Southampton County, VA, 2009 34

5. Brightness jumbo and fancy pods at Martin County, NC, Planting Date I, 2009 35

6. Brightness jumbo and fancy pods at Martin County, NC, Planting Date II, 2009..... 36

7. Brightness jumbo and fancy pods at Rocky Mount, NC, 2009..... 37

8. Brightness jumbo and fancy pods at Whiteville, NC, 2009..... 38

9. Brightness jumbo and fancy pods at Florence, SC, 2009 39

10. Summary of average pod yield and crop value at Tidewater AREC (Suffolk), VA, Planting Date I, 2009..... 41

11. Summary of Extra Large Kernel and Sound Mature Kernel content at Tidewater AREC (Suffolk), VA, Planting Date I, 2009 42

12. Summary of average pod yield and crop value at Tidewater AREC (Suffolk), VA, Planting Date II, 2009 44

13. Summary of Extra Large Kernel and Sound Mature Kernel content at Tidewater AREC (Suffolk), VA, Planting Date II, 2009..... 45

14. Summary of average pod yield and crop value at Tidewater AREC (Suffolk), VA, Planting Date III, 2009 47

15. Summary of Extra Large Kernel and Sound Mature Kernel content at Tidewater AREC (Suffolk), VA, Planting Date III, 2009 48

16. Summary of average pod yield and crop value at Southampton County, VA, 2009 50

17. Summary of Extra Large Kernel and Sound Mature Kernel content at Southampton County, VA, 2009..... 51

18. Summary of average pod yield and crop value at Martin County, NC, Planting Date I, 2009 53

19. Summary of Extra Large Kernel and Sound Mature Kernel content at Martin County, NC, Planting Date I, 2009 54

20. Summary of average pod yield and crop value at Martin County, NC, Planting Date II, 2009..... 56

21. Summary of Extra Large Kernel and Sound Mature Kernel content at Martin County, NC, Planting Date II, 2009..... 57

22. Summary of average pod yield and crop value at Rocky Mount, NC, 2009 59

23. Summary of Extra Large Kernel and Sound Mature Kernel content at Rocky Mount, NC, 2009..... 60

24. Summary of average pod yield and crop value at Whiteville, NC, 2009 62

25. Summary of Extra Large Kernel and Sound Mature Kernel content at Whiteville, NC, 2009 63

26. Summary of average pod yield and crop value at Florence, SC, 2009 65

27. Summary of Extra Large Kernel and Sound Mature Kernel content at Florence, SC, 2009 66

28. Summary of pod yield and crop value of all locations, 2009 68

29. Summary of Extra Large Kernel and Sound Mature Kernel content all locations, 2009 69

30. Summary of Damaged Kernel content and number of plants symptomatic for TSWV, SB, and CBR at all locations, 2009 70

Introduction

INTRODUCTION

Peanut is an important crop for the Virginia and the Carolinas. It annually brings over \$90 million to the economies of this region from over 180,000 acres planted every year. For example this year, 12,000 acres were planted in Virginia and 70,000 in North Carolina. Average yield was approximately 3,500 lb/A in both states. Due to environmental similarities 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 the same peanut varieties. More recently, farmers in South Carolina started to grow the large-seeded Virginia-type varieties as well. For example this year, growers in South Carolina planted approximately 70,000 acres of Virginia-type peanut. In the view of this 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 the 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 2009.



Plant Material and Test Locations

PLANT MATERIAL AND TEST LOCATIONS

In 2009, PVQE included 30 genotypes: 10 commercial varieties and 20 advanced breeding lines developed by the Virginia and North Carolina peanut breeding programs (Table 1). Genotypes were planted from 20 April to 15 May at six locations: at the Tidewater AREC in Suffolk, VA, Southampton Co., VA, Martin Co., NC, the Upper Coastal Plain Research Station near Rocky Mount, NC, the Border Belt Tobacco Research Station near Whiteville, NC, and the PeeDee Research and Education Center at Florence, SC. At Suffolk three and at Martin two planting dates and three replications within each planting 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 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 2009.

Genotype Number	Variety or Line	Pedigree
1	NC-V 11	Florigiant / NC 5 // Florigiant / Valencia
2	Gregory	NC 7 / NC 9
3	Perry	NC 7 / Florigiant // N90021
4	CHAMPS	VA 8911215 / VA-C 92R
5	Phillips	N90014E / N91024
6	Bailey	NC 12C*2 / N96076L
7	Georgia 08V	C99R / GA Hi-O/L
8	Florida Fancy	F87 x 8-2-1 / F 85410 / 93Q10
9	VA 98R	VA 81B x VA 780839P
10	Sugg	Gregory // X98006 (F1)
11	VT 024077	Wilson*2 / N95003C
12	VT 004152	N91054E / VA 901082
13	VT 003194	N93008 / VA 901082
14	VT 003069	N91004E / VA 93B
15	VT 003191	N92037 / VA 93B
16	VT 003192	N92037 / VA 901082
17	VT 003200	N93008 / VT 940419P
18	VT 024024	NC 12C / Wilson
19	VT 023117	VA 98R // X98025 (F1), Wilson / N95003C
20	VT 024051	VA 98R // X98011 (F1), Perry / N96076L
21	N03023EF	VA 98R / X98011 (F1)
22	N04074FCT	N97070 / N96029
23	N05006	NC-V 11 // Ga. Green / NC-V 11
24	N05007	Ga. Green // NC-V 11 / Ga. Green
25	N05008	Ga. Green // NC-V 11 / Ga. Green
26	N05018	N97137C / N98002
27	N03088T	NC 12C*2 / N96076L
28	N05024J	N98002 / N97140C
29	N05049J	N98002 / N99121CSm
30	HST 02-08	NC 6 / 90 APS 15

Plant Material and Test Locations

Table 2. Planting, digging and combining dates for each test location in 2009. Planting date I was considered an early planting, II optimum planting, and III late planting times for peanut in V-C area.

Locations	Planting Date (PD)			Digging Date			Combining Date		
	I	II	III	I	II	III	I	II	III
Tidewater AREC, VA	April 20	May 1	May 15	Oct. 2	Oct. 9	Oct. 20	Oct. 9	Oct. 21	Oct. 23
Southampton Co., VA	April 24			Sept. 30			Oct. 5		
Martin Co., NC	April 30		May 14	Sept. 24		Oct. 7	Oct. 1		Oct. 14
Rocky Mount, NC			May 14			Oct. 8			Oct. 19
Whiteville, NC		May 5			Oct. 12			Oct. 20	
Florence, SC		May 4			Oct. 9			Oct. 22	

Weather Conditions

WEATHER CONDITIONS

The 2009 cropping season began with good conditions for germination and emergence at all locations. Throughout the growing season rainfall was plentiful at all locations except at Rocky Mount where rainfall was scarce for the entire season. At this location irrigation was applied to the plot in June and July. Weather information is provided in Tables 3 through 8.

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 2009 peanut growing season. These data were recorded next to the plots from planting PD I to the harvest of PD III.

Month	AVG Tair	Max Tair	Min Tair	AVG Tsoil	Heat units DD56	AVG PAR ¹	Max PAR	RH	Rain
	°F				°F d	μmol m ⁻² s ⁻¹		%	inch
May	71	80	64	69	137	574	2188	78	1.77
June	80	90	73	75	635	575	2248	78	3.38
July	81	91	73	76	1321	587	2172	77	6.02
August	83	92	75	78	2063	500	2062	85	5.86
September	73	81	66	69	2669	394	1733	86	5.54
October	69	79	62	67	2954	268	1267	74	0.16
Mean	76	86	69	72	2954	483	1945	80	22.73

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 600 μmol m⁻² s⁻¹. If these numbers are less, it denotes cloudy days, on which plants grow less.

Weather Conditions

Table 4. Temperature, peanut heat units (degree day – DD56) calculated based on a 56 °F temperature base (T_b), air relative humidity (RH), and precipitation at Southampton County, VA, in 2009 peanut growing season. These data were provided by Mr. J. Pond for rain from planting to harvest and the State Climate Office of NC for the other weather factors from 1 May to 31 October. Information on light is not available at this site.

Month	AVG Tair	Max Tair	Min Tair	Heat units DD56	RH	Rain
	°F			°F d	%	inch
May	70.7	81.1	60.6	232	76.2	3.4
June	77.0	87.6	67.2	782	74.6	5.3
July	78.2	89.0	68.2	1445	72.9	5.3
August	79.9	89.1	72.2	2204	80.9	2.9
September	70.6	80.7	62.0	2817	82.0	3.9
October	61.2	71.4	51.3	3137	80.3	2.4
Mean	73	83	64	3137	78	23.2

Table 5. Temperature of air and soil at 4 inches depth, and air relative humidity (RH) at Martin County, NC, in 2009 peanut growing season. These data were recorded next to the plots from planting of PD I to the harvest of PD II. Rain sensor did not function properly, for which precipitation information is not available at this site.

Month	AVG Tair	Max Tair	Min Tair	AVG Tsoil	RH
	°F				%
May	72.3	81.0	64.9	69.9	74.7
June	85.1	95.1	75.1	83.1	55.0
July	78.9	85.1	73.5	76.8	76.4
August	77.2	79.7	74.6	78.8	82.3
September	71.1	74.2	67.8	70.6	82.5
October	55.0	67.7	43.4	53.6	72.8
Mean	73	80	67	72	74

Weather Conditions

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 Rocky Mount, NC, in 2009 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	69.8	80.6	60.0	70.2	225	475.8	73.2	2.5
June	77.6	87.7	67.9	78.4	750	546.1	69.5	0.0
July	76.7	87.7	67.7	79.5	1386	494.4	71.5	0.7
August	78.7	89.6	70.9	81.1	2120	426.9	76.5	1.8
September	70.1	80.7	61.3	72.7	2719	343.7	75.9	2.8
October	60.4	71.1	50.6	63.4	3026	244.6	76.1	1.0
Mean	72.0	83	63	74	3026	422.0	74.0	8.8

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 7. 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 Whiteville, NC, in 2009 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	70.0	80.5	61.0	71.2	237	310.1	80.9	7.0
June	77.3	87.8	67.8	80.4	781	540.5	76.5	3.2
July	77.2	88.4	68.4	80.5	1463	492.8	77.1	5.1
August	78.0	88.7	70.3	81.1	2190	393.4	81.0	6.6
September	71.6	82.1	62.6	77.0	2791	341.2	78.1	1.9
October	62.1	72.8	52.8	67.8	3147	234.9	79.7	3.0
Mean	73	83	64	76	3147	385	79	26.84

Weather Conditions

Table 8. 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 Pee Dee Research and Education Center in Florence, SC, in 2009 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	°F	°F d	%	inch
May	70.8	81.1	61.8	243	76.4	6.3
June	78.4	89.0	69.2	816	73.6	4.7
July	78.3	90.0	69.5	1546	74.2	5.1
August	79.4	89.8	71.3	2313	78.5	2.3
September	73.4	84.9	63.9	2969	72.9	0.9
October	62.6	73.4	53.3	3366	78.4	3.2
Mean	74	85	65	3366	76	22.4

Cultural Practices

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 9 through 16 show planting dates, soil type, pH and mineral content, and cultural practices applied to the crops at each location.



Cultural Practices

Table 9. Cultural practices at Tidewater AREC (Suffolk), VA, for Planting Date (PD) I in 2009.

Planting Date		April 20					
Harvest Date		October 9					
Soil Type		Eunola & Dragston					
Soil Test Results	pH	P	K	Ca	Mg	Zn	Mn
	5.88	23	95	390	32	0.5	3.3
Cultivation	6/23						
Soil Fumigant	4/5 – Vapam 7.5 gal/A						
Landplaster	6/19 – Peanut Maker @ 1200 lbs/A						
HERBICIDES			INSECTICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
4/5	Dual Magnum	1.5 pt	4/20	Temik	7.5 lbs		
4/27	Intro	2 qt	6/23	Lorsban 15G	13 lbs		
4/27	Gromoxone	14 oz	5/20	Orthene 97	6 oz		
6/1	Storm	1.5 qt	6/30	Asana	6 oz		
6/22	Intro	1 qt					
FERTILITY			FUNGICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
4/5	Boron	1 qt	6/15	Bravo	3/4 pt		
6/15	Manganese	1.5 qt	7/22	Folicur	7.2 oz		
7/22	Manganese	1 qt	8/3	Omega	1 pt		
7/22	Boron	1 qt	8/3	Danitol	10 oz		
			8/21	Headline	10 oz		
			8/21	Danitol	10 oz		
			9/1	Omega	1 pt		
			9/13	Bravo	1.5 pt		

Cultural Practices

Table 10. Cultural practices at Tidewater AREC (Suffolk), VA, for Planting Date (PD) II in 2009.

Planting Date		May 1					
Harvest Date		October 21					
Soil Type		Eunola & Dragston					
Soil Test Results	pH	P	K	Ca	Mg	Zn	Mn
	5.88	23	95	390	32	0.5	3.3
Cultivation	6/22						
Soil Fumigant		4/5 – Vapam 7.5 gal/A					
Landplaster		6/19 – Peanut Maker @ 1200 lbs/A					
HERBICIDES			INSECTICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
4/5	Dual Magnum	1.5 pt	5/1	Temik	7.5 lbs		
4/27	Intro	2 qts	5/21	Orthene 97	6 oz		
4/27	Gramoxone	14 oz	6/22	Lorsban 15G	13 lbs		
6/1	Storm	1.5 pt	6/30	Asana	6 oz		
6/23	Intro	1 qt					
FERTILITY			FUNGICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
4/5	Boron	1 qt	6/15	Bravo	8 oz		
6/15	Manganese	1 qt	7/22	Folicur	7.2 oz		
7/22	Boron	1 qt	8/3	Provost	10 oz		
			8/3	Omega	1 pt		
			8/3	Danitol	10 oz		
			8/21	Danitol & Headline	10 oz		
			9/1	Omega	1 pt		
			9/13	Bravo	1.5 pt		

Cultural Practices

Table 11. Cultural practices at Tidewater AREC (Suffolk), VA, for Planting Date (PD) III in 2009.

Planting Date		May 15					
Harvest Date		October 23					
Soil Type		Eunola & Dragston					
Soil Test Results	pH	P	K	Ca	Mg	Zn	Mn
	5.88	23	95	390	32	0.5	3.3
Cultivation	6/23						
Soil Fumigant		4/5 – Vapam 7.5 gal/A					
Landplaster		6/19 – Peanut Maker @ 1200 lbs/A					
HERBICIDES			INSECTICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
4/5	Dual Magnum	1.5 pt	5/15	Temik	7.5 lbs		
4/27	Gramoxone	14 oz	5/23	Orthene 97	6 oz		
5/13	Intro	12 qts	6/23	Lorsban 15G	13 lbs		
6/1	Storm	1.5 pt	6/30	Asana	6 oz		
6/23	Intro	1 qt					
FERTILITY			FUNGICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
4/5	Boron	1 qt	6/15	Bravo	¾ pt		
7/22	Manganese	1 qt	7/22	Folicur	7.2 oz		
7/22	Boron	1 qt	8/3	Provost	10 oz		
			8/3	Danitol	10 oz		
			8/3	Omega	1 pt		
			8/21	Headline	10 oz		
			8/21	Danitol	10 oz		
			9/1	Omega	1 pt		
			9/13	Bravo	1.5 pt		

Cultural Practices

Table 12. Cultural practices at Southampton Co., VA in 2009.

Planting Date	April 24						
Harvest Date	October 5						
Soil Type	Emporia fine sandy loam						
Soil Test Results	pH	P	K	Ca	Mg	Zn	Mn
	5.9	45	125	467	119	0.5	1.4
Cultivation	6/25						
Soil Fumigant	4/10 – Vapam 7.5 gal/A						
Landplaster	6/25 – Peanut Maker @ 1200 lbs/A						
HERBICIDES			INSECTICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
4/10	Dual	1.5 pt	4/24	Temik	7.5 lbs		
4/29	Intro	2 qts	5/20	Orthene 97	6 oz		
6/3	Storm	1.5 pt	6/25	Lorsban	13 lbs		
6/26	Intro	1 qt	7/1	Asana	6 oz		
			8/5	Danitol	10 oz		
			8/21	Danitol	10 oz		
FERTILITY			FUNGICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
4/20	Boron	1 qt	6/23	Bravo	¾ pt		
6/23	Manganese	1.5 qt	7/22	Folicur	7.2 oz		
7/22	Manganese	1.5 qt	8/5	Provost	10 oz		
7/22	Boron	1 qt	8/5	Omega	1 pt		
			8/21	Headline	10 oz		
			9/1	Omega	1 pt		
			9/13	Bravo	1.5 pt		

Cultural Practices

Table 13. Cultural practices at Martin Co., NC, for Planting Dates (PD) I and II, in 2009.

Planting / Harvest for PD I		April 30 / October 1					
Planting / Harvest for PD II		May 14 / October 14					
Soil Type		Norfolk loamy fine sand					
Soil Test Results	pH	P	K	Ca	Mg	Zn	Mn
	5.94	109	113	418	45	0.8	1.6
Cultivation	6/29						
Soil Fumigant	4/13 – Vapam 7.5 gal/A						
Landplaster	7/8 – 1200 lbs/A Peanut Maker						
HERBICIDES			INSECTICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
4/13	Dual	1.5 pt	4/30	Temik	7.5 lbs		
5/14	Intro	2 qts	5/26	Orthene 97	6 oz		
5/14	Gramoxone	1 pt	6/29	Lorsban	13 lbs		
6/29	Intro	1 qt	6/29	Asana	6 oz		
			8/6	Danitol	10 oz		
			8/28	Danitol	10 oz		
FERTILITY			FUNGICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
4/13	Boron	1 qt	6/29	Bravo	¾ pt		
6/29	Manganese	1.5 qt	7/24	Folicur	7.2 oz		
7/24	Manganese	1 qt	8/6	Provost	10 oz		
7/24	Boron	1 qt	8/6	Omega	1 pt		
			8/28	Headline	10 oz		
			8/28	Omega	1 pt		
			9/13	Bravo	1.5 pt		

Cultural Practices

Table. 14 Cultural practices at Rocky Mount, NC in 2009.

Planting Date	May 14						
Harvest Date	October 19						
Soil Type							
Soil Test Results	pH	P	K	Ca	Mg	Zn	Mn
	5.58	158	232	765	179	3.4	7.5
Cultivation	None						
Soil Fumigant	None						
Landplaster	7/3 – 800 lb/A Gypsum						
HERBICIDES			INSECTICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
5/15	Dual Magnum	1.3 pt	7/2	Lorsban	13 lbs		
6/15	Galaxy	2 pt	7/2	Asana	9.6 oz		
6/15	Select	8 oz	8/4	Bathroid XL	3.2 oz		
7/4	Inttro	1 qt	8/4	Asana XL	4 oz		
8/12	Butyrac 200	½ pt	8/13	Asana	9.6 oz		
8/12	Poast	1.5 pt	8/20	Danitol	1 pt		
			8/28	Danitol	1 pt		
FERTILITY			FUNGICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
7/20	Boron	2.5 lb	7/20	Bravo WS	2 pt		
			7/20	Mangro	3 lb		
			7/29	Tilt/Bravo	1.5 pt		
			8/13	Folicur	7.2 oz		
			8/13	Bravo WS	1 pt		
			8/26	Abound	18 oz		
			9/9	Omega	1 pt		
			9/23	Bravo WS	1 qt		

Cultural Practices

Table 15. Cultural practices at Whiteville, NC in 2009.

Planting Date	May 5						
Harvest Date	October 20						
Soil Type	Goldsboro sandy loam						
Soil Test Results	pH	P	K	Ca	Mg	Zn	Mn
	6.5	8.4	125	467	119	0.5	1.4
Cultivation	None						
Soil Fumigant	None						
Landplaster	7/3 – 800 lb/A Gypsum						
HERBICIDES			INSECTICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
5/6	Dual Magnum	1 pt	5/5	Temik	7.5 lbs		
6/9	Basagran	1.5 pt	6/9	Orthene	1 lb		
6/30	Poast	1.5 pt	8/5	Danitol	10 oz		
8/5	Dual Magnum	1 qt	8/25	Danitol	12 oz		
			9/9	Danitol	12 oz		
FERTILITY			FUNGICIDES				
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
8/5	Boron 9%	1 qt	7/9	Headline	15 oz		
			7/21	Abound	16 oz		
			8/5	Folicur	10 oz		
			8/25	Bravo	1.5 pt		
			9/9	Headline	12 oz		

Cultural Practices

Table 16. Cultural practices used in PVQE Test, at Pee Dee Research and Education Center in Florence, SC in 2009.

Planting Date	May 4						
Harvest Date	October 22						
Soil Type	Norfolk loamy sand						
Soil Test Results	pH	P	K	Ca	Mg	Zn	Mn
	6.0	52	39	319	74	1.3	1.7
Cultivation	None						
Soil Fumigant	None						
Landplaster	6/29 – 1200 lbs/A Peanut Maker						
HERBICIDES				INSECTICIDES			
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
4/14	Prowl	1 qt	8/17	Karate	2 oz		
5/13	Dual Magnum	1.3 pt					
5/13	Valor	3 oz					
FERTILITY				FUNGICIDES			
Date	Product	Rate/Ac	Date	Product	Rate/Ac		
5/13	Inoculaid	16 oz	6/24	Solubor	2.5 lb		
7/14	Manganese Sulfate	1 qt	6/24	Bravo Weatherstik	1 pt		
			7/14	Bravo Weatherstik	1.5 pt		
			8/5	Provost	10 oz		
			8/17	Stratego	7 oz		
			8/17	Bravo	1.5 pt		
			9/1	Provost	10 oz		
			9/14	Stratego	7 oz		
			9/14	Bravo	1.5 pt		

2009 Results by Location

RESULTS

Throughout the growing season, plant growth habit, height and width were measured (Table 17 and 18). Seedcoat color and maturity are presented in Table 19. Except at Florence, SC, disease ratings were taken a few days before digging (Tables 20-24). 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, and value per acre obtained as the product of yield times the price per pound were determined in the laboratory.

The results are presented in tables 25 to 37 and figures 1 through 27 for individual locations. Grade factors were averaged for all locations in Table 38 and Figures 28 through 30. Two-year averages are presented in Tables 39-42 for Tidewater AREC (Suffolk), Southampton County, VA, Martin County, NC and Florence, SC, for genotypes grown in 2008 and 2009. Average of 2 years 2008-2009 for all common locations and genotypes are in Table 43. Suggested VT lines for consideration to be released as cultivars or used in further crosses due to particular traits of are: VT 003200 for exceptional pod brightness and VT 003069 and N05024J for high yield with high content of SMK and ELK when planted earlier. Lines N05024J, N05018 and N05008 were also very productive.



2009 Results by Location

RESULTS – PLANT GROWTH

Table 17. Average plant growth habit across locations in 2009.

Variety or Line	Growth Habit
NC-V 11	IR ¹
Gregory	IR
Perry	IR
CHAMPS	R
Phillips	IR
Bailey	IR
Georgia 08V	IR
Florida Fancy	IR
VA 98R	R
Sugg	IR
VT 024077	IR
VT 004152	IR
VT 003194	IR
VT 003069	IR
VT 003191	IR
VT 003192	IR
VT 003200	IR
VT 024024	IR
VT 023117	IR
VT 024051	IR
N03023EF	IR
N04074FCT	IR
N05006	IR
N05007	IR
N05008	IR
N05018	IR
N03088T	IR
N05024J	IR
N05049J	IR
HST 02-08	B

¹ Plant growth habit classifications: IR = Intermediate Runner; B = Bunch; R - Runner

2009 Results by Location

RESULTS – PLANT HEIGHT AND WIDTH

Table 18. Average plant height and width (inches)¹ measured at Tidewater AREC (Suffolk), VA in mid July 2009.

Variety or Line	Plant Height	Plant Width
NC-V 11	17.4 c-g ²	78.1 b-h
Gregory	18.3 b-g	77.6 c-h
Perry	18.3 b-g	75.8 c-h
CHAMPS	16.9 e-g	80.7 a-d
Phillips	18.6 –f	75.2 c-h
Bailey	19.0 bc	75.6 c-h
Georgia 08V	14.3 i	76.9 c-h
Florida Fancy	14.9 hi	77.1 c-h
VA 98R	16.7 g	80.1 a-f
Sugg	18.8 b-d	76.7 c-h
VT 024077	18.4 b-f	79.8 a-f
VT 004152	18.6 b-e	80.6 a-e
VT 003194	17.2 d-g	73.6 f-h
VT 003069	17.2 d-g	86.5 a
VT 003191	19.0 bc	76.1 c-h
VT 003192	16.6 gh	81.3 a-c
VT 003200	17.0 e-g	73.9 e-h
VT 024024	16.7 g	71.7 h
VT 023117	16.8 fg	80.1 a-f
VT 024051	16.7 g	73.0 gh
N03023EF	16.8 fg	73.6 f-h
N04074FCT	21.6 a	79.3 b-g
N05006	17.7 b-g	84.7 ab
N05007	17.1 d-g	76.4 c-h
N05008	17.1 d-g	74.9 c-h
N05018	19.4 b	80.9 a-d
N03088T	18.4 b-f	77.4 c-h
N05024J	19.2 b	74.4 d-h
N05049J	18.3 b-g	73.6 f-h
HST 02-08	19.4 b	59.9 i
Mean	1.8	6.8

¹Main stem height in inches. Each mean is an average of eight plants.

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

2009 Results by Location

RESULTS – COLOR AND MATURITY

Table 19. Seedcoat color and maturity rating of the peanut entries averaged for all locations in 2009.

Variety or Line	Seedcoat ¹	ELK	Maturity Rating ²
	Color		Medium
NC-V 11	LP	1.0	1.0
Gregory	LP	1.0	1.3
Perry	LP	1.0	1.3
CHAMPS	LP	1.0	1.1
Phillips	LT	1.0	1.3
Bailey	LT	1.0	1.0
Georgia 08V	T,LP	1.0	1.2
Florida Fancy	LP	1.0	1.1
VA 98R	LP	1.0	1.1
Sugg	LP	1.0	1.2
VT 024077	LP	1.0	1.0
VT 004152	LP	1.0	1.1
VT 003194	P,LT	1.0	1.0
VT 003069	P	1.0	1.1
VT 003191	LP	1.0	1.2
VT 003192	LP	1.0	1.1
VT 003200	LP	1.0	1.0
VT 024024	LP	1.0	1.0
VT 023117	LP	1.0	1.2
VT 024051	LP	1.0	1.1
N03023EF	LP	1.0	1.1
N04074FCT	LP	1.0	1.0
N05006	LP	1.0	1.0
N05007	LP	1.0	1.1
N05008	LP	1.0	1.1
N05018	LT	1.0	1.1
N03088T	LP	1.0	1.0
N05024J	LT	1.0	1.5
N05049J	LT	1.0	1.0
HST 02-08	LT	1.0	1.5

¹ T = tan, LP = light pink, P = pink, and LT = Light Tan² 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.

2009 Results by Location

RESULTS – DISEASE

Table 20. Disease incidence at the Tidewater AREC (Suffolk), VA evaluated on 22 September 2009.

Variety or Line	Tomato Spotted Wilt Virus ¹			Sclerotinia Blight			Cylindrocladium black rot	
	PD 1	PD 2	PD 3	PD 1	PD 2	PD 3	PD 1	PD 2
NC-V 11	4.0 ab ²	3.0 b-f	0.3 f	2.3 cd	1.7 cd	0.3 de	0.0 b	0.0 b
Gregory	2.7 ab	3.7 a-f	2.3 b-f	1.7 d	10.3 a	1.0 c-e	0.0 b	0.0 b
Perry	4.7 ab	4.0 a-e	1.7 b-f	2.3 cd	3.3 b-d	1.0 c-e	1.3 ab	0.0 b
CHAMPS	2.3 ab	3.7 a-f	1.7 b-f	2.3 cd	3.0 b-d	2.7 a-e	5.3 a	0.3 b
Phillips	2.3 ab	2.7 b-f	4.7 ab	4.7 b-d	4.0 a-d	2.0 a-e	3.7 ab	2.3 a
Bailey	3.0 ab	1.3 ef	0.7 ef	1.3 d	1.3 cd	0.0 e	0.0 b	0.0 b
Georgia 08V	1.0 b	2.3 c-f	1.3 c-f	2.0 cd	1.3 cd	0.3 de	0.3 b	0.0 b
Florida Fancy	1.3 b	4.0 a-e	1.7 b-f	3.3 cd	0.3 d	0.7 de	0.0 b	0.0 b
VA 98R	2.3 ab	3.0 b-f	4.3 a-c	5.3 b-d	3.3 b-d	4.3 a-c	1.7 ab	0.3 b
Sugg	2.0 ab	3.0 b-f	2.0 b-f	5.0 b-d	3.0 b-d	0.0 e	0.7 b	0.0 b
VT 024077	3.7 ab	5.0 a-c	1.7 c-f	5.0 b-d	5.7 a-d	1.7 b-e	4.0 ab	0.0 b
VT 004152	2.3 ab	3.3 a-f	6.3 a	5.3 b-d	4.7 a-d	4.7 ab	1.3 ab	0.0 b
VT 003194	2.7 ab	3.3 a-f	1.7 b-f	4.7 b-d	3.0 b-d	1.7 b-e	0.0 b	0.0 b
VT 003069	4.7 ab	5.7 ab	4.0 a-d	5.0 b-d	4.3 a-d	5.3 a	0.0 b	0.3 b
VT 003191	5.0 ab	4.0 a-e	4.0 a-d	6.3 b-d	2.7 b-d	0.3 de	0.0 b	0.0 b
VT 003192	3.3 ab	2.0 c-f	1.0 d-f	10.3 ab	2.7 b-d	5.3 a	3.3 ab	0.7 b
VT 003200	3.0 ab	2.7 b-f	3.0 b-f	5.3 b-d	3.7 b-d	0.7 de	0.3 b	0.0 b
VT 024024	3.3 ab	3.3 a-f	2.7 b-f	12.7 a	7.7 a-c	3.0 a-e	1.3 ab	0.0 b
VT 023117	2.3 ab	2.0 c-f	2.3 b-f	3.7 cd	1.3 cd	0.7 de	4.0 ab	0.0 b
VT 024051	2.7 ab	3.7 a-f	2.0 b-f	7.7 a-c	5.0 a-d	0.0 e	1.0 ab	1.0 ab
N03023EF	4.7 ab	2.7 b-f	2.7 b-f	2.0 cd	3.3 b-d	0.0 e	0.3 b	0.3 b
N04074FCT	6.3 a	2.3 c-f	2.0 b-f	6.7 b-d	1.3 cd	2.0 b-e	0.0 b	0.0 b
N05006	6.7 a	2.7 b-f	0.3 f	6.7 b-d	8.3 ab	2.0 a-e	0.7 b	0.0 b
N05007	1.0 b	1.7 d-f	0.7 ef	2.0 cd	3.0 b-d	1.0 c-e	2.7 ab	0.7 b
N05008	2.3 ab	0.7 f	3.0 b-f	4.3 cd	2.0 b-d	0.7 de	1.0 ab	0.0 b
N05018	5.3 ab	3.7 a-f	1.3 c-f	5.0 b-d	2.7 b-d	3.7 a-d	0.0 b	0.0 b
N03088T	3.0 ab	2.7 b-f	3.7 a-e	1.3 d	1.0 d	3.3 a-e	0.0 b	0.0 b
N05024J	4.0 ab	6.3 a	0.7 ef	2.3 cd	5.0 a-d	2.0 a-e	0.0 b	0.0 b
N05049J	2.7 ab	2.7 b-f	3.3 a-f	1.0 d	1.0 d	1.0 c-e	0.0 b	0.0 b
HST 02-08	2.3 ab	4.7 a-d	1.3 c-f	3.3 cd	3.3 b-d	1.3 c-e	0.7 b	0.0 b
Mean	4.9	3.2	3.1	6.0	6.6	3.5	4.5	1.4

¹ Hit (one foot row) count per plot with plants showing symptoms of Tomato Spotted Wilt Virus, Sclerotinia blight, and Cylindrocladium black rot. CBR symptomatic plants were almost absent for PD 3.

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

2009 Results by Location

Table 21. Disease incidence at Southampton Co., VA, evaluated on 20 September 2009.

Variety or Line	Tomato Spotted Wilt	
	Virus ¹	Sclerotinia Blight
NC-V 11	4.3 a-c ²	2.3 b-d
Gregory	4.3 a-c	1.0 cd
Perry	3.3 a-f	1.7 b-d
CHAMPS	3.7 a-e	3.3 b-d
Phillips	2.3 b-g	11.0 a
Bailey	2.7 a-g	0.0 d
Georgia 08V	1.0 fg	0.7 cd
Florida Fancy	2.3 b-g	0.0 d
VA 98R	3.0 a-g	0.7 cd
Sugg	3.0 a-g	1.3 b-d
VT 024077	2.7 a-g	6.3 a-c
VT 004152	1.7 d-g	4.3 b-d
VT 003194	3.0 a-g	0.3 c
VT 003069	4.7 ab	2.3 b-d
VT 003191	4.0 a-d	3.7 b-d
VT 003192	2.7 a-g	7.0 ab
VT 003200	3.0 a-g	2.7 b-d
VT 024024	2.7 a-g	1.0 cd
VT 023117	3.3 a-f	3.3 b-d
VT 024051	2.7 a-g	2.7 b-d
N03023EF	4.3 a-c	2.3 b-d
N04074FCT	3.7 a-e	1.0 cd
N05006	1.3 e-g	0.7 cd
N05007	1.3 e-g	4.0 b-d
N05008	2.0 c-g	2.3 b-d
N05018	3.3 a-f	5.0 b-d
N03088T	2.7 a-g	1.0 cd
N05024J	5.0 a	0.7 cd
N05049J	3.3 a-f	0.7 cd
HST 02-08	0.7 g	1.0 cd
Mean	2.4	5.8

¹ Hit (one foot row) count per plot with plants showing symptoms of Tomato Spotted Wilt Virus, and Sclerotinia blight. CBR symptomatic plants were almost absent.

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

2009 Results by Location

Table 22. Disease incidence at Martin County, NC, evaluated on 21 September 2009.

Variety or Line	Tomato Spotted Wilt Virus ¹		Sclerotinia Blight	
	Planting Date I	Planting Date II	Planting Date I	Planting Date II
NC-V 11	1.0 bc ²	0.0 c	4.3 a-c	1.3 b-d
Gregory	0.3 c	1.7 a-c	6.0 a-c	3.7 b-d
Perry	2.3 a-c	0.7 bc	5.7 a-c	3.0 b-d
CHAMPS	1.7 a-c	0.0 c	2.7 a-c	3.0 b-d
Phillips	2.0 a-c	0.3 c	2.7 a-c	4.0 b-d
Bailey	0.3 c	0.7 bc	1.0 bc	1.0 cd
Georgia 08V	2.0 a-c	0.7 bc	1.7 a-c	0.7 cd
Florida Fancy	0.7 c	1.0 a-c	0.7 c	0.0 d
VA 98R	4.0 a	1.7 a-c	4.3 a-c	1.0 cd
Sugg	2.0 a-c	1.3 a-c	2.7 a-c	0.7 cd
VT 024077	1.3 a-c	1.3 a-c	6.0 a-c	3.0 b-d
VT 004152	0.3 c	0.7 bc	4.0 a-c	5.3 b
VT 003194	2.0 a-c	1.3 a-c	3.7 a-c	2.7 b-d
VT 003069	1.7 a-c	0.7 bc	5.0 a-c	1.7 b-d
VT 003191	1.7 a-c	1.0 a-c	8.7 a	3.3 b-d
VT 003192	1.3 a-c	3.0 a	4.7 a-c	2.7 ab
VT 003200	1.7 a-c	1.0 a-c	7.0 a-c	9.7 a
VT 024024	2.7 a-c	0.7 bc	7.7 a-c	0.7 cd
VT 023117	0.3 c	0.3 bc	6.0 a-c	1.7 b-d
VT 024051	2.0 a-c	0.3 bc	8.0 ab	2.7 b-d
N03023EF	3.7 ab	2.0 a-c	2.7 a-c	1.0 cd
N04074FCT	1.3 a-c	2.3 ab	4.3 a-c	3.7 b-d
N05006	1.3 a-c	0.3 bc	2.3 a-c	3.7 b-d
N05007	2.0 a-c	1.0 a-c	5.3 a-c	1.0 cd
N05008	0.7 c	1.3 a-c	1.7 a-c	2.3 b-d
N05018	1.7 a-c	0.7 bc	7.0 a-c	2.7 b-d
N03088T	0.7 c	2.0 a-c	1.3 bc	2.7 b-d
N05024J	3.7 ab	2.3 ab	8.0 ab	4.7 ab
N05049J	1.7 a-c	1.7 a-c	2.3 a-c	3.0 b-d
HST 02-08	3.0 a-c	1.7 a-c	2.7 a-c	2.7 b-d
Mean	2.9	2.2	7.0	4.3

¹ Hit (one foot row) count per plot with plants showing symptoms of Tomato Spotted Wilt Virus and Sclerotinia Blight. CBR symptomatic plants were almost absent.

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

2009 Results by Location

Table 23. Disease incidence at Rocky Mount, NC, evaluated on 6 October, 2009.

Variety or Line	Tomato Spotted Wilt	
	Virus ¹	Sclerotinia Blight
NC-V 11	1.7 c-e ²	1.3 a-c
Gregory	2.0 b-e	1.3 a-c
Perry	2.0 b-e	0.7 a-c
CHAMPS	2.7 bc	2.3 a
Phillips	2.0 b-e	0.0 c
Bailey	1.3 c-e	1.0 bc
Georgia 08V	2.0 b-e	0.3 bc
Florida Fancy	2.7 a-c	0.3 c
VA 98R	2.0 b-e	0.0 c
Sugg	1.7 c-e	1.0 a-c
VT 024077	2.3 b-d	1.0 a-c
VT 004152	1.0 de	2.0 ab
VT 003194	1.3 c-e	1.3 a-c
VT 003069	2.3 b-d	1.3 a-c
VT 003191	1.3 c-e	0.0 c
VT 003192	1.0 de	0.0 c
VT 003200	0.7 e	1.3 a-c
VT 024024	1.3 c-e	2.3 a
VT 023117	0.7 e	0.3 bc
VT 024051	1.3 c-e	0.7 a-c
N03023EF	1.3 c-e	0.0 c
N04074FCT	3.3 ab	0.3 bc
N05006	2.0 b-e	0.7 bc
N05007	1.0 de	2.3 a
N05008	0.7 e	0.3 bc
N05018	4.0 a	0.0 c
N03088T	1.0 de	1.0 a-c
N05024J	1.7 c-e	0.7 a-c
N05049J	2.0 b-e	0.0 c
HST 02-08	1.7 c-e	1.0 a-c
Mean	1.5	2.0

¹ Hit (one foot row) count per plot with plants showing symptoms of Tomato Spotted Wilt Virus and Sclerotinia Blight. CBR symptomatic plants were almost absent.

³ Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's protected LSD test.

2009 Results by Location

Table 24. Disease incidence at Whiteville, NC, evaluated on 5 October, 2009.

Variety or Line	Tomato Spotted Wilt Virus ¹	Sclerotinia Blight	Cylindrocladium black rot
NC-V 11	3.0 b-d ²	0.0 c	1.0 a-c
Gregory	2.7 b-d	0.7 bc	0.7 bc
Perry	4.0 a-d	0.7 bc	0.0 c
CHAMPS	2.3 b-d	1.0 bc	1.0 a-c
Phillips	3.3 a-d	0.0 c	0.7 bc
Bailey	4.0 a-d	0.3 bc	0.0 c
Georgia 08V	2.3 b-d	0.0 c	0.0 c
Florida Fancy	4.3 a-c	0.3 bc	0.0 c
VA 98R	4.0 a-d	0.7 bc	0.0 c
Sugg	2.3 b-d	0.7 bc	0.0 c
VT 024077	4.7 ab	5.3 a	0.0 c
VT 004152	2.7 b-d	1.7 bc	0.3 bc
VT 003194	2.0 cd	1.3 bc	1.0 a-c
VT 003069	1.7 d	0.7 bc	1.0 a-c
VT 003191	4.0 a-d	0.3 bc	0.3 bc
VT 003192	2.7 b-d	1.7 bc	0.3 bc
VT 003200	3.0 b-d	1.0 bc	2.3 ab
VT 024024	3.7 a-d	0.0 c	3.0 a
VT 023117	2.0 cd	0.0 c	0.0 c
VT 024051	3.0 a	2.0 b	1.0 a-c
N03023EF	4.7 ab	0.3 bc	0.3 bc
N04074FCT	5.7 a	2.0 b	0.7 bc
N05006	2.7 b-d	0.0 c	0.0 c
N05007	2.0 cd	0.7 bc	0.7 bc
N05008	3.0 b-d	0.7 bc	1.3 a-c
N05018	3.3 a-d	2.0 b	0.3 bc
N03088T	3.7 a-d	0.0 c	0.3 bc
N05024J	3.7 a-d	2.0 b	0.0 c
N05049J	3.3 a-d	1.0 bc	0.3 bc
HST 02-08	3.3 a-d	0.3 bc	0.3 bc
Mean	2.5	1.8	2.3

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

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

2009 Results by Location

RESULTS – PODS

Table 25. Average percent of jumbo pods¹ based on farmers' grade at all locations in 2009.

Variety or Line	Suffolk, VA			Southampton Co., VA	Martin Co., NC		Rocky Mount, NC	Whiteville, NC	Florence, SC	Average of all locations
	PD I	PD II	PD III		PD I	PD II				
NC-V 11	37 g-i	36 h-k	31 g-j	40 f-j	30 g-l	31 g-i	--	24 h-j	10 k-m	30 i-k
Gregory	76 a	67 a	73 a	72 ab	70 a	72 a	66 ab	59 ab	51 ab	67 a
Perry	35 hi	39 f-j	30 g-k	48 ef	32 g-j	24 h-j	34 hi	36 d-h	32 e-g	35 g-i
CHAMPS	42 f-h	36 h-k	28 h-k	39 f-j	26 h-l	21 i-k	35 g-i	20 j	10 k-m	29 jk
Phillips	48 ef	37 g-k	38 e-g	45 fg	32 g-k	34 f-h	--	29 g-j	16 j-m	35 g-i
Bailey	29 i	21 lm	13 l	33 h-l	19 l	12 k	--	18 j	16 j-m	20 lm
Georgia 08V	59 cd	54 c-e	60 a	58 cd	57 b-d	51 c-e	53 c-e	50 b-d	42 b-e	54 e
Florida Fancy	61 c	56 b-c	50 cd	62 b-d	57 b-d	62 a-c	--	35 e-i	40 c-f	53 e
VA 98R	41 f-h	33 h-k	30 g-k	36 g-k	35 g-i	20 i-k	--	32 e-i	7 lm	29 i-k
Sugg	38 g-i	33 i-k	22 j-l	27 k-m	27 h-l	19 i-k	38 g-i	--	16 j-m	27 k
VT 024077	43 e-h	43 f-h	33 f-i	32 i-l	19 kl	18 jk	36 g-i	25 h-j	10 k-m	28 jk
VT 004152	51 de	48 d-f	57 bc	41 f-i	50 d-f	45 ef	55 b-d	41 c-g	30 fg	46 f
VT 003194	39 gh	32 i-k	24 i-k	30 j-m	33 g-j	22 i-k	34 hi	22 ij	17 i-l	28 jk
VT 003069	65 bc	62 a-c	55 bc	58 de	59 a-d	63 ab	51 c-f	46 b-e	35 d-g	55 de
VT 003191	45 e-g	42 f-h	36 e-h	48ef	35 g-j	35 fg	46 d-g	31 f-j	25 g-j	38 gh
VT 003192	37 g-i	31 j-l	27 h-k	30 j-m	25 i-l	19 jk	36 g-i	19 j	10 k-m	26 kl
VT 003200	65 bc	64 ab	64 ab	66 a-d	63 a-c	66 ab	72 a	52 a-c	45 bc	62 ab
VT 024024	66 bc	58 a-c	60 b	73 a	65 a-c	66 ab	55 b-d	45 b-f	27 g-i	57 b-e
VT 023117	36 g-i	35 h-k	35 e-h	23 lm	38 f-i	35 fg	29 i	21 j	6 m	29 jk
VT 024051	72 ab	60 a-c	57 bc	68 a-d	65 a-c	57 b-d	59 bc	50 b-d	27 gh	57 b-e
N03023EF	37 g-i	32 jk	29 g-k	36 g-k	30 g-l	27 g-j	31 hi	24 h-j	13 k-m	29 jk
N04074FCT	12 j	18 m	14 l	20 m	19 kl	18 jk	--	27 g-j	19 h-m	19 m
N05006	44 e-g	39 f-j	42 d-f	44 fg	41 e-g	49 de	--	32 e-j	26 g-j	40 g
N05007	66 bc	62 a-c	61 b	61 cd	65 ab	61 a-c	42 e-h	46 b-e	41 c-e	56 c-e
N05008	58 cd	59 a-c	62 b	59 cd	52 c-e	65 ab	--	32 e-j	32 e-g	52 e
N05018	40 f-h	46 e-g	44 de	37 g-j	39 f-h	28 g-j	36 g-i	24 h-j	19 h-k	35 g-i
N03088T	37 g-i	29 kl	21 kl	27 k-m	22 j-l	26 g-j	41 f-i	23 h-j	18 h-k	27 k
N05024J	66 bc	60 a-c	63 b	65 a-d	66 ab	64 ab	60 bc	51 a-c	45 b-d	60 b-d
N05049J	36 g-i	38 g-k	35 e-h	43 f-h	35 g-j	35 fg	32 hi	25 h-j	19 h-j	33 h-j
HST 02-08	60 cd	60 a-c	55 bc	68 a-c	64 a-c	62 a-c	52 c-f	65 a	59 a	61 bc
Mean	48	44	42	46	42	40	45	35	25	41
LSD_{0.05}²	8.7	9.6	9.5	10.3	12.8	11.5	11.6	14.2	10.2	5.8

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

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

2009 Results by Location

Table 26. Average percent of fancy pods¹ based on farmers' grade at all locations in 2009.

Variety or Line	Suffolk, VA			Southampton	Martin Co., NC		Rocky	Whiteville,	Florence,	Average of all locations
	PD I	PD II	PD III	Co., VA	PD I	PD II	Mount, NC	NC	SC	
NC-V 11	40 b-d	39 e-g	45 d-g	40 f-h	51 b-e	52.0 c-e	--	50 a-c	32 i-k	43 f-i
Gregory	18 k	24 i	22 l	20 m	23 i	21.3 i	24 fg	23 k	28 jk	23 m
Perry	42 bc	41 c-f	44 d-h	38 hi	52 a-d	57.5 a-d	48 ab	43 b-h	37 e-i	44 e-h
CHAMPS	40 bc	40 d-g	49 b-e	44 d-h	55 a-c	58.7 a-d	51 a	53 ab	41 d-g	48 c-e
Phillips	37 c-f	47 a-d	49 b-e	42 f-h	54 a-c	53.3 b-e	--	46 a-f	51 ab	48 c-e
Bailey	43 bc	50 ab	55 a-c	50 b-d	59 ab	59.7 a-c	--	46 a-g	44 c-e	50.1 a-d
Georgia 08V	33 d-g	33 g-j	31 jk	31 ij	33 gh	39.0 fg	37 c-e	35 f-i	37 e-i	34 j
Florida Fancy	27 g-j	29 j-l	35 ij	27 j-l	30 hi	27.7 hi	--	37 e-i	34 g-j	31 j-l
VA 98R	38 c-e	39 e-g	46 d-g	42 f-h	48 c-e	57.7 a-d	--	48 a-d	37 e-i	44 e-h
Sugg	43 bc	44 b-e	56 ab	57 a	59 ab	62.3 ab	52 a	--	54 a	53 ab
VT 024077	41 bc	42 c-f	46 d-g	49 c-e	62 a	63.3 a	48 ab	51 a-c	53 a	51 b-d
VT 004152	38 c-e	41 d-f	33 jk	41 f-h	42 e-g	45.5 ef	67 c-e	41 c-i	43 c-f	40 i
VT 003194	44 bc	44 b-e	51 b-d	53 a-c	53 a-d	61 a-c	49 ab	53 ab	49 a-c	51 a-c
VT 003069	25 h-k	28 j-l	32 jk	30 j	30 hi	26.0 hi	36 c-e	35 g-j	39 d-i	31 j-l
VT 003191	40 b-d	43 b-f	44 d-h	41 f-h	50 b-e	49.7 de	43 a-c	49 a-c	46 b-d	45 e-g
VT 003192	43 bc	45 b-e	48 c-f	50 b-d	51 b-e	54.0 b-e	44 a-c	43 b-h	33 h-k	46 e-g
VT 003200	27 g-j	25 kl	26 kl	25 j-m	30 hi	26.0 hi	22 g	36 e-i	36 f-i	28 l
VT 024024	25 h-k	31 h-k	30 jk	21 m	28 hi	25.7 hi	33 d-f	37 d-i	43 c-f	31 kl
VT 023117	42 bc	38 e-h	41 g-i	46 d-g	45 de	48.0 ef	48 ab	47 a-e	27 k	42 j-l
VT 024051	21 jk	28 j-l	30 jk	25 j-m	28 hi	32.3 gh	30 e-g	34 h-k	39 d-i	30 kl
N03023EF	40 b-d	43 b-f	48 d-g	42 e-h	52 b-d	57.7 a-d	51 a	52 a-c	39 d-i	47 d-f
N04074FCT	57 a	48 a-c	50 b-d	57 ab	55 a-c	54.3 a-e	--	51 a-c	52 ab	53 ab
N05006	37 c-f	39 e-g	37 h-j	38 hi	44 d-h	39.0 fg	--	49 a-c	43 c-f	41 hi
N05007	25 g-j	27 j-l	30 jk	27 j-l	27 hi	31.5 gh	40 b-d	43 b-h	38 e-i	32 jk
N05008	31 e-h	28 j-l	26 kl	29 jk	35 f-h	27.7 hi	--	47 a-e	42 c-f	33 jk
N05018	38 cd	36 f-i	41 g-i	46 d-f	49 c-e	59.7 a-c	46 a-c	48 a-d	46 b-d	46 e-g
N03088T	47 a	53 a	61 a	55 a-c	57 a-c	58.3 a-d	45 a-c	56 a	55 a	55 a
N05024J	23 i-j	27 j-l	26 kl	25 j-m	27 hi	27.3 hi	30 e-g	31 i-k	36 f-i	28 l
N05049J	41 bc	41 d-f	43 f-h	39 gh	48 c-e	46.3 ef	48 ab	47 a-e	40 d-h	44 g-i
HST 02-08	30 f-i	29 j-l	31 jk	22 k-m	28 hi	29.7 hi	33 d-f	24 jk	29 jk	28 l
Mean	36	37	40	38	44	45	42	43	41	41
LSD_{0.05}²	7.6	7.2	7	6.9	9.4	9.2	10.2	11.1	7.2	3.8

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

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

2009 Results by Location

Table 27. Average of pod brightness¹ (Hunter L Score) for jumbo pods in 2009.

Variety or Line	Suffolk, VA			Southampton Co., VA	Martin Co., NC		Rocky Mount, NC	Whiteville, NC	Florence, SC	Average of all locations
	PD I	PD II	PD III		PD I	PD II				
NC-V 11	45.7 c-e	44.0 a-g	44.6 bc	49.7 ab	48.5 b-f	47.5 a-d	--	47.1 b-g	47.3 a-d	46.8 b-f
Gregory	45.7 c-e	42.2 gh	45.8 a-c	48.5 b-f	49.3 b-d	47.0 a-g	45.3 bc	46.7 c-g	46.9 a-d	46.4 d-g
Perry	45.0 c-e	42.3 f-h	45.8 a-c	48.8 b-f	49.0 b-d	45.1 f-h	44.6 c	45.7 f-h	45.8 c-f	45.8 e-g
CHAMPS	46.0 a-e	44.4 a-e	45.3 a-c	49.0 b-d	50.0 a-c	47.6 a-d	46.4 a-c	46.4 d-g	45.6 c-f	46.8 b-f
Phillips	48.1 a	45.1 a-c	44.0 bc	48.9 b-e	51.5 a	47.5 a-d	--	47.6 a-f	48.7 a-c	47.7 a-c
Bailey	48.1 ab	45.6 a	46.4 ab	48.7 b-f	50.2 ab	46.5 b-h	--	48.9 ab	47.8 a-d	47.8 ab
Georgia 08V	44.2 de	42.5 e-h	44.7 bc	47.2 d-f	47.9 d-f	44.5 h	45.2 bc	46.2 e-g	47.2 a-d	45.6 fg
Florida Fancy	44.0 e	41.4 h	45.8 a-c	47.5 c-f	46.8 f	44.7 gh	--	46.8 b-g	46.6 a-d	45.5 g
VA 98R	46.7 a-c	43.1 d-h	45.5 a-c	48.2 b-f	49.1 b-d	46.8 a-g	--	48.2 a-e	42.8 e-g	46.2 d-g
Sugg	46.0 a-e	43.7 a-g	43.7 c	48.7 b-f	48.7 b-e	46.5 b-h	45.2 bc	--	47.0 a-d	46.2 d-g
VT 024077	46.0 a-e	44.6 a-d	45.2 a-c	48.8 b-f	49.2 b-d	48.4 a-c	45.0 bc	46.6 d-g	45.6 c-f	46.7 b-g
VT 004152	46.3 a-d	43.3 c-g	46.2 a-c	49.9 ab	48.5 b-f	46.2 c-h	46.5 a-c	47.1 b-g	48.8 a-c	47.0 a-d
VT 003194	46.5 a-d	44.6 a-d	44.5 bc	49.8 ab	49.6 b-d	48.7 ab	45.9 a-c	46.7 b-h	46.2 b-e	47.0 a-e
VT 003069	45.8 b-e	43.6 b-g	44.3 bc	48.4 b-f	46.9 f	44.9 f-h	44.4 c	46.5 d-g	47.5 a-d	46.0 e-g
VT 003191	46.3 a-d	44.0 a-g	44.2 bc	49.0 b-e	48.3 d-f	47.6 a-d	46.8 ab	45.1 gh	47.3 a-d	46.5 c-g
VT 003192	45.6 c-e	43.5 c-g	45.7 a-c	48.6 b-f	48.7 b-e	48.1 a-d	46.4 a-c	47.4 a-f	44.6 d-g	46.5 c-g
VT 003200	47.2 a-c	43.8 a-g	47.5 a	51.0 a	50.0 a-c	48.2 a-d	46.2 a-c	49.3 a	49.8 ab	48.1 a
VT 024024	46.3 a-d	44.2 a-f	47.5 a	49.6 ab	50.0 a-c	48.4 a-c	46.2 a-c	48.5 a-d	49.5 ab	47.8 ab
VT 023117	46.4 a-d	45.5 ab	44.8 bc	48.1 b-f	49.2 b-d	47.2 a-f	46.8 ab	47.0 b-g	41.6 g	46.3 d-g
VT 024051	45.6 c-e	44.2 a-f	45.0 a-c	48.8 b-f	48.9 b-d	48.1 a-d	46.4 a-c	47.1 b-g	48.3 a-d	46.9 a-e
N03023EF	45.3 c-e	43.7 a-g	46.1 a-c	48.3 b-f	47.9 d-f	47.4 a-e	47.4 a	46.8 b-g	47.7 a-d	46.7 b-f
N04074FCT	46.6 a-c	43.0 d-h	44.2 bc	50.0 ab	48.8 b-e	44.9 f-h	--	47.3 a-f	46.9 a-d	46.5 c-g
N05006	46.4 a-d	44.5 a-d	45.3 a-c	48.9 b-f	49.3 b-d	48.3 a-c	--	48.8 a-c	47.4 a-d	47.3 a-d
N05007	45.8 a-e	44.3 a-e	44.3 bc	48.5 b-f	48.4 c-f	47.4 a-e	45.3 bc	46.6 d-g	49.9 a	46.7 b-f
N05008	45.8 c-e	44.0 a-g	45.4 a-c	49.4 a-c	48.4 c-f	47.8 a-d	--	46.5 d-g	48.6 a-c	47.0 a-e
N05018	46.3 a-e	44.0 a-g	46.1 a-c	47.1 ef	49.8 a-c	48.8 a	45.5 a-c	46.3 e-g	48.1 a-d	46.9 a-e
N03088T	46.8 a-c	44.5 a-d	45.5 a-c	48.7 b-f	48.5 b-f	45.9 d-h	45.2 bc	46.7 d-g	46.9 a-d	46.6 b-g
N05024J	45.5 c-e	44.3 a-e	45.4 a-c	48.7 b-f	48.6 b-e	47.3 a-e	47.5 a	45.5 f-h	47.7 a-d	46.7 b-g
N05049J	46.9 a-c	42.9 d-h	47.4 a	47.1 f	48.8 b-e	47.0 a-g	46.2 a-c	47.6 a-f	48.5 a-c	46.9 a-e
HST 02-08	45.8 c-e	41.2 h	44.2 bc	44.8 g	47.1 ef	44.7 gh	42.1 d	43.7 h	42.3 fg	44.1 h
Mean	46.1	43.7	45.3	48.6	48.9	47.0	45.8	46.9	47.0	46.6
LSD_{0.05}²	2.3	1.9	2.7	1.9	1.8	2.3	2.1	2.1	3.7	1.2

¹ The higher the number the brighter the pod color.

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

2009 Results by Location

Table 28. Average of pod brightness¹ (Hunter L Score) for fancy pods in 2009.

Variety or Line	Suffolk, VA			Southampton Co., VA	Martin Co., NC		Rocky Mount, NC	Whiteville, NC	Florence, SC	Average of all locations
	PD I	PD II	PD III		PD I	PD II				
NC-V 11	45.4 a-d	42.6 a-d	43.5 b-h	48.7 b-f	47.8 c-f	46.1 a-d	--	47.9 a-e	46.7 d-j	46.0 a-f
Gregory	44.3 d-f	39.3 g	42.0 gh	48.2 c-f	47.1 e-g	45.4 c-f	42.2 d	46.8 c-g	44.7 j	44.3 h-j
Perry	44.7 b-f	42.0 b-e	44.6 a-f	49.0 a-f	48.3 b-f	46.5 a-d	45.2 ab	46.7 c-g	46.6 e-j	45.9 a-f
CHAMPS	46.0 ab	43.6 ab	44.3 a-g	48.8 b-f	49.5 a-c	46.1 a-d	45.0 ab	47.4 a-f	47.7 a-g	46.5 a-e
Phillips	46.0 a-c	44.0 a	44.0 a-h	49.4 a-c	50.7 a	46.9 a-d	--	48.2 a-d	48.8 a-d	47.3 a
Bailey	46.4 ab	43.4 ab	45.8 ab	47.1 d-g	48.7 b-e	46.7 a-d	--	49.0 a	49.0 a-c	47.0 a-c
Georgia 08V	42.8 ef	40.6 e-g	42.9 d-h	47.0 e-g	46.9 f-i	42.8 g	43.2 b-d	44.8 i	44.9 ij	44.1 jk
Florida Fancy	42.5 f	39.8 fg	43.2 c-h	46.8 fg	46.2 g-i	43.3 fg	--	47.0 b-g	46.6 e-j	44.4 g-j
VA 98R	46.0 ab	42.0 b-e	44.7 a-e	49.8 a-c	49.0 a-d	46.0 a-d	--	47.3 a-f	48.1 a-f	46.6 a-e
Sugg	45.3 a-e	40.7 d-g	43.0 d-h	48.8 b-f	48.1 b-f	46.2 a-d	45.5 ab	--	46.7 d-j	45.5 d-i
VT 024077	46.2 ab	43.0 a-c	44.8 a-d	48.8 b-f	49.1 a-d	47.3 a-d	44.5 a-d	45.9 f-i	47.1 b-h	46.4 a-f
VT 004152	44.9 a-f	42.1 b-e	42.8 d-h	49.1 a-e	47.6 d-g	45.3 d-f	45.1 ab	46.5 d-i	47.2 b-h	45.7 d-h
VT 003194	46.0 a-c	42.9 a-c	43.9 a-h	48.9 a-f	48.7 b-e	46.3 a-d	46.0 a	46.2 e-i	45.5 h-j	46.1 a-f
VT 003069	42.6 f	40.7 e-g	42.7 d-h	47.8 c-f	45.2 i	43.2 fg	43.3 b-d	46.7 c-h	45.7 g-j	44.3 i-k
VT 003191	44.5 b-f	41.5 c-f	41.6 h	48.4 b-f	47.0 e-h	45.8 b-e	45.9 a	44.9 hi	46.1 f-j	45.1 f-j
VT 003192	44.4 b-f	43.5 ab	45.5 a-c	47.9 c-f	48.1 b-f	47.4 a-d	45.8 a	48.2 a-c	47.4 a-h	46.5 a-e
VT 003200	47.2 a	42.2 a-e	44.0 a-h	51.1 a	48.8 b-e	47.2 a-d	45.3 ab	48.7 ab	49.3 a	47.1 ab
VT 024024	44.6 b-f	42.6 a-d	44.3 a-g	49.4 a-d	48.5 b-f	46.2 a-d	45.0 ab	48.1 a-d	49.2 a	46.4 a-f
VT 023117	44.9 a-f	43.2 a-c	43.2 c-h	49.0 a-f	49.6 ab	45.8 b-e	44.9 ab	46.7 c-g	46.7 d-j	46.0 a-f
VT 024051	43.8 c-f	41.8 b-e	42.3 e-h	48.4 b-f	47.2 e-g	46.4 a-d	45.2 ab	47.5 a-f	47.8 a-f	45.6 d-i
N03023EF	44.7 a-f	43.0 a-c	46.4 a	48.8 b-f	47.4 d-g	47.1 a-d	46.1 a	46.5 e-i	46.8 d-j	46.3 a-f
N04074FCT	45.0 a-f	43.2 a-c	44.4 a-g	50.5 ab	49.6 a-c	47.8 ab	--	46.6 c-i	47.6 a-h	46.8 a-d
N05006	45.8 a-d	42.3 a-e	45.9 ab	49.1 a-e	49.7 ab	48.1 a	--	48.9 a	48.0 a-f	47.2 a
N05007	44.0 b-f	42.0 b-e	43.1 c-h	49.5 a-c	48.4 b-f	47.1 a-d	44.4 a-d	46.3 e-i	47.6 a-h	45.8 b-g
N05008	45.0 a-f	42.9 a-c	44.9 a-d	48.8 b-f	48.1 b-f	47.5 a-c	--	45.5 g-i	48.6 a-e	46.4 a-f
N05018	45.9 a-c	43.0 a-c	44.6 a-f	48.9 a-f	49.1 a-d	48.0 ab	45.3 ab	46.9 c-g	47.9 a-f	46.7 a-e
N03088T	43.9 b-f	41.8 b-e	43.6 b-h	47.7 c-f	47.4 d-g	46.8 a-d	45.2 ab	46.7 c-g	45.6 g-j	45.4 e-j
N05024J	45.6 a-d	43.0 a-c	44.2 a-g	47.7 c-f	47.6 d-g	45.4 d-f	44.8 a-c	45.8 f-i	46.7 c-i	45.7 c-g
N05049J	46.2 ab	42.8 a-c	46.3 a	49.0 a-f	48.0 b-f	45.9 b-e	44.8 a-c	47.5 a-f	47.6 a-h	46.4 a-f
HST 02-08	44.1 b-f	39.3 g	42.1 f-h	45.1 g	45.3 hi	43.8 e-g	42.5 cd	42.4 j	41.9 k	43.0 k
Mean	45.0	42.2	44.0	48.6	48.1	46.1	44.8	46.8	47.0	45.9
LSD _{0.05} ²	2.5	1.9	2.5	2.3	1.7	2.2	2.4	1.7	2.2	1.4

¹ The higher the number the brighter the pod color.

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

2009 Results by Location

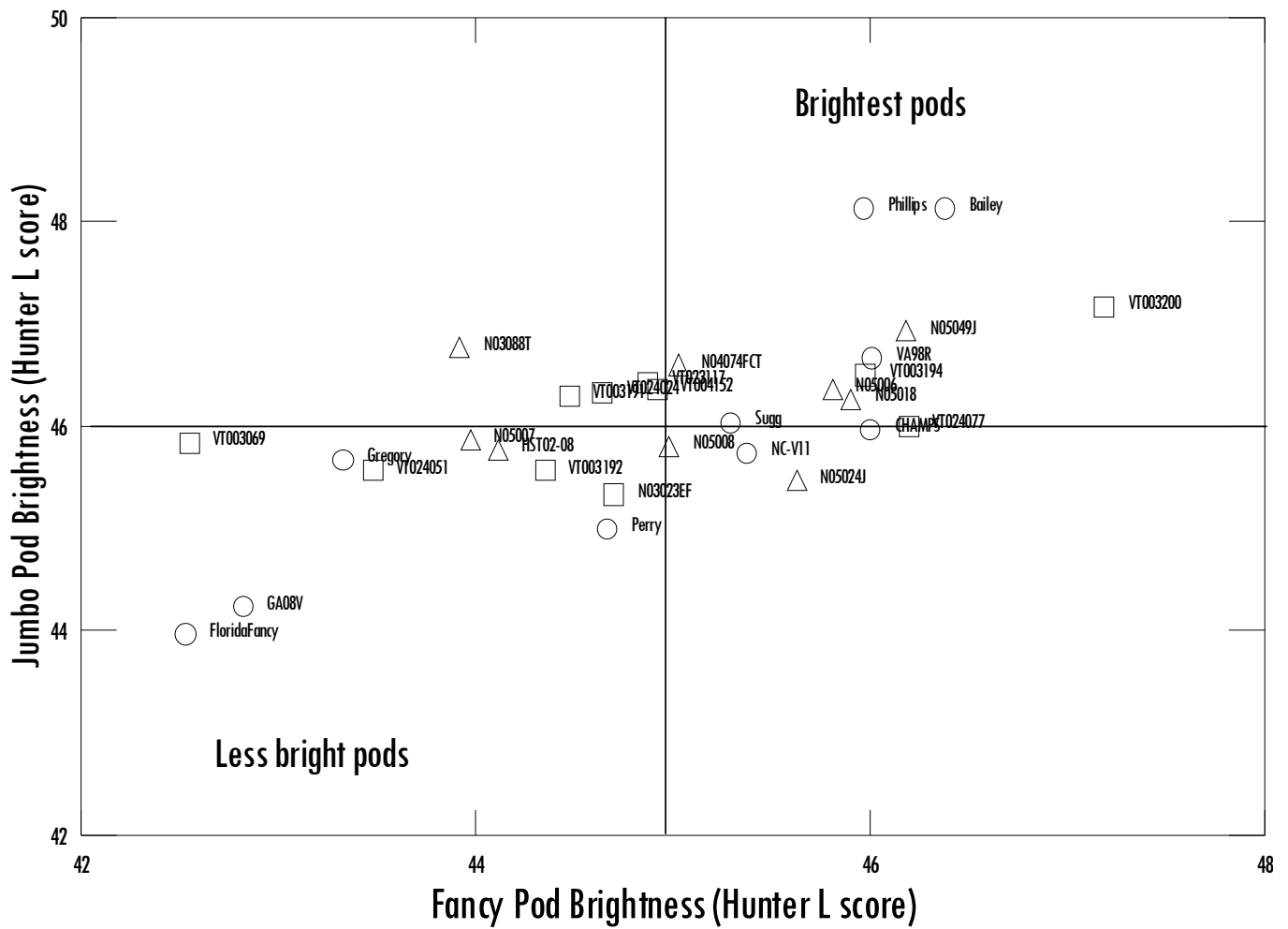


Figure 1. Brightness of jumbo and fancy pods of Planting Date I at Tidewater AREC, Suffolk, VA, in 2009.

2009 Results by Location

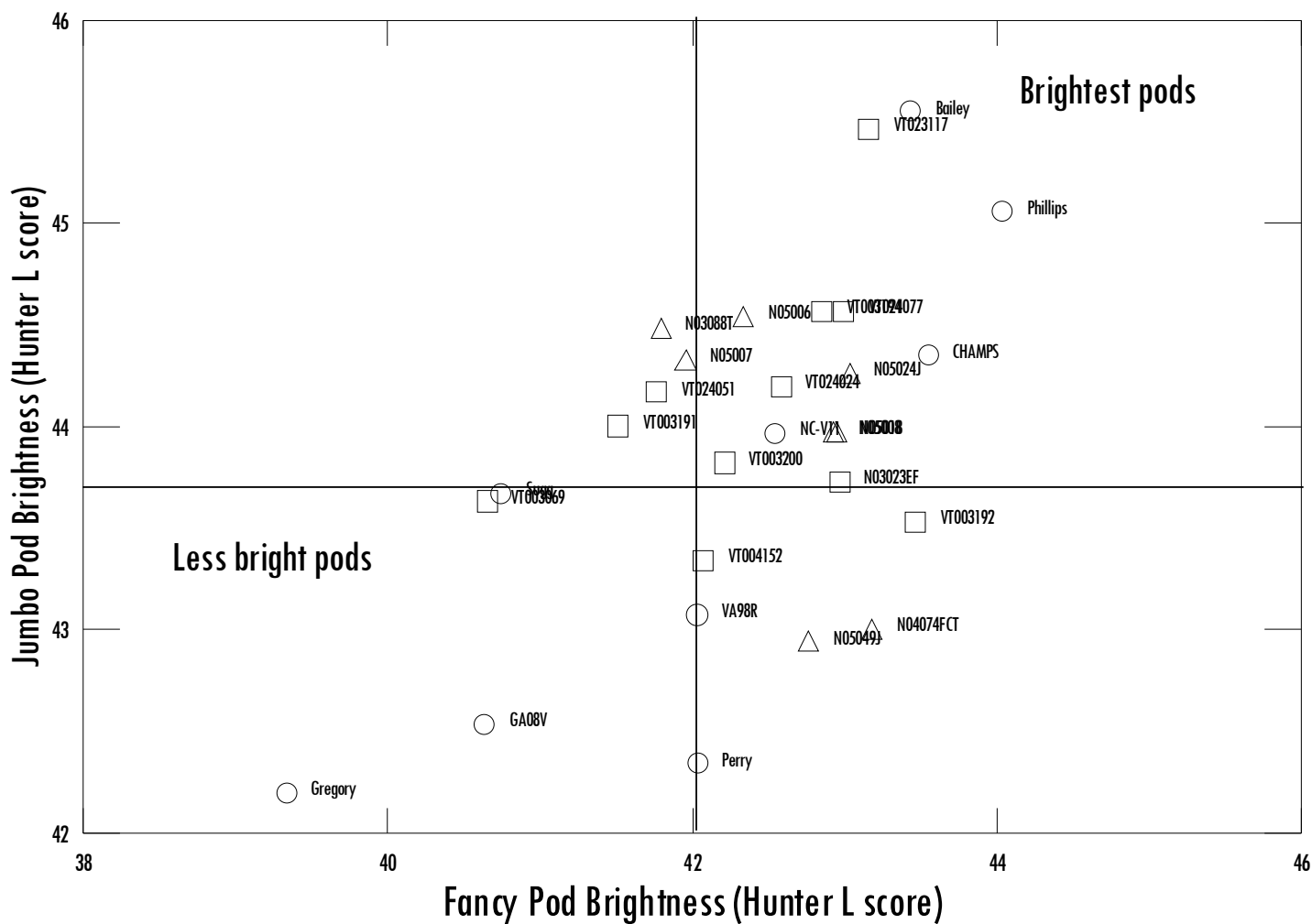


Figure 2. Brightness of jumbo and fancy pods of Planting Date II at Tidewater AREC, Suffolk, VA, in 2009.

2009 Results by Location

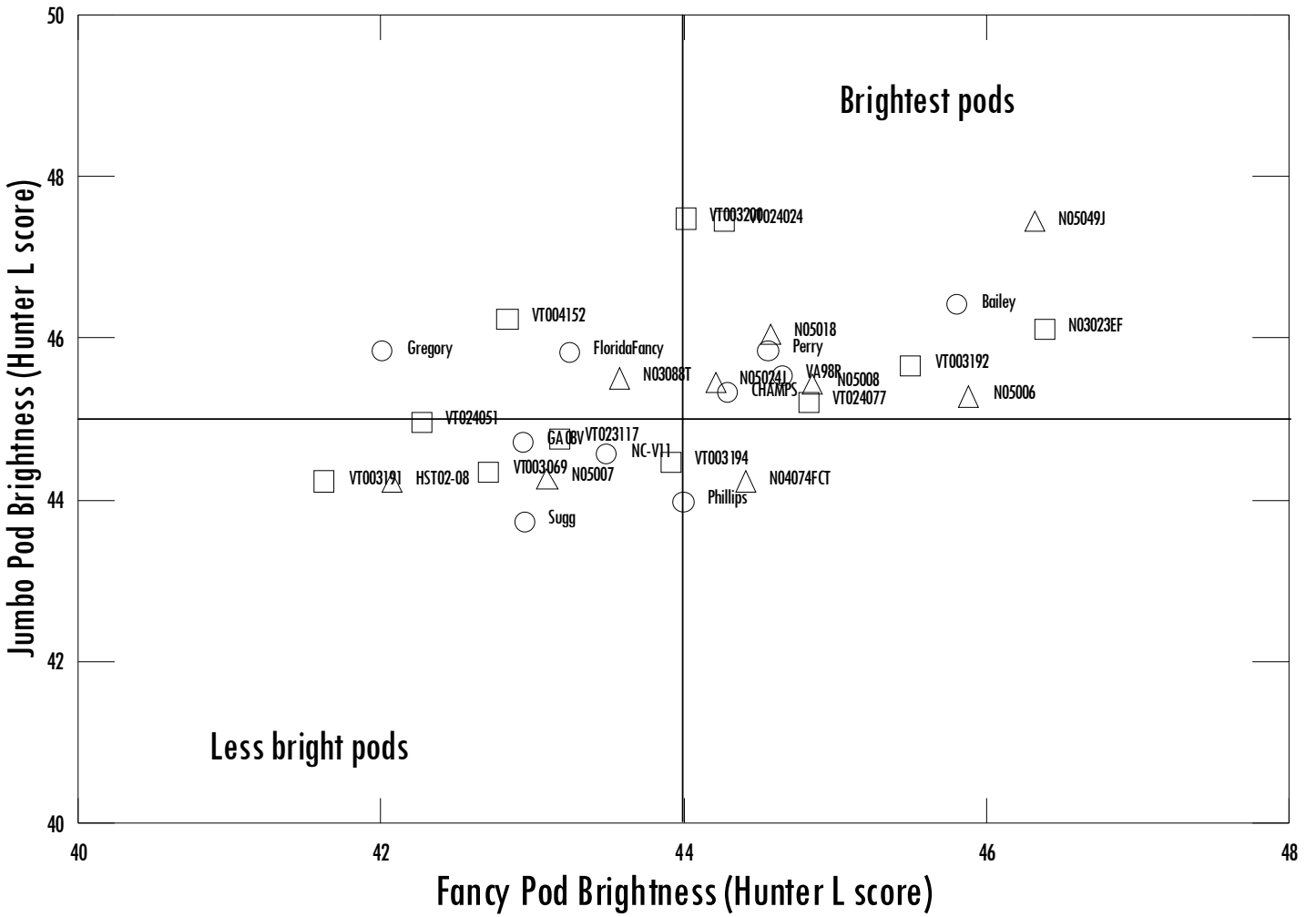


Figure 3. Brightness of jumbo and fancy pods of Planting Date III at Tidewater AREC, Suffolk, VA, in 2009.

2009 Results by Location

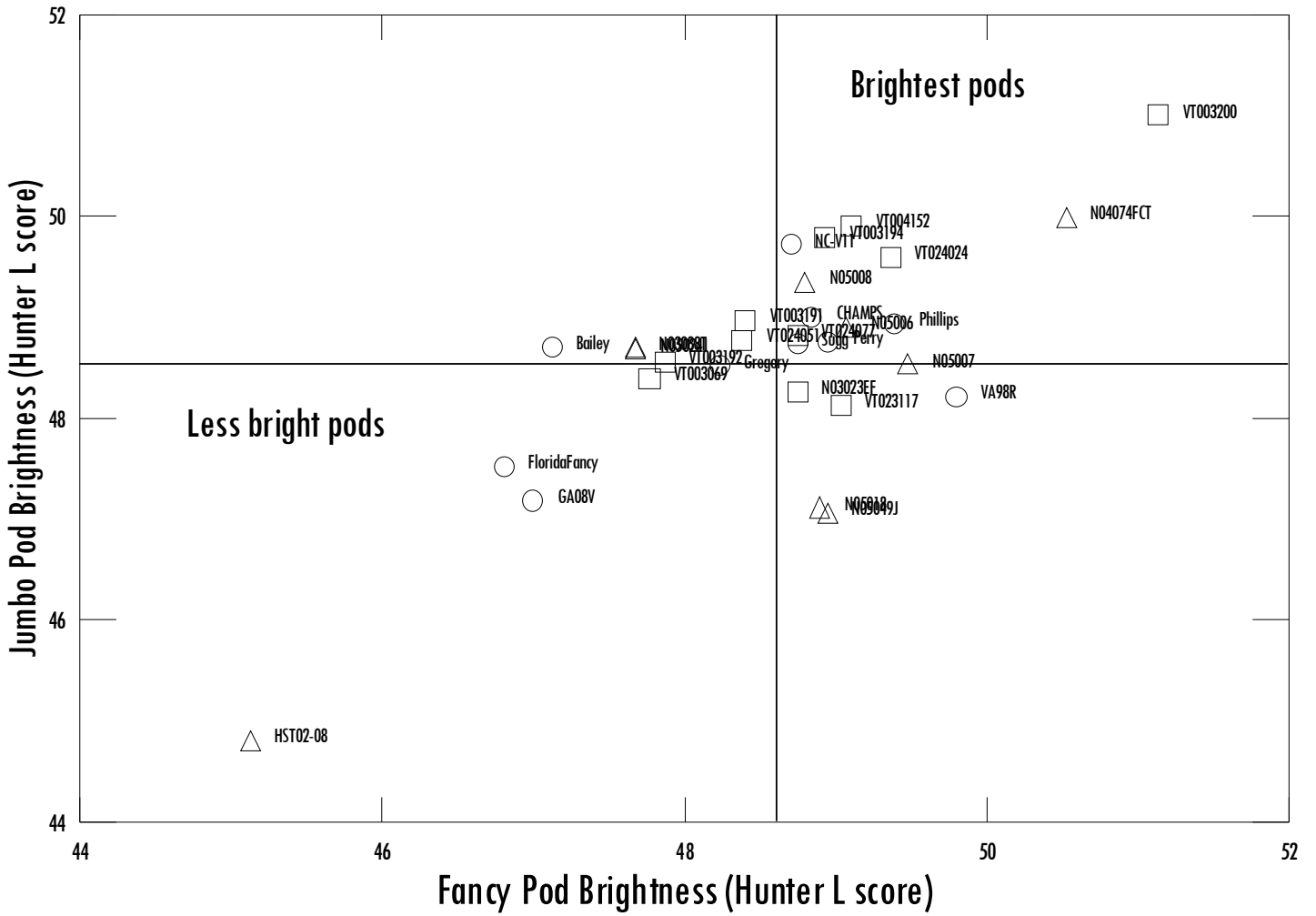


Figure 4. Brightness of jumbo and fancy pods at Southampton Co., VA, in 2009.

2009 Results by Location

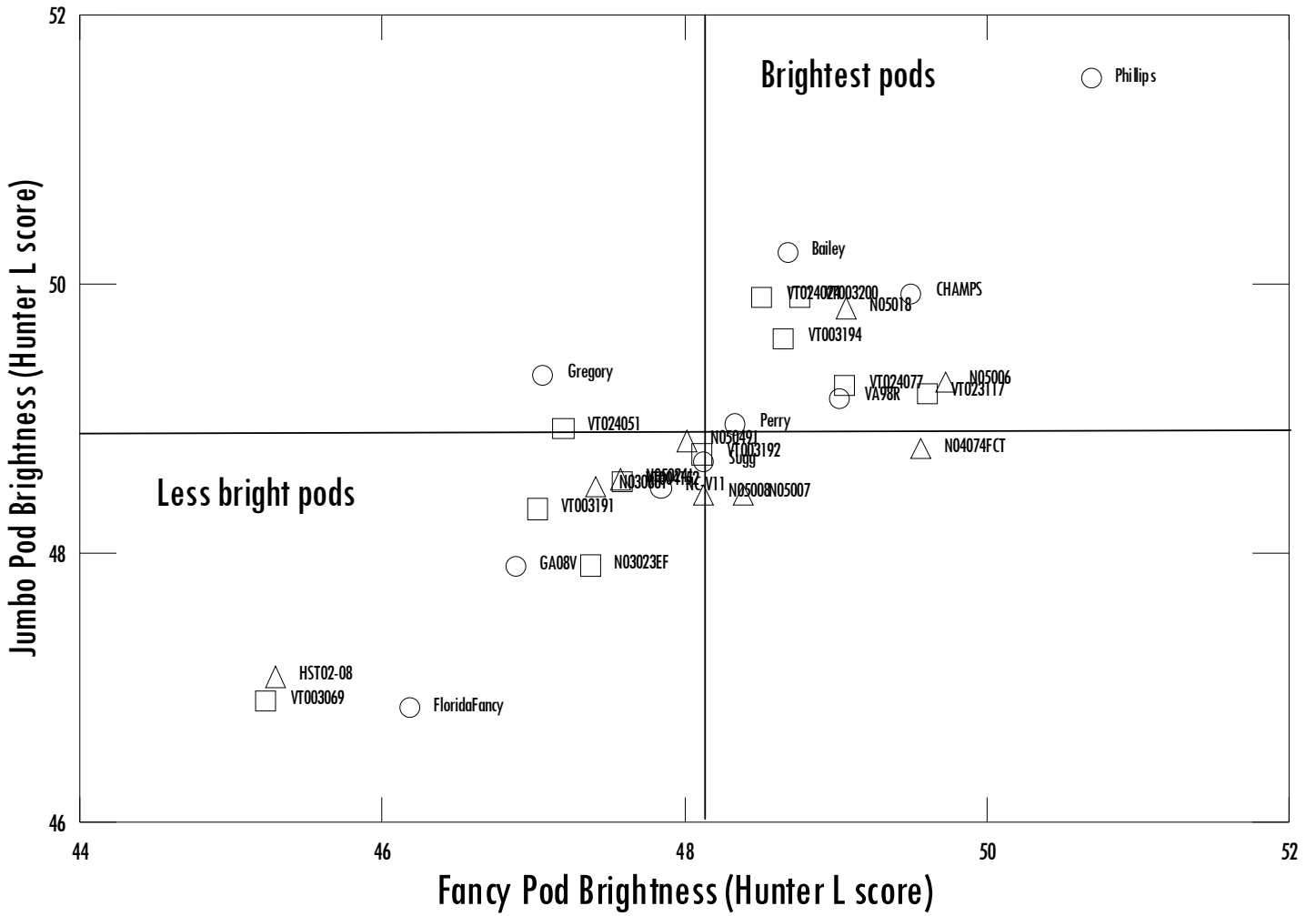


Figure 5. Brightness of jumbo and fancy pods of Planting Date I at Martin Co., NC, in 2009.

2009 Results by Location

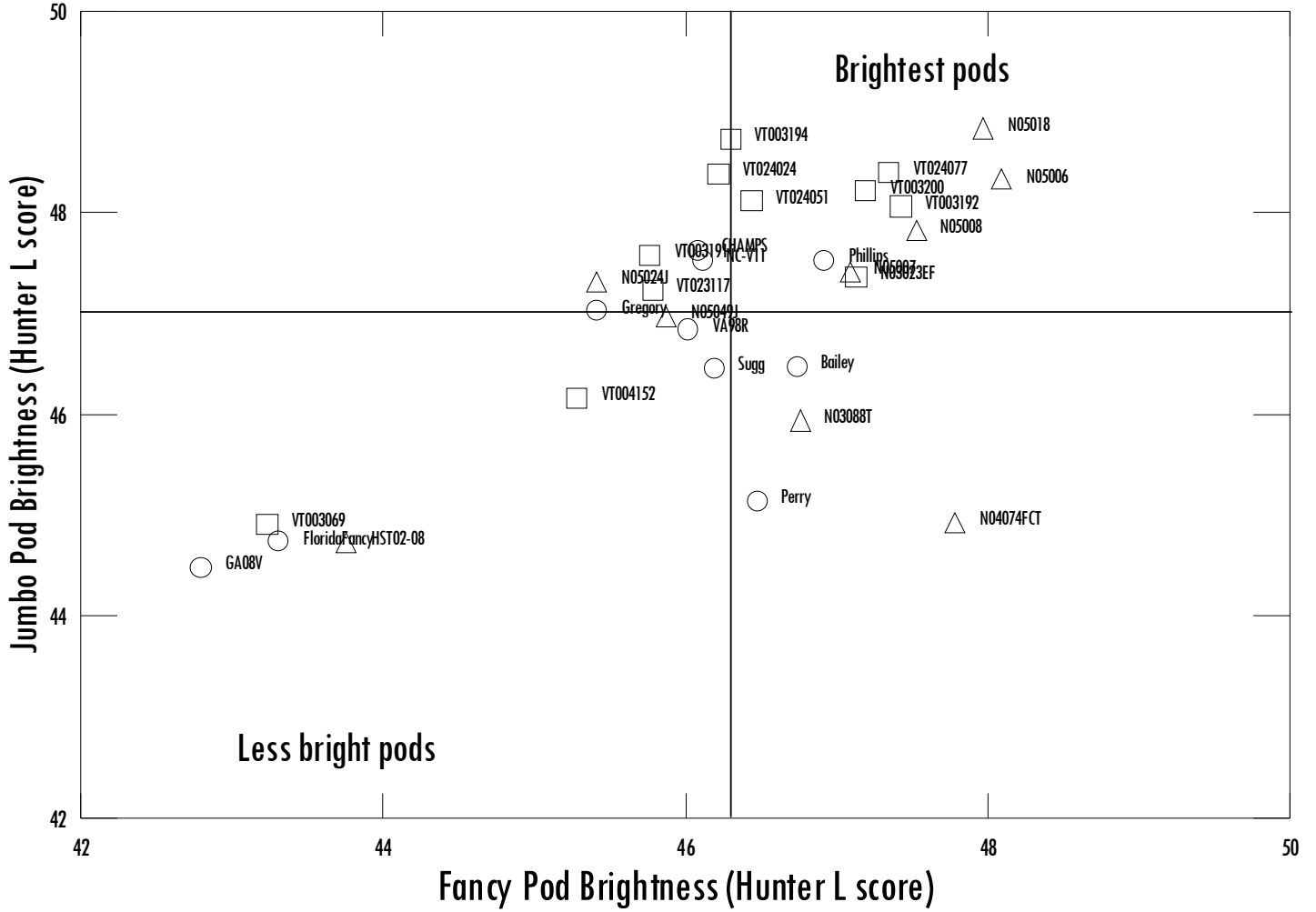


Figure 6. Brightness of jumbo and fancy pods of Planting Date II at Martin Co., NC, in 2009.

2009 Results by Location

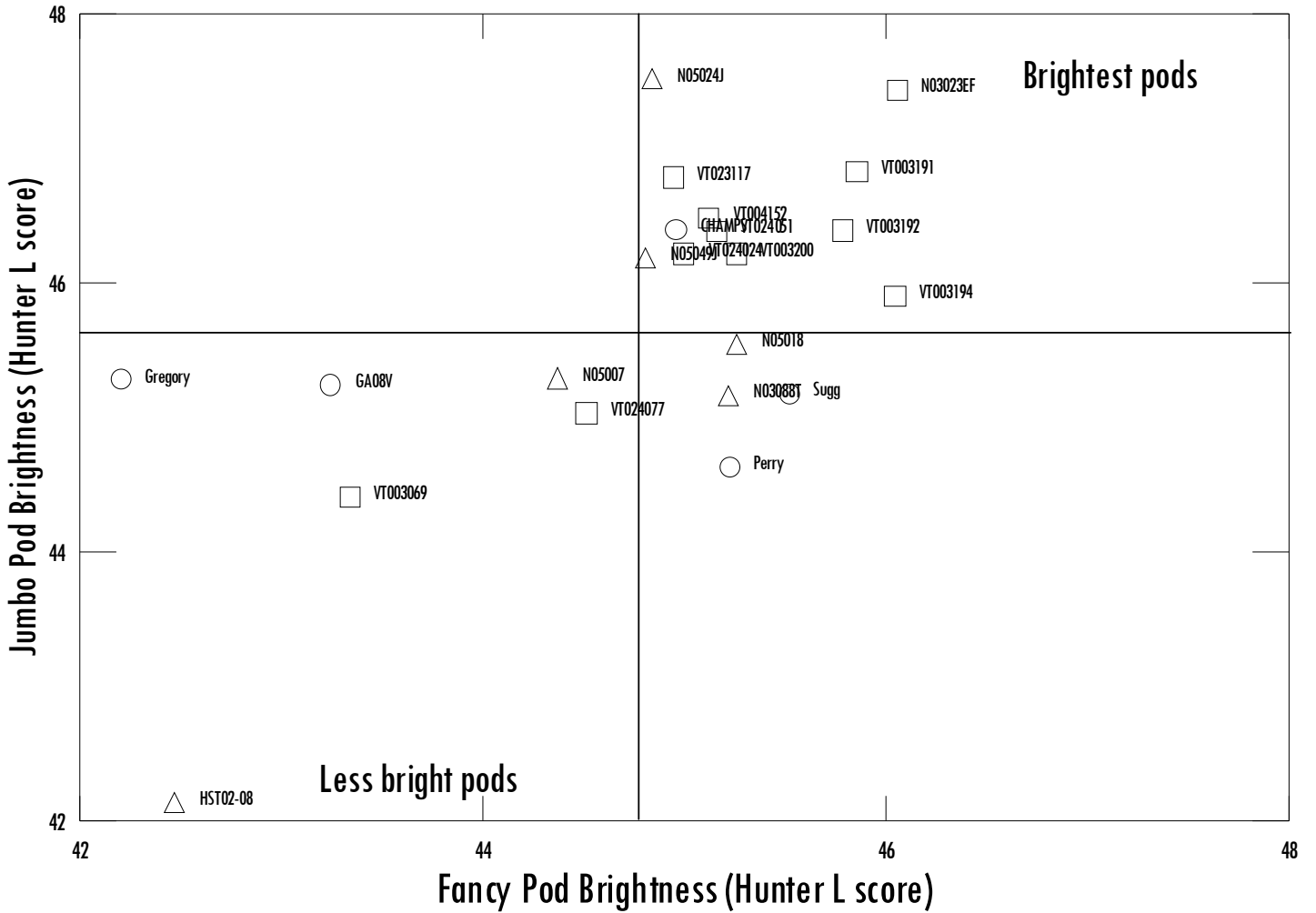


Figure 7. Brightness of jumbo and fancy pods at Rocky Mount, NC, in 2009.

2009 Results by Location

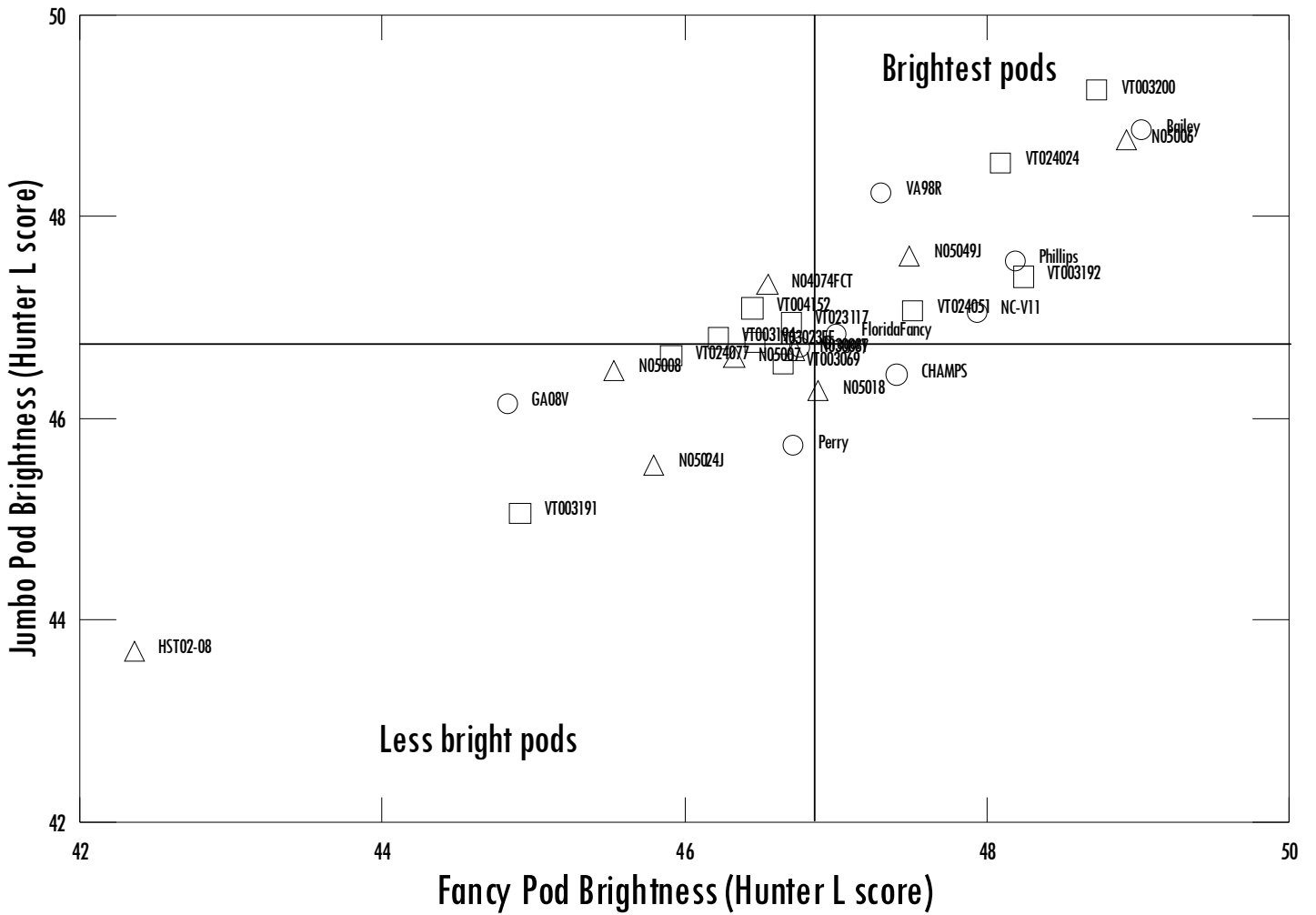


Figure 8. Brightness of jumbo and fancy pods at Whiteville, NC, in 2009.

2009 Results by Location

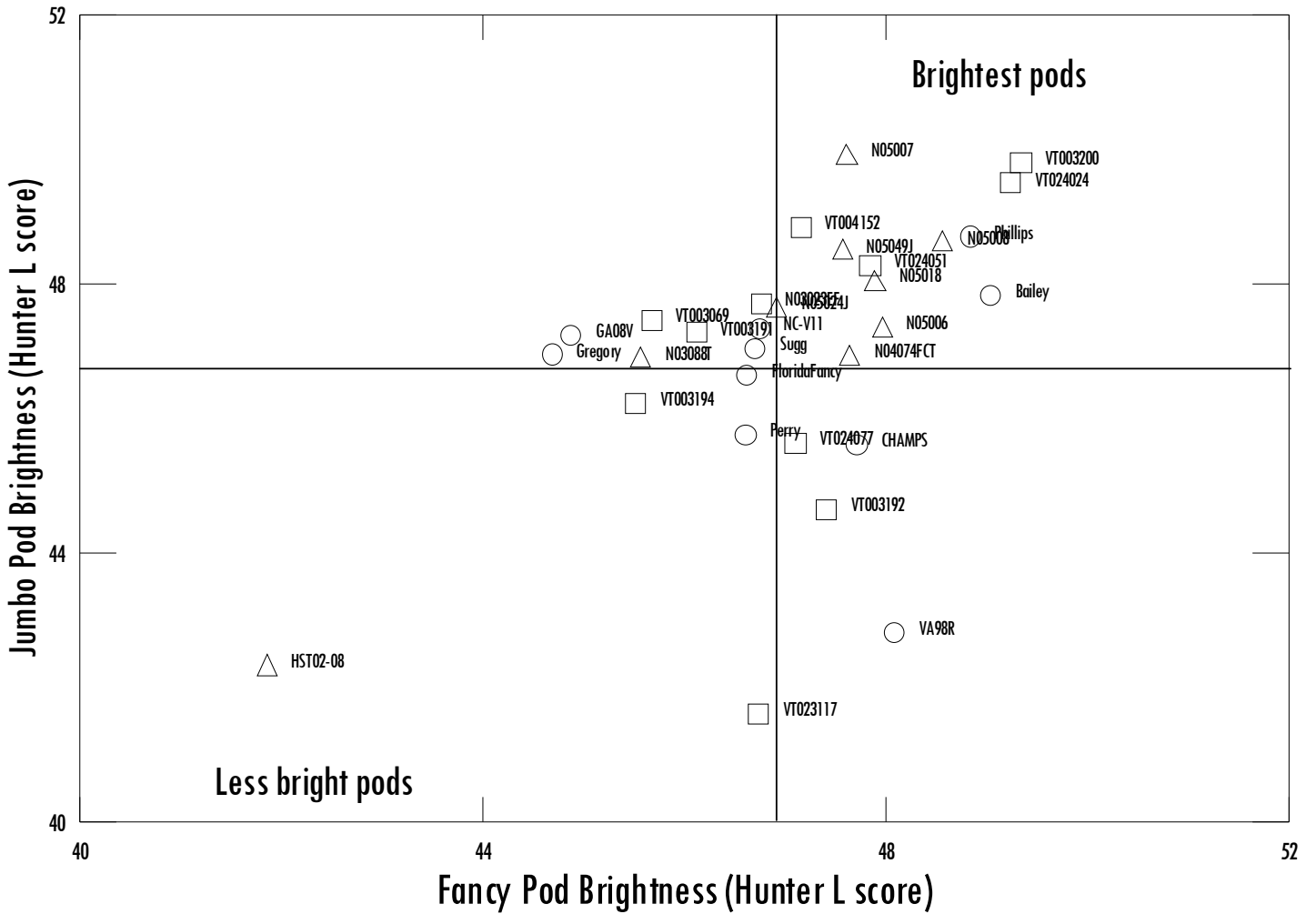


Figure 9. Brightness of jumbo and fancy pods at Florence, SC, in 2009.

2009 Results by Location

RESULTS – YIELD AND GRADE BY LOCATION

Table 29. Performance of genotypes at Tidewater AREC (Suffolk), VA, in 2009. Planting Date I averages of three replicated plots planted on 20 April, dug on 2 October, and combined on 9 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	1.2	0.8	77 g-i	7.6	44 f-k	2.2	2.7	1.5	67 a-d	74 a-g	18.07 a-e	5200 a-c	942 a-e
Gregory	2.8	1.4	93 a	7.8	55 ab	0.7	2.1	1.7	68 a-d	73 f-j	17.89 a-e	5454 ab	985 a-c
Perry	1.6	1.1	77 g-i	8.2	43 g-k	1.4	4.3	3.6	63 e-g	73 e-i	16.60 f-h	5017 a-e	855 a-g
CHAMPS	2.0	1.2	82 d-g	7.8	41 i-k	1.0	3.3	1.9	66 a-e	72 f-j	17.48 a-f	4394 c-f	770 d-h
Phillips	1.4	1.0	85 b-g	7.9	54 a-c	1.6	2.3	0.8	69 a	74 a-f	18.59 ab	5081 a-d	945 a-e
Bailey	1.4	0.8	72 h-j	8.1	46 d-j	1.5	3.7	0.2	66 a-e	72 h-j	17.88 a-e	5000 a-e	894 a-f
Georgia 08V	3.5	1.0	92 a-c	7.8	57 a	2.4	2.8	1.5	67 a-d	74 a-e	18.41 a-c	4740 a-f	875 a-f
Florida Fancy	2.5	1.2	88 a-f	8.4	49 c-f	2.4	3.0	1.1	66 b-e	72 f-j	17.84 a-e	4643 a-f	833 c-g
VA 98R	1.7	0.9	79 gh	8.1	46 d-j	2.7	2.5	4.3	65 de	74 a-d	16.04 hi	4741 a-f	841 b-g
Sugg	1.3	0.8	81 e-h	7.9	50 b-e	1.9	3.8	1.7	66 c-e	73 b-i	17.84 a-e	5092 a-d	911 a-f
VT 024077	1.9	0.7	84 c-g	8.1	49 c-f	2.5	2.0	3.1	67 a-d	75 ab	17.44 b-f	4761 a-f	873 a-f
VT 004152	2.8	1.0	89 a-e	8.0	40 jk	1.7	2.5	2.9	66 a-e	73 b-i	16.96 e-h	4623 a-f	817 c-g
VT 003194	1.2	0.9	67 j	7.6	45 e-j	1.9	2.9	2.2	65 de	72 g-j	17.35 c-f	5103 a-d	896 a-f
VT 003069	2.8	1.3	90 a-d	7.8	50 b-e	2.7	2.2	1.5	69 a-c	75 a	18.63 a	5587 a	1044 ab
VT 003191	2.1	1.0	84 b-g	7.8	46 d-j	1.5	3.2	1.5	66 b-e	72 i-k	16.10 g-i	4866 a-f	856 a-g
VT 003192	1.6	1.0	80 f-h	7.6	39 k	5.5	2.6	3.9	61 gh	73 e-i	17.21 hj	3826 f	660 gh
VT 003200	1.4	1.1	91 a-c	7.2	42 h-k	4.3	2.0	2.4	62 gh	71 jk	17.06 e-h	4958 a-e	862 a-g
VT 024024	1.3	1.1	91 a-c	8.0	42 h-k	4.3	3.2	2.8	60 hi	70 k	16.51 f-h	4528 b-f	764 e-h
VT 023117	1.6	1.3	78 gh	8.0	41 i-k	1.6	3.5	2.6	65 c-e	73 c-i	17.23 d-f	4267 c-f	755 e-h
VT 024051	1.9	0.9	93 ab	7.7	48 d-g	2.7	2.1	2.0	66 c-e	73 e-i	17.81 a-e	4786 a-f	858 a-g
N03023EF	2.5	0.9	77 g-i	7.9	47 e-h	0.9	3.1	1.8	67 a-d	73 d-i	17.68 a-f	4833 a-f	864 a-f
N04074FCT	1.1	1.4	70 ij	7.8	43 g-k	0.6	3.8	1.8	67 a-d	73 d-i	17.59 a-f	4118 d-f	730 f-h
N05006	1.5	1.2	82 e-g	8.0	44 f-k	1.0	2.7	2.6	67 a-d	73 d-i	17.04 e-h	4380 c-f	780 d-h
N05007	1.5	0.8	91 a-c	8.0	47 d-i	0.7	1.8	2.3	68 a-d	73 d-i	17.46 a-f	5153 a-d	928 a-f
N05008	1.3	0.8	89 a-e	7.7	46 d-j	1.6	2.3	1.7	68 a-d	73 c-i	17.90 a-e	4865 a-f	879 a-f
N05018	1.0	1.0	79 gh	7.6	49 b-e	3.0	2.9	1.1	67 a-d	74 a-g	18.30 a-d	5308 a-c	970 a-d
N03088T	1.7	0.8	84 c-g	7.8	51 b-d	3.1	3.1	1.2	67 a-d	75 a-c	18.45 a-c	5646 a	1048 a
N05024J	1.6	0.9	89 a-d	7.6	54 a-c	1.4	2.6	0.7	69 ab	73 a-h	18.47 a-c	5622 a	1038 ab
N05049J	1.4	1.1	77 g-i	8.1	51 b-d	1.5	3.3	1.4	67 a-d	74 a-h	18.07 a-e	5066 a-d	919 a-f
HST 02-08	0.9	1.1	90 a-d	8.1	38 k	1.0	4.3	1.2	57 i	64 l	15.32 i	3984 e-f	613 h
Mean	1.8	1.0	83.4	7.9	46.6	2.0	2.9	2.0	65.8	72.8	17.8	4855	867
LSD_{0.05}¹	1.0	0.4	8.5	0.5	5.5	1.3	1.0	1.4	3.3	2.0	0.01	1045	203

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

2009 Results by Location

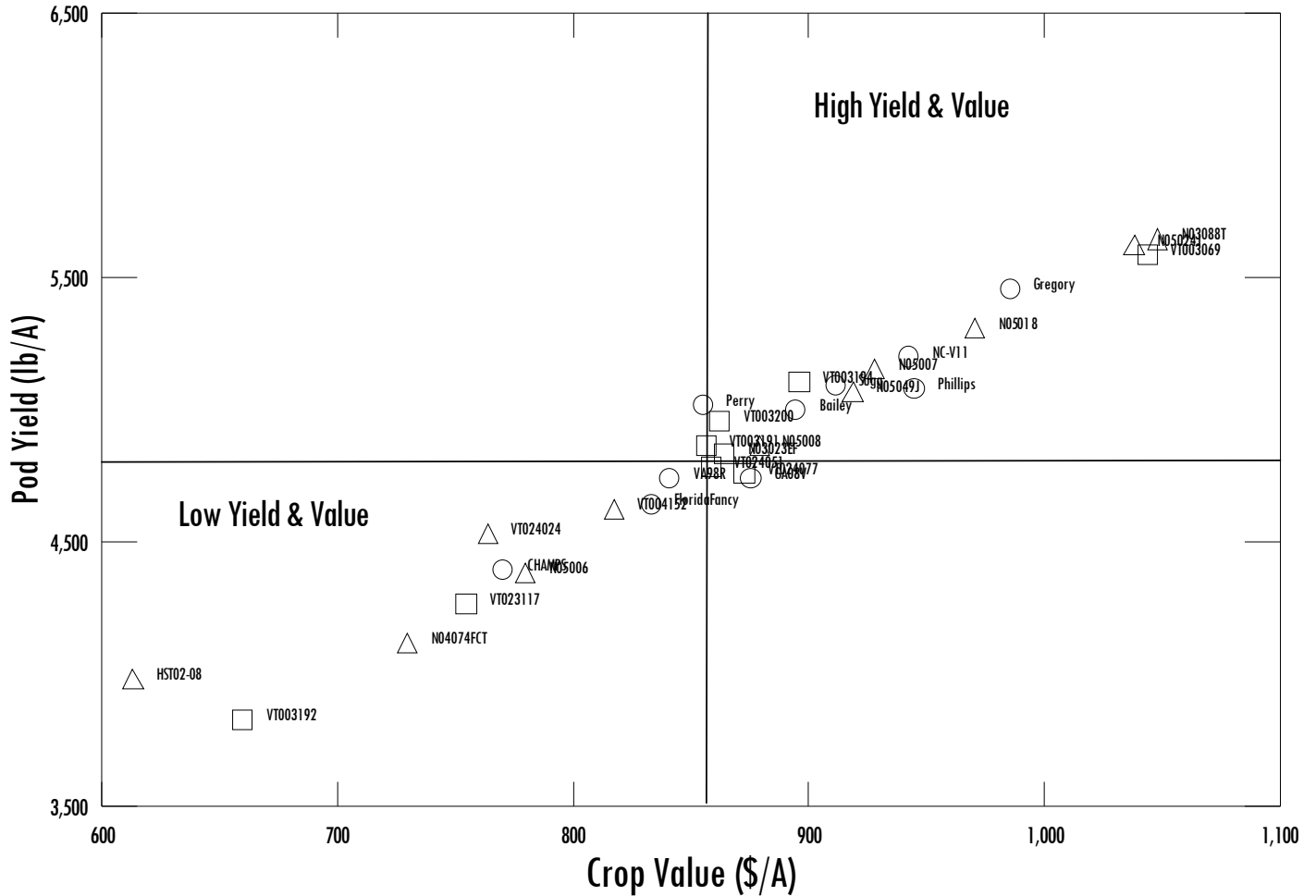


Figure 10. Summary of pod yield and crop value at Tidewater AREC (Suffolk), VA, Planting Date I in 2009. Vertical bar represents mean crop value and horizontal bar mean pod yield of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for yield and value at this location and planting time.

2009 Results by Location

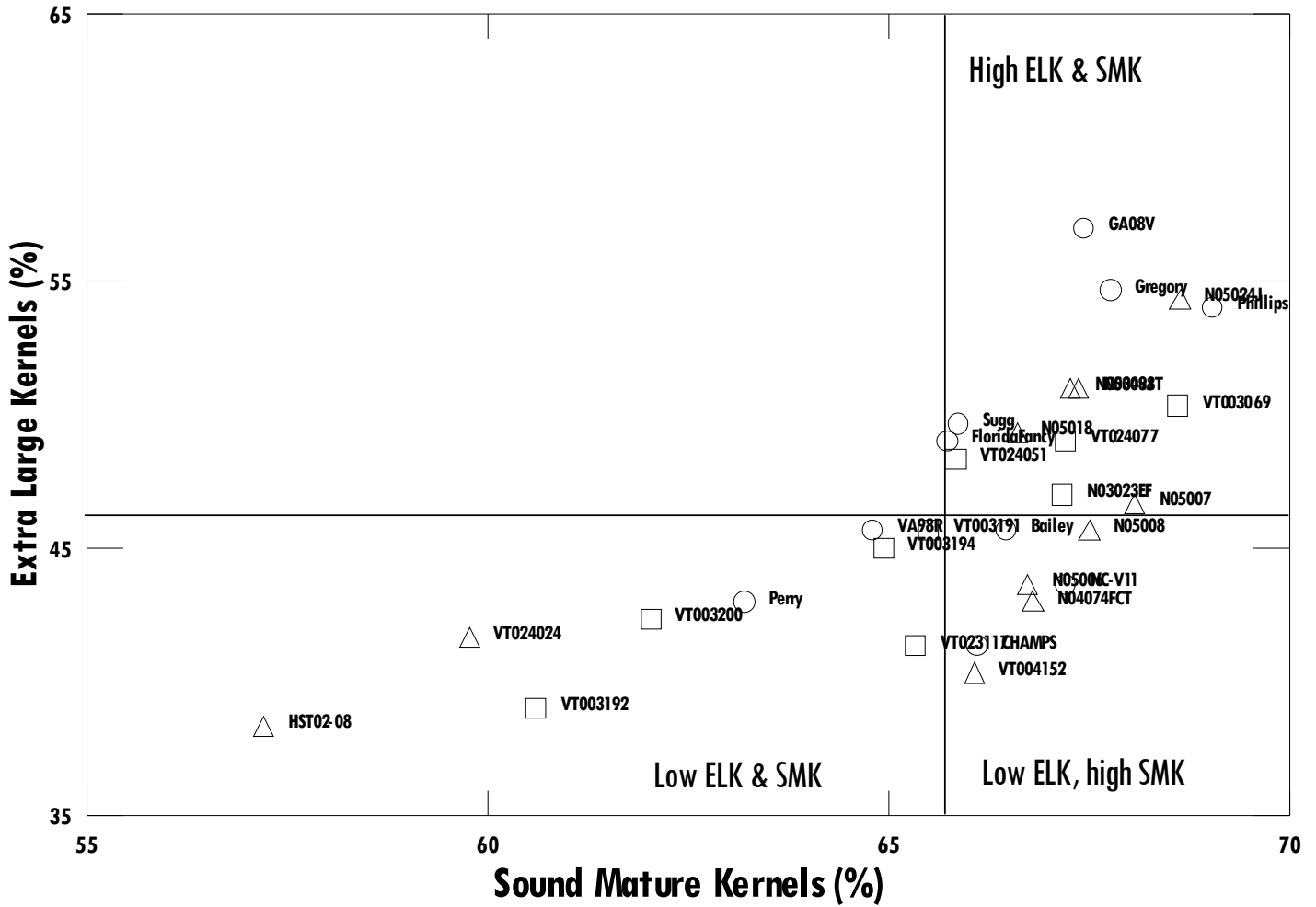


Figure 11. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Tidewater AREC (Suffolk), VA, Planting Date I in 2009. Vertical bar represents mean of SMK content and horizontal bar mean of ELK content of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and planting time.

2009 Results by Location

Table 30. Performance of genotypes at Tidewater AREC (Suffolk), VA in 2009. Planting Date II averages of three replicated plots planted on 1 May, dug on 4 October, and combined on 21 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	0.8	1.1	75 i-k	6.6	40 j-l	1.8	4.1	1.0	66 c-g	73 e-i	17.74 d-i	5307 a-f	941 a-g
Gregory	1.9	1.2	91 a	7.0	48 b-f	1.3	3.3	2.8	64 e-h	72 ij	17.28 g-i	4345 f	765 gh
Perry	1.0	0.8	80 e-i	6.8	43 f-k	2.2	4.9	1.3	65 c-h	74 c-e	17.85 d-i	5618 a-d	1003 a-f
CHAMPS	1.5	1.1	75 h-k	7.5	40 i-l	1.6	4.5	0.9	67 b-f	74 c-f	17.90 d-h	5216 a-f	933 a-g
Phillips	1.1	0.8	84 b-f	6.8	54 ab	1.5	3.0	0.7	70 ab	75 b-d	18.72 a-c	5274 a-f	987 a-f
Bailey	1.5	1.0	71 kl	6.9	43 g-k	1.6	5.2	0.9	65 c-h	73 e-i	17.68 e-i	5601 a-d	988 a-f
Georgia 08V	4.8	1.3	87 a-d	7.1	53 a-c	1.9	3.7	1.3	67 b-f	74 d-g	18.15 b-f	4744 b-f	865 d-h
Florida Fancy	2.1	1.0	85 a-f	6.7	48 b-f	3.0	3.2	1.0	66 c-g	73 f-h	18.17 b-f	5168 a-f	939 a-g
VA 98R	1.3	1.0	73 jk	7.1	42 h-l	2.2	4.6	2.0	65 d-h	74 d-g	17.63 e-i	4652 d-f	821 f-h
Sugg	0.9	0.6	77 g-k	6.8	48 b-f	2.6	5.7	0.9	65 d-h	74 c-e	17.91 d-h	5352 a-f	959 a-g
VT 024077	1.2	0.8	84 a-f	6.9	48 b-f	1.4	3.1	1.2	68 a-c	74 b-e	18.32 b-e	5408 a-e	995 a-f
VT 004152	1.3	0.8	89 a-c	6.7	38 kl	1.5	3.7	1.3	66 c-g	73 e-i	17.67 e-i	5432 a-e	959 a-g
VT 003194	0.7	0.9	77 g-k	6.7	45 e-j	1.1	4.6	1.2	66 c-g	73 e-i	17.74 e-i	5598 a-d	995 a-f
VT 003069	1.5	1.2	90 ab	6.9	56 a	2.6	2.8	1.1	71 a	77 a	19.28 a	5272 a-f	1016 a-f
VT 003191	1.1	0.8	85 a-f	6.8	49 b-e	2.6	4.0	1.9	64 f-h	72 f-j	17.52 f-i	5481 a-e	960 a-g
VT 003192	0.6	0.9	76 h-k	6.7	45 e-j	3.7	3.9	1.1	63 gh	72 g-j	17.64 e-i	5227 a-f	924 b-g
VT 003200	0.5	1.0	89 ab	6.7	46 e-i	2.3	3.6	2.1	63 h	71 j	17.14 i	5723 a-c	982 a-f
VT 024024	1.0	0.8	89 ab	6.5	44 e-j	1.6	3.8	1.5	64 f-h	71 j	17.22 hi	5090 a-f	883 b-h
VT 023117	0.8	1.0	73 jk	7.0	41 i-l	0.7	4.2	1.2	68 a-d	74 c-e	17.98 d-g	5481 a-e	986 a-f
VT 024051	0.9	1.0	88 a-d	6.6	45 e-j	1.3	3.8	1.2	66 c-h	72 h-j	17.62 e-i	4830 b-f	854 d-h
N03023EF	1.0	0.8	75 i-k	6.6	45 e-j	1.6	4.8	1.0	67 b-f	74 b-e	18.05 c-f	5268 a-f	951 a-g
N04074FCT	1.0	1.2	67 l	6.7	43 f-k	1.3	5.5	1.5	65 d-h	73 e-i	17.49 f-i	4813 b-f	842 e-h
N05006	0.8	1.5	79 f-j	6.7	43 f-k	0.9	4.2	1.1	67 b-f	73 e-i	17.73 e-i	4686 c-f	832 f-h
N05007	1.2	0.8	88 a-c	6.4	44 e-j	0.9	3.0	1.2	69 a-c	74 c-f	18.16 b-f	5700 a-d	1036 a-e
N05008	0.6	0.6	87 a-d	6.6	48 c-g	1.1	2.2	0.9	71 a	75 bc	18.80 ab	6034 a	1135 a
N05018	0.3	1.0	83 c-g	7.1	47 d-h	2.4	4.3	0.6	66 c-g	73 d-h	18.05 c-f	5955 a	1076 a-c
N03088T	0.9	0.7	82 d-h	7.1	49 b-e	2.5	4.6	1.1	67 b-e	76 b	18.47 b-d	5962 a	1102 ab
N05024J	1.1	0.9	87 a-e	6.9	51 a-d	2.0	3.2	2.2	67 b-f	74 b-e	18.14 b-f	5584 a-d	1013 a-f
N05049J	0.6	1.0	79 f-j	6.9	45 e-j	2.0	4.0	1.0	67 b-e	74 b-e	18.17 b-f	5797 ab	1054 a-d
HST 02-08	0.6	0.9	89 a-c	6.9	36 l	2.7	4.3	1.2	57 i	65 k	15.63 j	4457 ef	697 h
Mean	1.2	1.0	81.8	6.8	45.6	1.9	4.0	1.3	66.1	73.2	17.9	5303	950
LSD_{0.05}¹	0.8	0.3	6.6	0.6	5.4	1.1	1.3	1.3	3.2	1.5	0.0	1055	203

¹ Fisher's least significant difference (LSD) at P = 0.05.

² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

2009 Results by Location

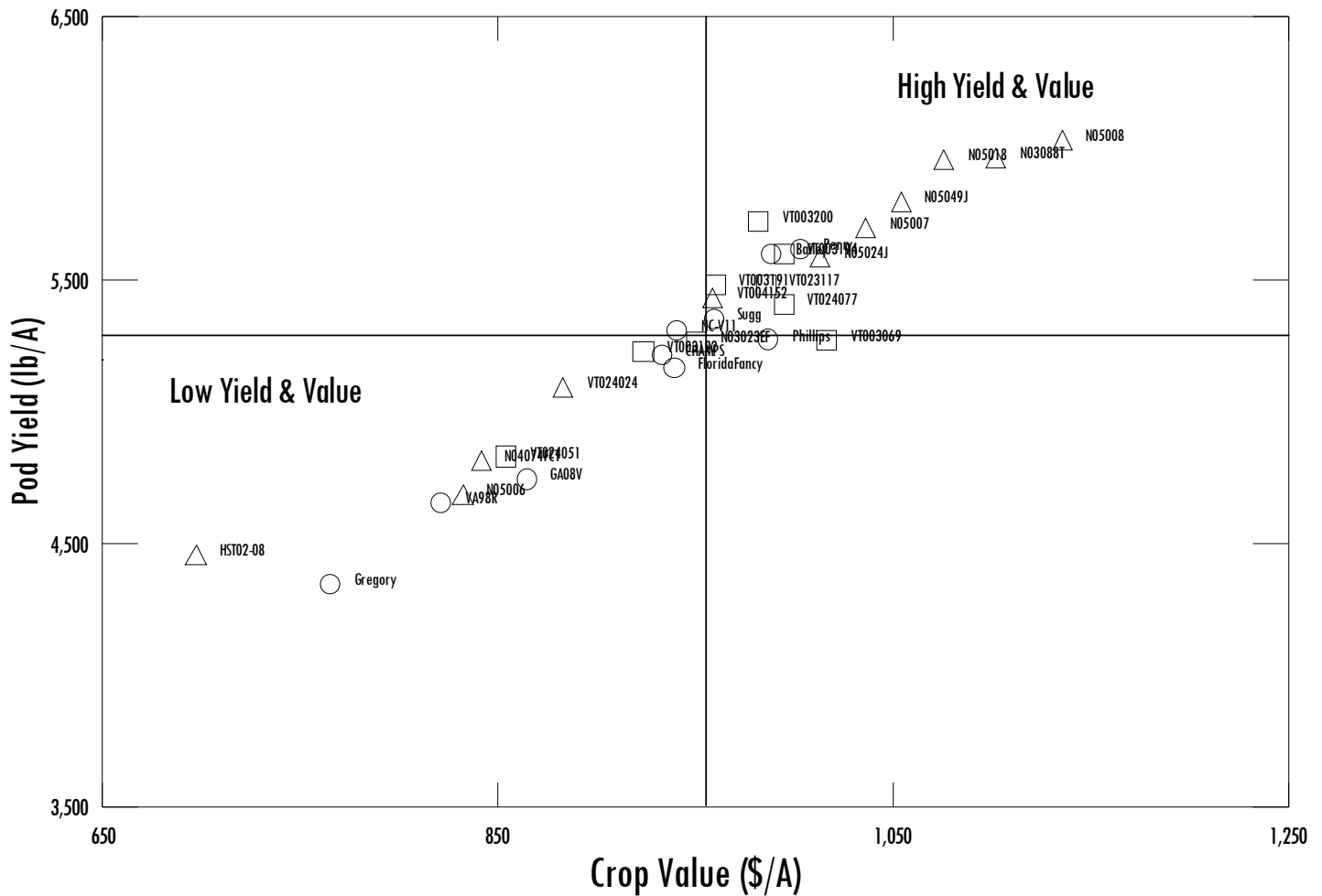


Figure 12. Summary of pod yield and crop value at Tidewater AREC (Suffolk), VA, Planting Date II in 2009. Vertical bar represents mean crop value and horizontal bar mean pod yield of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for yield and value at this location and planting time.

2009 Results by Location

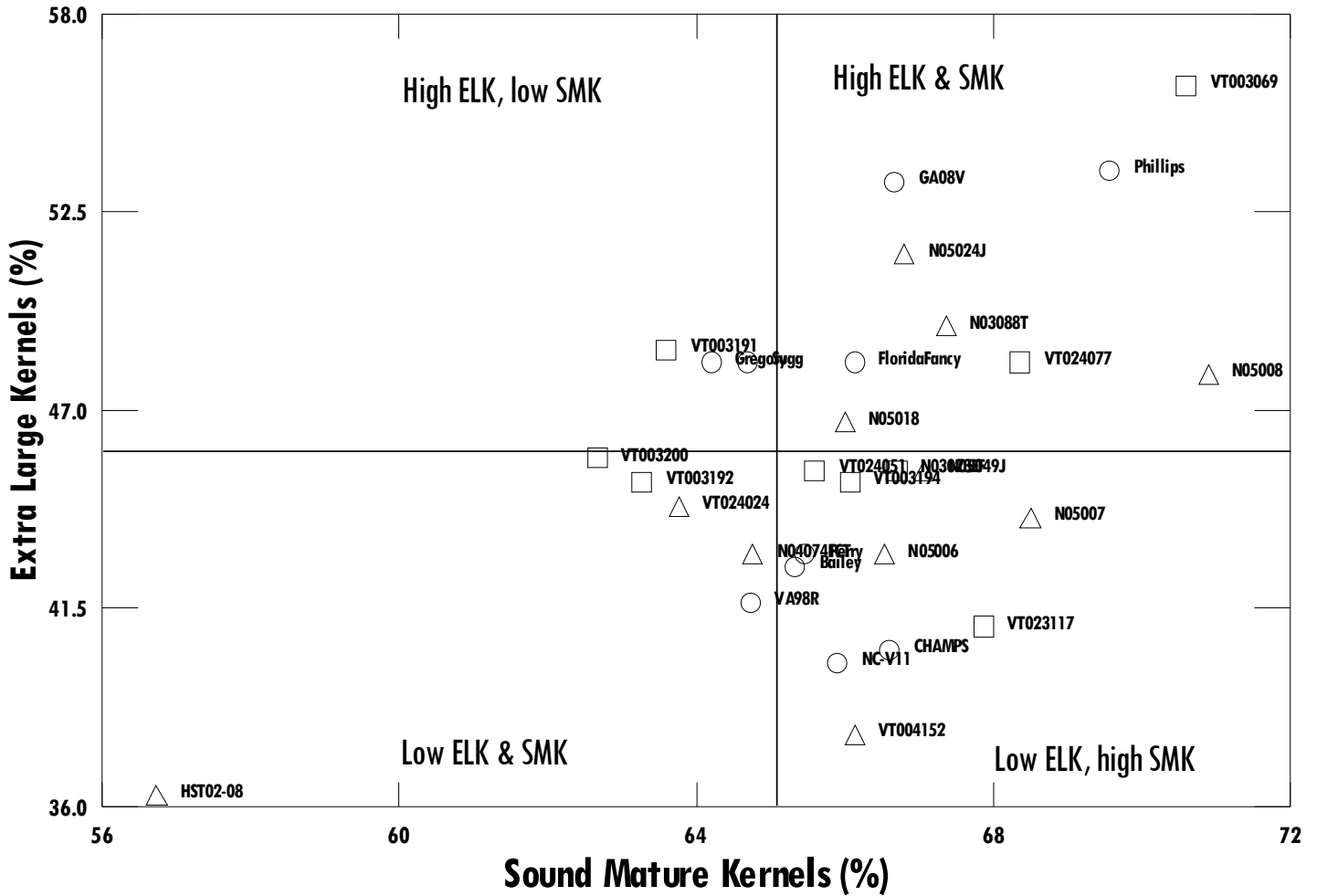


Figure 13. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Tidewater AREC (Suffolk), VA, Planting Date II in 2009. Vertical bar represents mean of the SMK content and horizontal bar mean of the ELK content of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and planting time.

2009 Results by Location

Table 31. Performance of genotypes at Tidewater AREC (Suffolk), VA in 2009. Planting Date III averages of three replicated plots planted on 15 May, dug on 20 October, and combined on 23 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	2.0	1.1	76 fg	6.6	40 f-h	1.7	4.2	2.4	64 a-c	72 f-h	17.00 a-c	6155 a	1063 a-c
Gregory	3.8	1.2	95 a	6.6	55 a	1.7	2.3	3.1	65 a-c	73 d-h	16.72 a-c	5687 a-e	1008 a-d
Perry	1.7	0.9	74 gh	7.0	40 f-i	2.7	3.9	2.3	64 a-c	74 c-g	17.46 ab	5583 a-e	988 a-d
CHAMPS	2.1	0.9	77 fg	6.7	43 d-h	1.4	4.1	1.7	67 a	74 a-d	17.86 ab	5795 a-e	1042 a-d
Phillips	1.4	0.7	88 bc	9.3	50 a-c	1.2	2.2	4.3	66 ab	74 a-f	15.71 bc	5592 a-e	991 a-d
Bailey	1.6	0.6	68 hi	7.0	39 g-i	2.3	4.7	1.3	64 a-c	72 e-h	17.39 ab	6072 ab	1060 a-c
Georgia 08V	4.9	0.9	91 ab	6.8	54 a	4.1	3.2	1.5	65 a-c	74 b-g	18.18 a	5609 a-e	1023 a-d
Florida Fancy	2.8	1.1	85 b-e	6.9	44 c-g	3.2	2.9	1.2	65 a-c	72 f-h	17.93 ab	5272 b-e	942 c-d
VA 98R	1.7	0.9	76 fg	6.9	44 c-g	2.4	3.5	1.0	68 a	74 a-c	18.30 a	5556 a-e	1016 a-d
Sugg	2.1	0.7	78 fg	6.5	44 c-g	3.3	4.1	3.3	63 bc	73 c-g	16.93 a-c	5705 a-e	990 a-d
VT 024077	1.5	0.5	79 e-g	6.7	43 d-h	2.6	2.9	3.6	66 ab	75 a-c	16.73 a-c	6353 a	1130 a
VT 004152	2.4	0.9	89 ab	7.0	41 d-h	1.3	2.7	2.7	66 ab	73 c-g	17.37 a-c	4968 ef	876 d
VT 003194	1.6	0.7	75 g	7.0	42 d-h	1.4	4.5	1.4	65 a-c	73 d-h	17.55 ab	5982 ab	1050 a-c
VT 003069	3.2	1.3	86 bc	7.0	47 b-e	2.9	3.2	3.0	67 ab	76 a	17.41 ab	5006 d-f	920 cd
VT 003191	2.6	0.9	80 d-g	6.8	43 d-h	3.0	3.8	2.2	63 a-c	72 e-h	17.23 a-c	6185 a	1081 a-c
VT 003192	0.9	0.8	75 fg	6.9	38 g-h	2.9	5.0	1.7	61 c	71 hi	16.86 a-c	5604 a-e	949 b-d
VT 003200	1.8	0.8	90 ab	6.3	44 b-f	1.4	3.5	1.9	64 a-c	70 i	16.89 a-c	6064 ab	1031 a-d
VT 024024	1.5	0.7	91 ab	6.5	47 b-e	1.8	2.8	2.4	64 a-c	71 hi	17.07 a-c	5808 a-d	1004 a-d
VT 023117	1.6	0.7	75 fg	7.0	37 hi	1.4	3.8	2.1	66 ab	73 c-g	17.40 ab	5743 a-e	1009 a-d
VT 024051	2.0	0.9	87 bc	7.0	45 b-f	1.7	3.1	1.9	66 ab	72 gh	17.50 ab	5841 a-d	1031 a-d
N03023EF	1.8	0.6	77 fg	6.7	47 b-d	2.7	3.4	2.2	66 ab	74 a-f	17.83 ab	6044 ab	1088 a-c
N04074FCT	1.9	1.1	64 i	6.9	41 e-h	0.7	5.2	1.6	65 a-c	73 d-h	17.28 a-c	5063 c-f	877 d
N05006	1.5	0.9	79 e-g	7.1	40 f-h	1.0	3.6	1.7	66 ab	73 e-h	17.53 ab	6275 a	1104 ab
N05007	1.3	0.7	91 ab	6.8	39 f-i	1.1	2.6	2.9	66 ab	73 e-h	16.78 a-c	5839 a-d	1017 a-d
N05008	1.2	0.8	89 ab	6.7	44 b-f	1.9	2.0	3.2	66 ab	73 c-g	16.48 a-c	5711 a-e	1013 a-d
N05018	1.0	0.8	85 b-e	6.7	51 ab	2.8	2.8	1.1	68 a	74 a-e	18.46 a	6142 a	1134 a
N03088T	1.7	1.1	82 c-f	6.6	45 b-f	3.0	4.1	2.0	66 ab	75 ab	17.94 ab	5267 b-e	952 b-d
N05024J	2.3	0.7	88 ab	7.0	50 a-c	3.4	2.4	2.4	66 ab	74 b-g	17.86 ab	6237 a	1130 a
N05049J	1.3	1.2	78 fg	6.9	44 d-g	1.8	4.0	1.7	66 ab	73 b-g	17.71 ab	5858 a-c	1044 a-d
HST 02-08	1.1	1.3	86 b-d	7.0	34 i	1.4	3.4	1.7	57 d	63 j	15.10 c	4374 f	666 e
Mean	1.9	0.9	81.8	6.9	43.8	2.1	3.5	2.2	65.0	72.8	17.3	5713	1008
LSD_{0.05}¹	10	0.4	6.3	1.3	6.5	1.1	1	2.4	4.1	1.8	2.3	837	169

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

2009 Results by Location

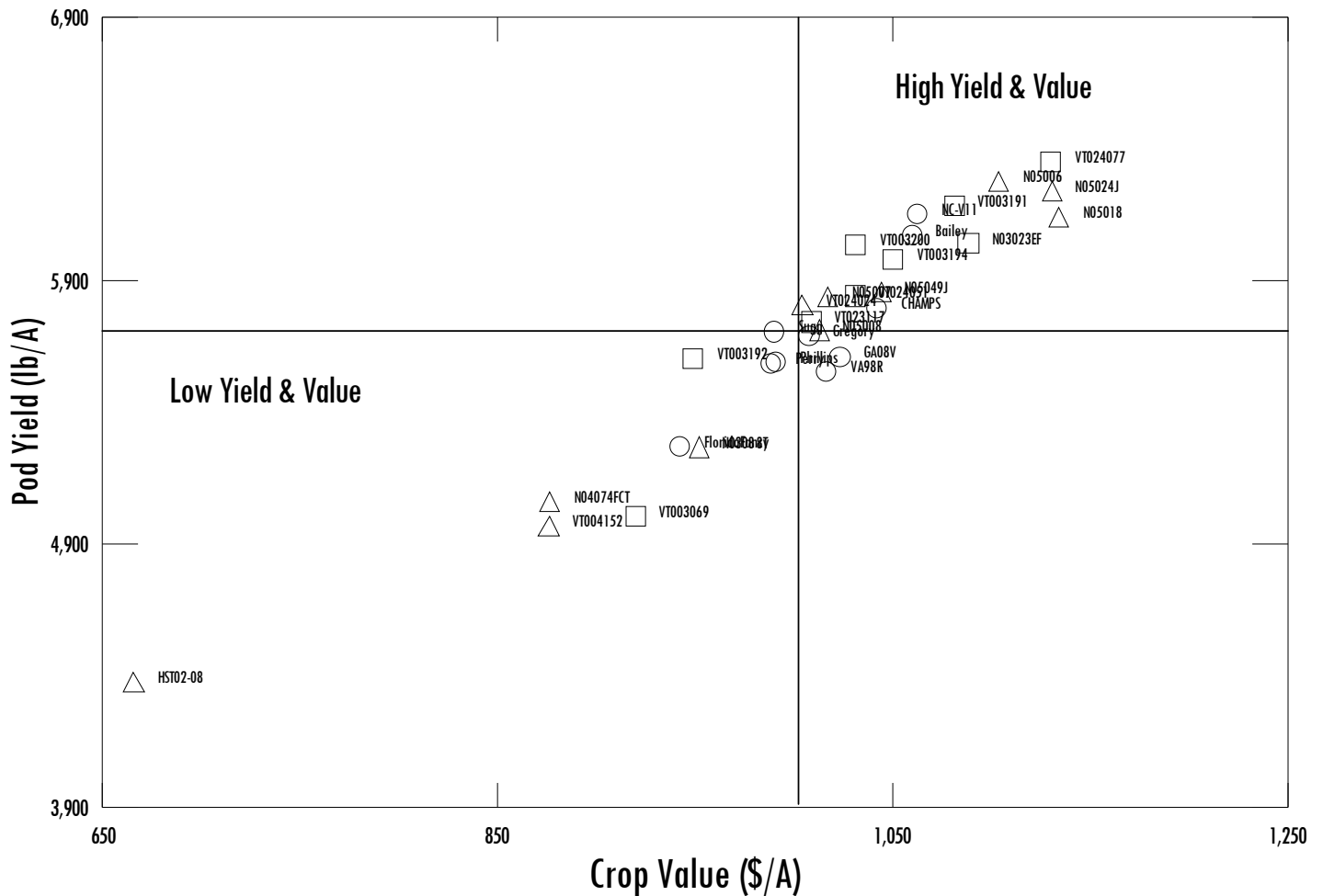


Figure 14. Summary of pod yield and crop value at Tidewater AREC (Suffolk), VA, Planting Date III in 2009. Vertical bar represents mean crop value and horizontal bar mean pod yield of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for yield and value at this location and planting time.

2009 Results by Location

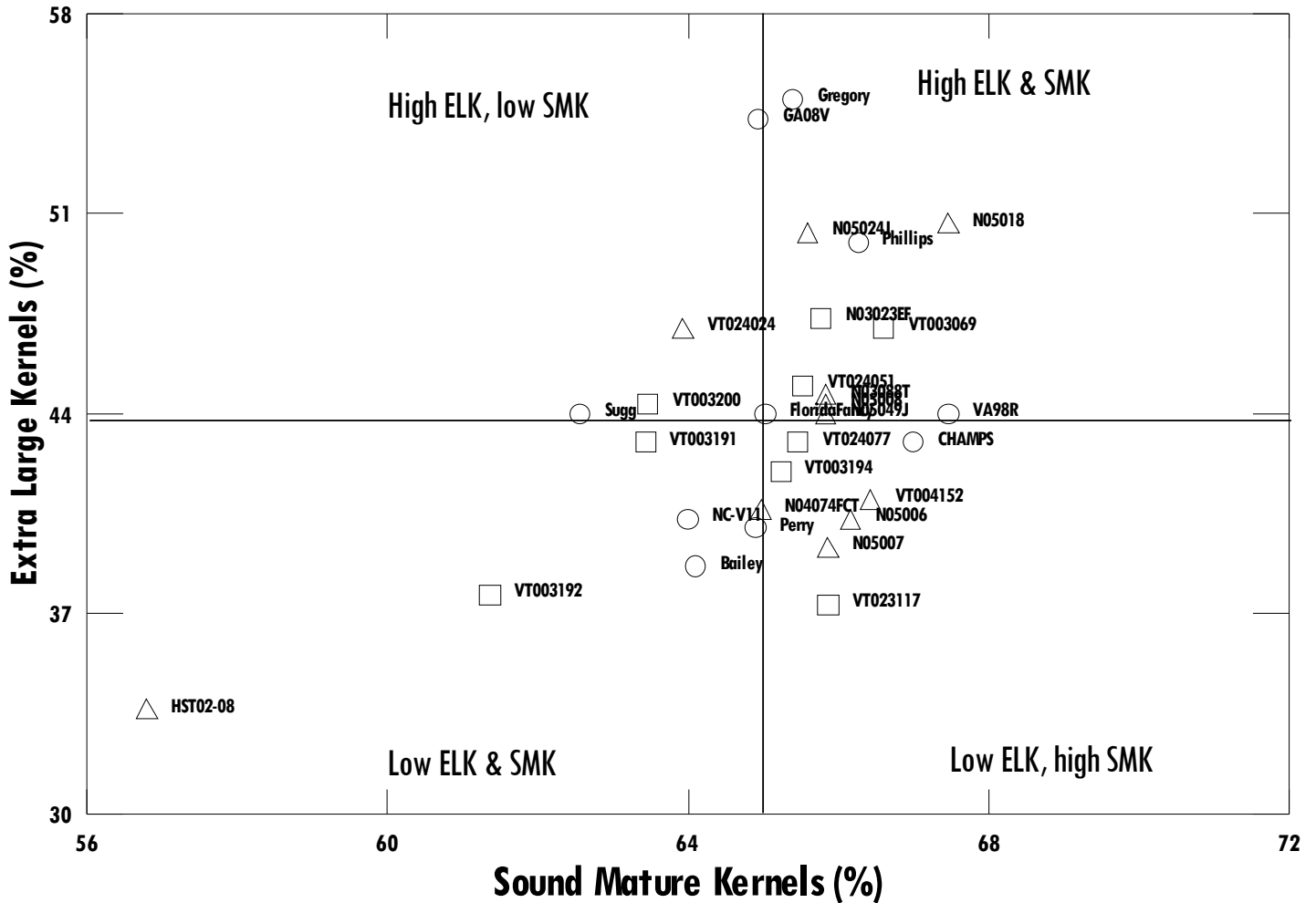


Figure 15. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Tidewater AREC (Suffolk), VA, Planting Date III in 2009. Vertical bar represents mean of the SMK content and horizontal bar mean of the ELK content of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and planting time.

2009 Results by Location

Table 32. Performance of genotypes at Southampton Co., VA, in 2009. Averages of three replicated plots planted on 24 April, dug on 30 September, and combined on 5 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	0.3	0.7	79 a-c	6.9	48 e-g	1.0	1.6	0.6	71 a-d	74 c-h	18.81 b-e	6140 a	1156 a
Gregory	1.0	1.2	91 ab	6.6	56 a-c	0.6	1.7	1.9	68 e-g	73 ij	18.19 e-g	5582 a-c	1018 ab
Perry	0.5	1.1	86 ab	6.5	49 d-g	1.0	3.1	1.2	68 e-g	74 g-i	18.25 e-g	5619 a-c	1025 ab
CHAMPS	0.8	0.9	83 a-c	6.9	50 c-g	1.1	2.1	0.8	71 a-c	75 b-e	18.94 a-d	5385 a-d	1020 ab
Phillips	0.7	0.7	87 ab	6.9	56 a-c	1.1	1.9	1.2	71 a-e	75 b-e	18.96 a-c	5159 b-g	977 a-c
Bailey	0.5	0.8	83 a-c	7.4	47 e-g	0.9	2.9	0.5	69 c-g	73 hi	18.28 d-g	5768 ab	1055 ab
Georgia 08V	1.8	0.9	90 ab	7.0	58 a	1.8	1.6	2.1	70 a-f	76 b	18.98 ab	4724 c-i	899 b-e
Florida Fancy	1.2	1.3	88 ab	6.8	53 a-e	1.5	1.7	0.9	69 c-g	73 hi	18.51 b-f	4841 b-i	896 b-e
VA 98R	0.4	0.8	77 bc	6.5	47 e-h	2.1	1.7	1.7	69 b-g	75 b-g	18.56 b-f	5059 b-g	939 b-e
Sugg	0.5	1.0	84 ab	6.5	51 a-f	1.8	2.6	1.1	70 a-f	76 b	18.92 a-d	4975 b-h	941 b-e
VT 024077	0.6	0.6	80 a-c	6.8	48 e-g	1.2	2.1	0.8	71 a-c	75 b-d	18.93 a-d	5234 a-f	991 a-c
VT 004152	1.3	0.9	83 a-c	6.7	40 ij	0.9	2.4	1.7	69 b-g	74 d-h	18.23 e-g	4828 b-i	880 b-e
VT 003194	0.5	0.9	83 a-c	6.6	48 d-g	1.2	2.5	1.3	69 c-g	74 f-h	18.37 b-g	5282 a-f	971 a-d
VT 003069	1.1	1.0	88 ab	6.3	57 ab	2.1	1.7	1.1	73 a	77 a	19.56 a	5007 b-g	979 a-c
VT 003191	0.8	0.7	89 ab	6.8	52 a-e	1.4	2.4	1.3	69 b-f	74 c-g	18.61 b-f	5254 a-f	977 a-c
VT 003192	1.0	1.1	80 a-c	6.7	50 b-g	2.2	2.2	1.4	68 fg	74 g-i	18.41 b-g	4475 d-i	823 c-e
VT 003200	0.4	1.1	91 ab	6.5	47 e-g	1.4	1.8	1.6	67 gh	72 jk	17.81 gh	5408 a-c	965 b-d
VT 024024	0.8	1.2	94 a	6.7	50 b-g	0.8	1.9	2.4	65 h	70 k	17.35 h	5512 a-c	957 b-d
VT 023117	1.1	1.0	69 cd	7.1	45 g-i	1.3	2.8	1.4	70 a-f	76 b-d	18.64 b-f	4042 hi	754 ef
VT 024051	0.6	0.5	93 a	6.7	53 a-e	1.0	1.6	0.8	70 a-f	73 g-i	18.62 b-f	5580 a-c	1038 ab
N03023EF	0.9	0.8	78 bc	6.8	51 a-f	1.2	2.2	1.2	70 b-f	74 c-h	18.63 b-f	4702 c-i	876 b-e
N04074FCT	0.6	1.1	77 bc	6.7	47 e-h	0.2	2.6	0.6	70 a-f	74 g-i	18.45 b-g	4364 f-i	806 c-e
N05006	0.6	1.0	82 a-c	6.5	41 h-j	0.7	1.9	1.2	69 c-g	73 ij	18.04 g	5337 a-e	963 b-d
N05007	0.2	0.5	88 ab	6.9	45 f-i	0.5	1.4	1.0	71 a-e	74 g-i	18.55 b-f	4240 g-i	786 de
N05008	0.5	0.6	88 ab	6.8	50 c-g	1.0	0.9	1.5	72 ab	75 b-f	18.94 a-d	5025 b-g	953 b-d
N05018	0.2	0.8	83 a-c	6.8	51 a-f	2.0	2.6	0.4	69 b-g	74 c-h	18.73 b-e	5222 b-f	980 a-c
N03088T	0.5	0.9	56 d	6.9	52 a-f	1.3	3.1	1.3	70 a-f	76 bc	18.73 b-e	4405 e-i	825 c-e
N05024J	0.8	0.6	90 ab	6.9	54 a-d	1.1	1.9	1.8	69 b-g	74 e-h	18.50 b-f	4859 b-h	897 b-e
N05049J	0.8	1.1	82 a-c	6.6	48 e-g	1.4	2.4	1.0	69 d-g	73 g-i	18.32 c-g	4766 c-i	873 b-e
HST 02-08	0.7	1.1	91 ab	7.0	36 j	1.0	3.8	1.0	57 i	63 l	15.21 i	3902 i	594 f
Mean	0.7	0.9	83.8	6.8	49.3	1.2	2.2	1.2	69.1	73.8	18.4	5023	927
LSD_{0.05}¹	0.4	0.4	14.9	0.5	6.4	0.9	0.9	1.4	2.7	1.3	0.007	954	188

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

2009 Results by Location

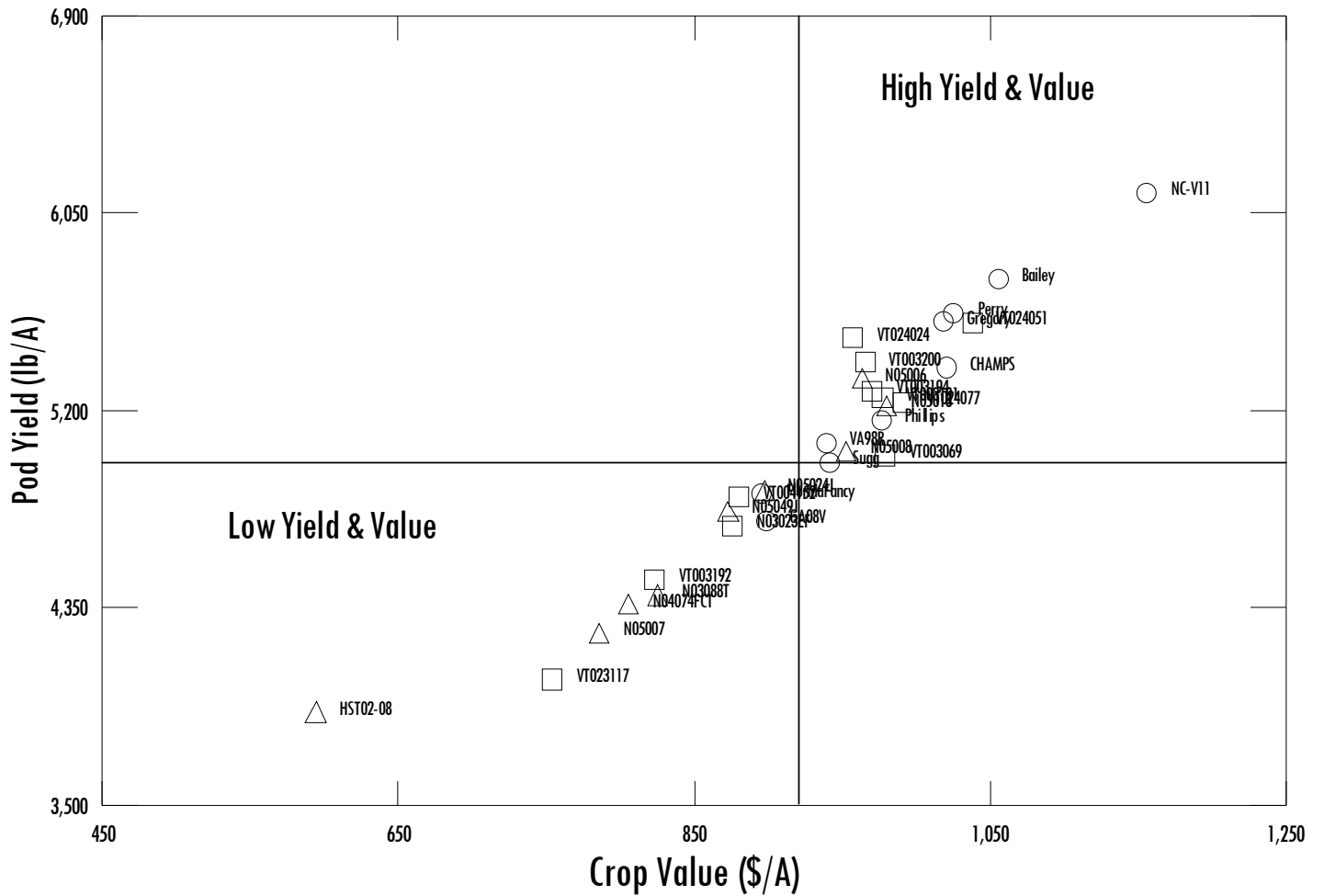


Figure 16. Summary of pod yield and crop value at Southampton Co., VA, in 2009. Vertical bar represents mean crop value and horizontal bar mean pod yield of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for yield and value at this location and planting time.

2009 Results by Location

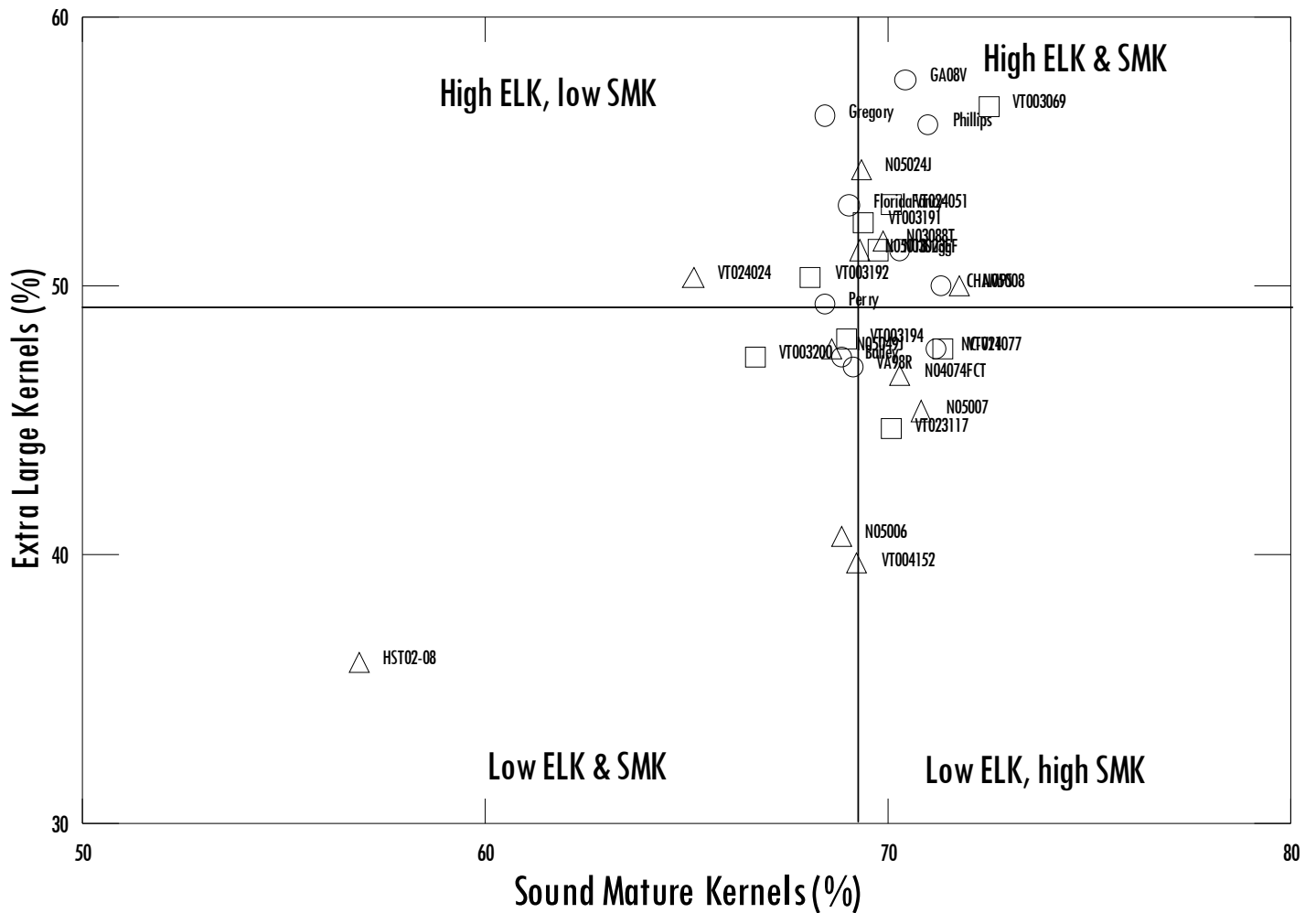


Figure 17. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Southampton Co., VA, in 2009. Vertical bar represents mean of the SMK content and horizontal bar mean of the ELK content of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and planting time.

2009 Results by Location

Table 33. Performance of genotypes at Martin Co., NC, in 2009. Planting Date I averages of three replicated plots planted on 30 April, dug on 24 September, and combined on 1 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	2.1	1.0	81 f-j	6.5	38 i-m	1.4	2.1	0.5	71 a-c	75 b-h	18.84 b-h	5882 a-c	1094 a-d
Gregory	3.8	1.1	93 a	6.6	53 ab	0.9	3.5	0.9	71 a-c	75 g-i	19.08 a-e	5595 a-h	1042 a-e
Perry	1.3	1.1	85 d-h	6.6	43 e-j	1.8	2.5	0.6	70 c-g	75 g-i	18.63 e-i	4943 hi	913 ef
CHAMPS	2.9	1.0	81 f-h	6.5	41 e-l	1.7	1.5	1.0	72 ab	76 a-f	19.02 a-f	5648 a-h	1054 a-e
Phillips	2.4	1.0	86 a-g	6.5	47 a-f	1.6	1.5	0.5	73 a	76 a-d	19.32 ab	5857 a-c	1114 a-c
Bailey	2.3	0.8	77 h-j	6.8	38 i-m	1.8	1.9	0.4	71 a-d	75 c-i	18.85 b-h	5746 a-f	1068 a-d
Georgia 08V	3.4	1.2	90 a-d	6.5	54 a	2.8	1.3	0.8	72 ab	77 a	19.52 a	5069 e-h	962 de
Florida Fancy	2.9	1.1	87 a-g	6.5	42 e-j	2.0	2.6	0.5	69 e-g	74 ij	18.48 g-j	5017 f-h	912 ef
VA 98R	2.5	0.8	84 e-i	6.7	40 f-l	1.8	1.7	0.6	71 a-d	75 c-i	18.9 b-h	5270 c-h	982 b-e
Sugg	2.1	1.0	85 b-g	6.6	51 a-d	3.2	1.9	0.7	70 b-f	76 a-e	19.25 a-c	5342 b-h	1015 b-e
VT 024077	1.6	0.5	81 f-j	7.2	39 g-l	1.4	1.5	1.0	73 a	76 a-c	19.09 a-e	6194 a	1170 a
VT 004152	3.0	0.8	92 a-d	6.6	34 k-m	1.0	1.8	0.9	71 b-e	74 i	18.41 h-j	5512 a-h	970 c-e
VT 003194	2.1	0.9	85 b-g	6.6	46 b-i	0.9	1.6	0.9	72 a-c	75 e-i	18.84 b-h	5620 a-h	1045 a-e
VT 003069	3.2	1.2	89 a-f	6.7	47 a-g	1.8	2.0	1.4	71 a-d	76 a-d	18.92 b-h	5241 c-h	972 b-e
VT 003191	2.2	0.8	85 c-h	6.6	41 e-l	2.2	1.7	0.5	70 b-f	75 hi	18.72 c-h	4985 gh	921 e
VT 003192	2.5	0.8	76 ij	6.4	41 e-l	2.8	1.8	0.6	69 d-g	75 g-i	18.69 d-i	5193 c-h	956 de
VT 003200	1.4	1.0	93 a	6.3	44 e-j	1.9	1.3	1.2	68 fg	73 jk	18.18 ij	5676 a-g	1025 b-e
VT 024024	2.3	0.9	93 ab	6.5	43 e-j	1.5	1.9	1.3	68 g	72 k	18.03 j	5402 b-h	962 de
VT 023117	2.0	0.9	82 e-j	6.5	40 f-l	2.1	2.3	0.5	71 a-d	76 a-g	18.94 b-g	5125 d-h	959 de
VT 024051	2.4	0.9	93 ab	6.3	41 e-j	2.2	1.4	0.8	70 b-f	75 g-i	18.73 c-h	5125 d-h	1016 b-e
N03023EF	3.0	0.9	81 f-j	6.4	46 b-h	1.5	2.4	0.5	70 b-f	75 hi	18.70 d-i	5564 a-h	1021 b-e
N04074FCT	1.7	1.7	75 j	6.7	38 h-m	1.1	1.9	0.9	71 b-e	74 hi	18.53 f-i	4231 ij	776 f
N05006	1.7	1.2	85 d-h	6.6	37 j-m	1.4	2.2	1.1	70 b-f	75 g-i	18.45 g-j	5778 a-e	1055 a-e
N05007	1.3	0.7	92 a-d	6.6	40 f-l	1.3	1.4	1.2	71 b-e	74 hi	18.53 f-j	6067 ab	1115 ab
N05008	1.4	0.4	87 a-g	6.3	31 m	1.6	1.4	0.5	71 a-d	75 g-i	18.66 d-i	5388 b-h	998 b-e
N05018	0.8	0.8	87 a-f	6.6	45 c-i	2.8	2.1	0.5	69 d-g	75 f-i	18.8 b-h	5829 a-d	1091 a-d
N03088T	1.6	0.9	79 g-j	6.4	49 a-e	3.0	1.7	1.1	71 a-e	77 ab	19.17 a-d	5346 b-h	1014 b-e
N05024J	1.8	1.0	93 a-c	6.6	52 a-c	2.5	1.6	1.1	70 b-f	75 d-i	18.90 b-h	5521 a-h	1035 a-e
N05049J	1.9	1.1	83 e-i	6.5	42 e-j	1.6	2.2	0.9	70 b-f	75 f-i	18.67 d-i	5433 b-h	1003 b-e
HST 02-08	1.5	1.3	92 a-d	6.9	33 lm	1.7	3.0	1.1	60 h	66 l	16.08 k	3918 j	625 g
Mean	2.2	1.0	85.7	6.6	42.5	1.8	1.9	0.8	70.2	74.7	18.7	5384	996
LSD_{0.05}¹	1.2	0.3	8.0	0.4	7.9	1.1	1.3	0.8	2.0	1.3	0.5	731	145

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

2009 Results by Location

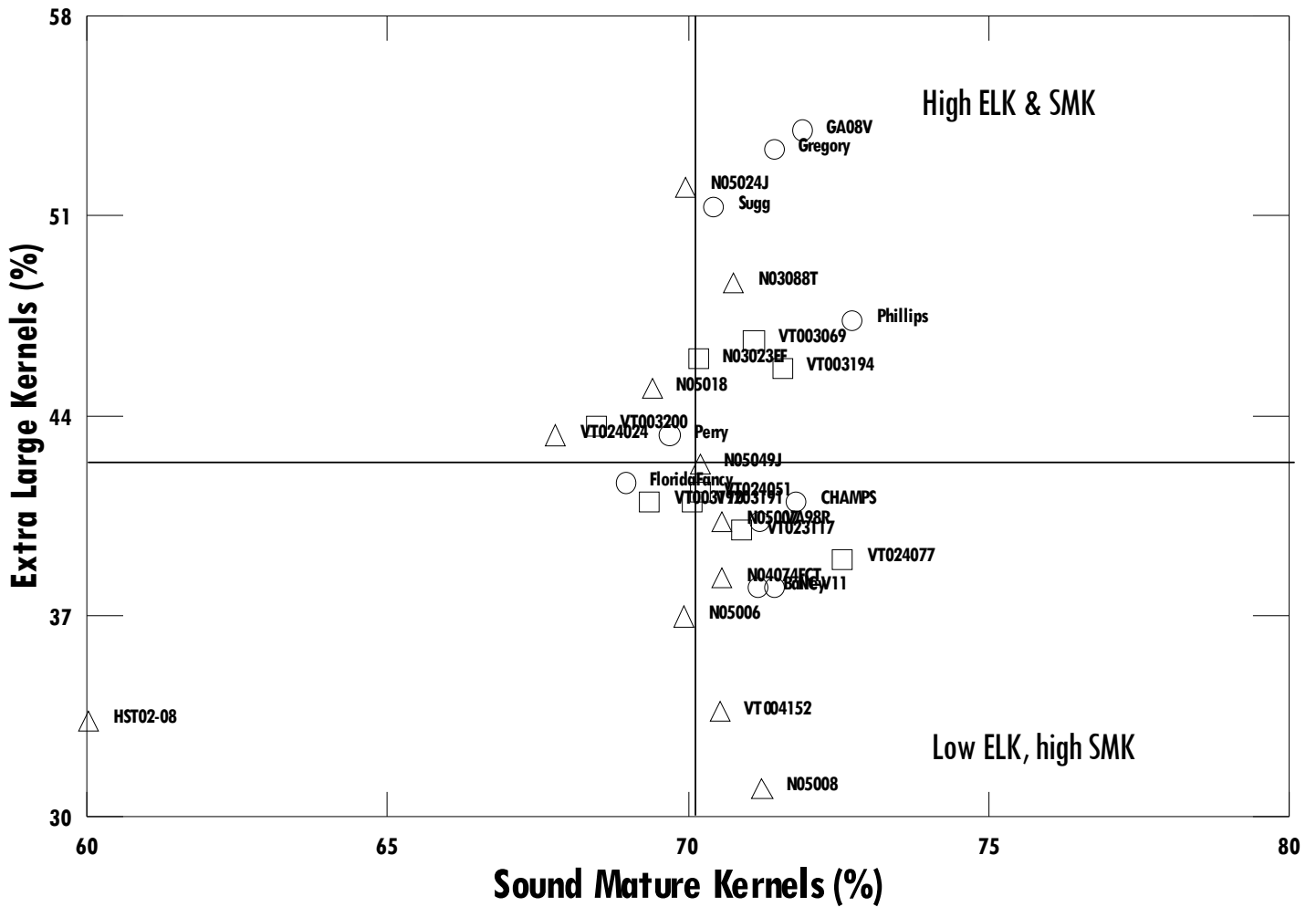


Figure 19. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content for Planting I at Martin Co., NC, in 2009. Vertical bar represents mean of the SMK content and horizontal bar mean of the ELK content of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and planting time.

2009 Results by Location

Table 34. Performance of genotypes at Martin Co., NC, in 2009. Planting Date II averages of three replicated plots planted on 14 May, dug on 7 October, and combined on 14 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	1.3	0.8	83 c-e	7.4	41 g-i	1.5	2.4	0.8	71 b-f	75 d-g	18.70 b-f	5369 b-d	1003 b-d
Gregory	3.3	1.1	93 a	7.4	57 ab	1.2	1.9	1.1	71 a-d	75 d-g	19.06 a-c	5332 b-d	1017 b-d
Perry	1.0	1.4	81 de	7.7	43 e-i	0.6	2.4	0.9	72 a-c	75 c-g	18.79 b-f	5371 b-d	1009 b-d
CHAMPS	1.5	1.1	80 de	7.0	36 ij	1.8	3.1	1.0	70 c-h	75 d-g	18.52 b-g	5419 a-d	1002 b-d
Phillips	1.5	1.0	88 a-c	7.9	54 a-c	0.9	2.6	0.6	71 a-e	75 d-g	18.93 a-e	5878 a-d	1112 a-c
Bailey	1.1	0.5	72 g	7.7	41 g-i	1.1	3.4	0.6	70 c-h	75 e-h	18.45 c-h	5862 a-d	1082 a-d
Georgia 08V	1.9	0.9	90 ab	7.7	58 a	3.5	2.2	0.8	71 a-e	77 a	19.61 a	6101 ab	1197 a
Florida Fancy	1.4	1.0	90 ab	7.6	43 d-h	1.4	2.3	0.9	70 c-g	74 f-h	18.60 b-g	5334 b-d	993 b-e
VA 98R	1.4	1.0	78 ef	7.4	33 j	1.9	1.9	1.5	70 b-g	75 d-g	18.50 b-h	5419 a-d	1002 b-d
Sugg	0.9	0.7	82 de	7.0	50 b-e	2.3	2.8	1.9	69 c-h	76 a-d	18.66 b-f	5767 a-d	1084 a-d
VT 024077	0.9	1.0	81 de	7.3	44 e-h	1.4	1.5	2.1	72 a-c	77 a-c	18.85 b-f	5979 a-c	1135 a-c
VT 004152	2.0	1.1	90 ab	7.3	41 g-i	2.4	2.4	2.1	69 e-h	75 d-g	18.28 f-h	5814 a-d	1072 a-d
VT 003194	1.3	0.9	83 c-e	7.0	44 e-h	1.1	2.6	1.0	71 b-f	75 d-g	18.69 b-f	5805 a-d	1085 a-d
VT 003069	2.4	1.1	89 ab	7.3	50 b-e	2.4	2.0	1.7	72 a-c	78 a	19.18 ab	5631 a-d	1088 a-c
VT 003191	1.5	0.7	85 b-d	7.5	49 c-f	2.6	2.4	2.1	68 f-h	75 d-g	18.34 d-h	5990 a-c	1111 a-c
VT 003192	0.9	0.9	73 fg	7.3	42 f-i	2.3	2.8	1.4	68 f-h	75 e-h	18.36 d-h	5746 a-d	1055 a-d
VT 003200	0.9	0.9	92 a	7.3	44 e-h	0.7	2.3	1.1	68 gh	72 j	17.82 h	5470 a-d	978 c-e
VT 024024	1.3	1.1	92 a	7.4	49 c-f	1.4	2.3	1.5	67 h	72 ij	17.95 gh	6280 a	1130 a-c
VT 023117	1.4	0.9	83 c-e	7.0	44 e-h	1.5	2.6	1.2	70 b-g	75 d-g	18.67 b-f	5716 a-d	1067 a-d
VT 024051	1.6	0.9	89 ab	6.3	46 e-h	1.4	2.2	1.2	70 b-f	75 e-h	18.67 b-f	6046 a-c	1130 a-c
N03023EF	1.6	0.9	85 b-d	6.9	49 c-f	1.5	2.4	1.1	70 b-f	75 d-g	18.79 b-f	6036 a-c	1136 a-c
N04074FCT	1.6	1.1	72 g	7.8	46 e-h	1.1	3.7	1.1	68 f-h	74 gh	18.27 e-h	5003 d	915 de
N05006	1.4	1.0	88 a-c	6.6	45 e-h	1.7	2.4	2.1	69 e-h	75 e-h	18.20 f-h	6306 a	1160 ab
N05007	0.8	0.5	93 a	7.6	40 h-j	0.6	1.0	0.7	73 a	75 d-g	19.02 a-d	6271 a	1192 ab
N05008	0.7	0.9	93 a	6.9	44 e-h	1.2	1.3	1.1	72 ab	76 b-e	19.05 a-c	6295 a	1201 a
N05018	0.9	0.8	88 a-c	6.5	45 e-h	2.4	2.3	0.6	69 e-h	75 e-h	18.73 b-f	5699 a-d	1067 a-d
N03088T	1.6	0.7	84 b-d	6.9	54 a-c	3.1	2.8	2.2	69 e-h	77 ab	18.72 b-f	5739 a-d	1088 a-c
N05024J	1.3	0.9	91 a	7.3	53 a-d	1.6	1.8	0.8	71 a-c	76 b-f	19.14 ab	5304 b-d	1016 b-d
N05049J	1.1	1.0	81 de	7.4	47 c-g	0.8	3.4	0.8	69 e-h	74 hi	18.25 e-h	5757 a-d	1050 a-d
HST 02-08	0.7	1.0	92 a	7.1	36 ij	1.1	3.2	1.4	61 i	66 k	16.00 i	5156 cd	828 e
Mean	1.4	0.9	85.4	7.3	45.6	1.6	2.4	1.2	69.7	74.8	18.6	5730	1067
LSD_{0.05}¹	0.8	0.5	6.0	1.6	7.2	1.2	1.1	1.0	2.5	1.4	0.7	894	171

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

2009 Results by Location

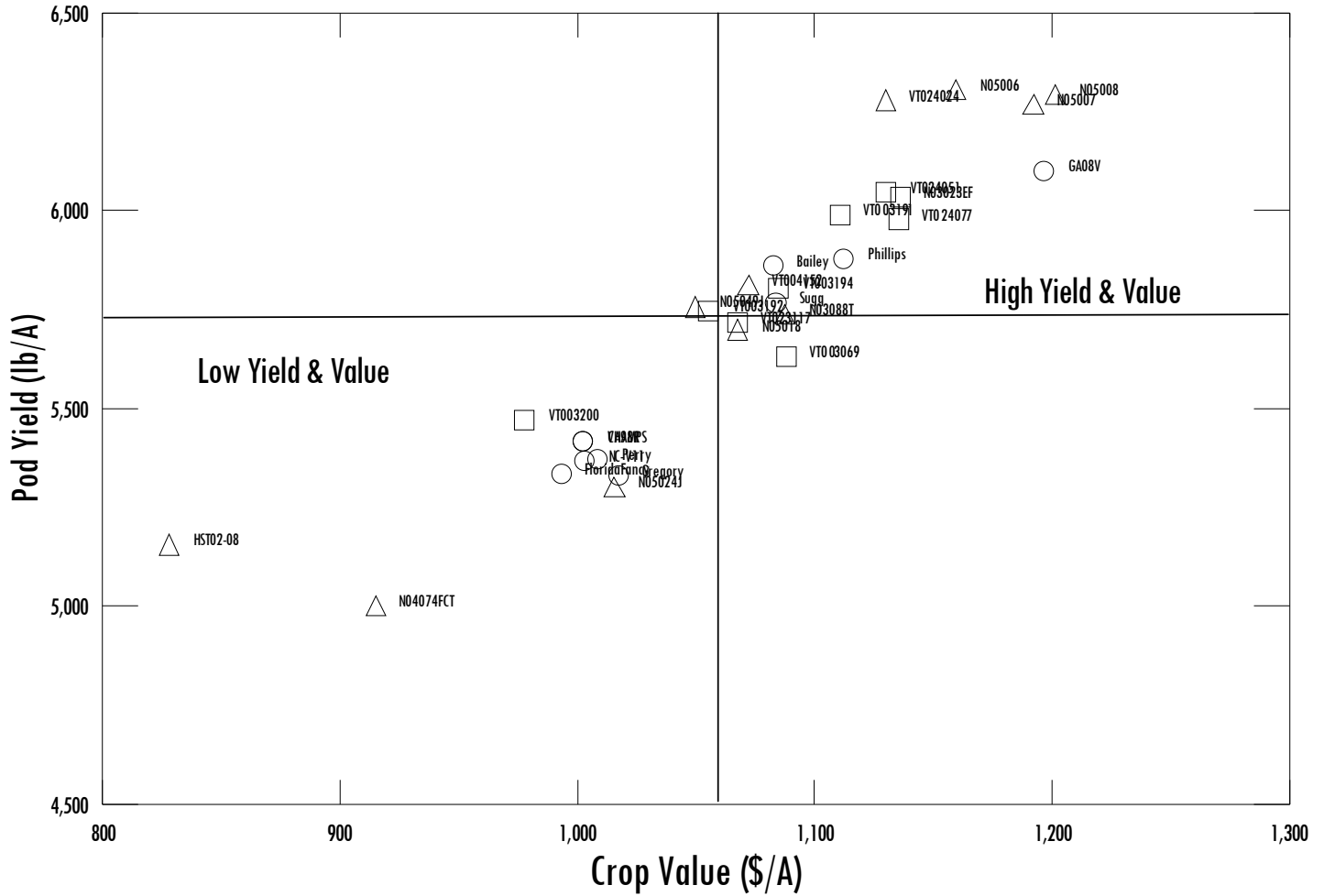


Figure 20. Summary of pod yield and crop value for Planting Date II at Martin Co., NC, in 2009. Vertical bar represents mean crop value and horizontal bar mean pod yield of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for yield and value at this location and planting time.

2009 Results by Location

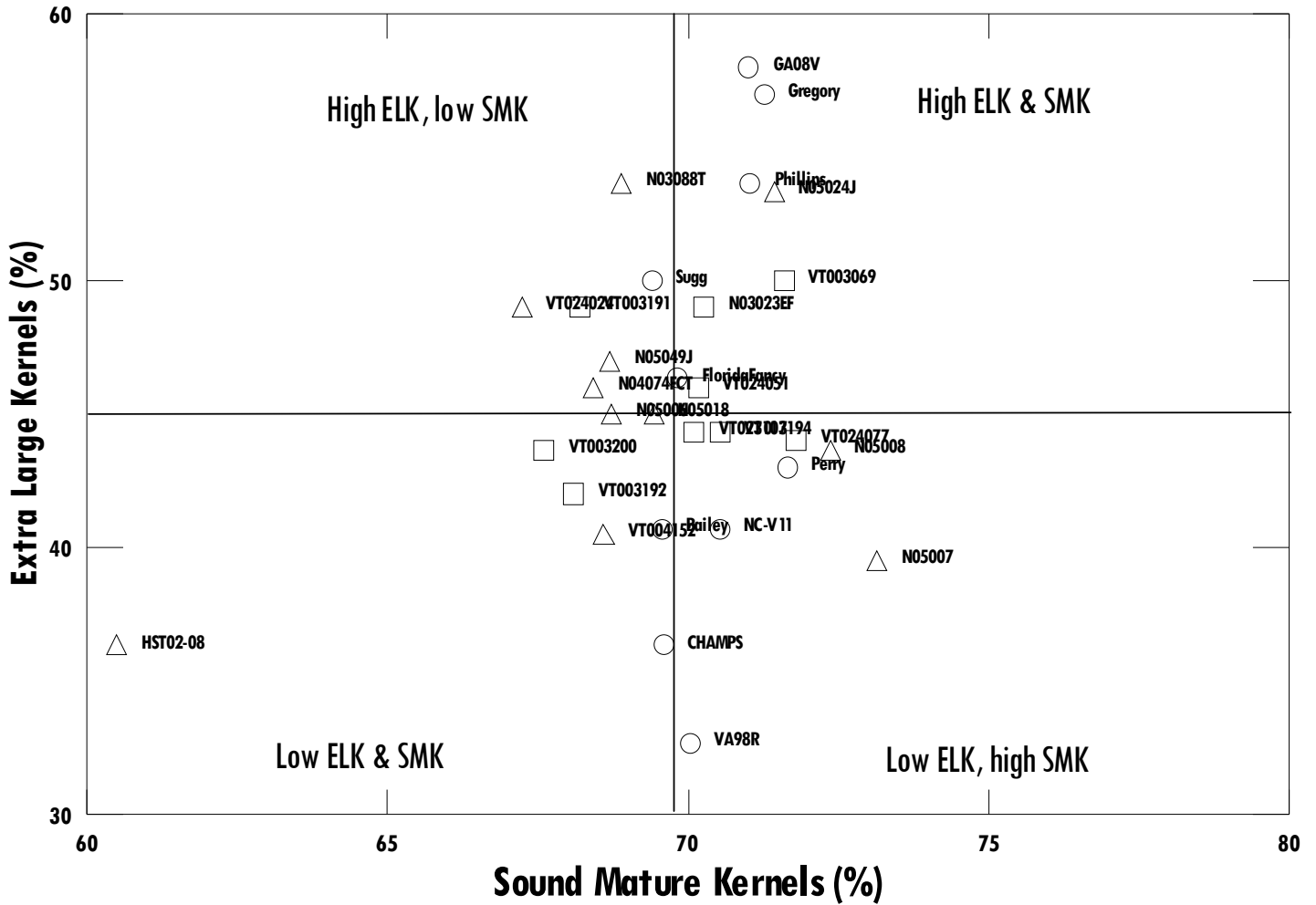


Figure 21. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content for Planting Date II at Martin Co., NC, in 2009. Vertical bar represents mean of the SMK content and horizontal bar mean of the ELK content of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and planting time.

2009 Results by Location

Table 35. Performance of genotypes at Rocky Mount, NC, in 2009. Averages of three replicated plots planted on 14 May, dug on 8 October, and combined on 19 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
Gregory	1.1	1.4	90 a-c	7.0	54 a-c	2.2	2.5	2.2	68 a-d	75 c-e	18.07 b-d	4479 a	823 ab
Perry	0.4	0.8	82 f-h	7.0	49 d-h	2.7	3.2	1.9	67 a-e	74 c-e	18.22 cd	4872 a	888 a
CHAMPS	1.0	0.8	86 c-g	7.1	46 g-i	2.2	3.3	1.4	68 a-d	74 c-e	18.27 cd	5302 a	970 a
Georgia 08V	1.4	1.0	90 a-c	7.8	55 ab	3.8	2.0	1.0	69 a	76 ab	19.18 a	4625 a	886 a
Sugg	0.3	0.8	91 ab	7.1	52 a-d	2.7	3.2	1.6	67 a-d	75 b-e	18.45 b-d	4746 a	876 a
VT 024077	1.0	0.8	84 e-h	7.4	51 b-f	4.0	2.7	2.0	67 a-e	75 b-d	18.58 a-d	5245 a	974 a
VT 004152	0.9	1.2	91 ab	7.1	47 f-i	2.2	2.5	2.2	67 a-d	74 de	18.20 cd	5108 a	930 a
VT 003194	1.4	0.9	83 f-h	7.2	53 a-d	1.9	2.8	1.9	68 a-c	75 b-e	18.52 a-d	2713 b	511 b
VT 003069	1.6	0.8	87 b-f	7.2	49 d-h	2.9	3.0	2.4	69 a-c	77 a	18.74 a-c	5167 a	972 a
VT 003191	0.5	0.7	89 a-d	7.3	53 a-c	3.6	2.6	2.5	66 b-e	74 c-e	18.27 cd	5107 a	934 a
VT 003192	0.4	0.6	80 hi	6.8	49 d-h	5.4	2.1	1.1	65 c-e	74 e	18.51 a-d	4767 a	881 a
VT 003200	0.3	0.7	94 a	6.6	51 a-e	2.8	2.1	1.2	66 b-e	72 f	18.03 de	5421 a	976 a
VT 024024	0.7	1.1	88 b-e	6.8	47 e-h	3.0	2.8	3.1	63 ef	72 f	17.47 e	4929 a	862 a
VT 023117	0.6	1.0	78 i	6.9	45 h-j	2.9	3.7	2.0	66 a-e	75 b-e	18.16 cd	4735 a	859 a
VT 024051	1.3	0.8	89 a-d	7.1	51 a-e	3.0	1.8	1.2	69 ab	75 b-e	18.79 a-c	4730 a	889 a
N03023EF	0.3	0.8	82 g-i	7.3	52 a-d	2.9	3.1	1.1	69 a-c	76 b-d	18.79 a-c	4898 a	920 a
N05007	0.9	0.9	82 f-i	7.0	42 ij	2.3	2.6	2.8	67 a-d	75 b-e	18.15 c-e	4541 a	831 a
N05018	0.9	0.8	82 g-i	7.0	46 g-i	4.5	2.7	2.0	65 de	74 e	18.12 c-e	4890 a	885 a
N03088T	0.3	0.8	86 d-g	7.2	50 c-g	4.3	3.8	1.7	66 b-e	76 c-d	18.47 b-d	5160 a	953 a
N05024J	0.4	0.9	90 a-c	7.3	56 a	3.5	2.3	1.0	69 ab	76 a-c	19.03 ab	5387 a	1026 a
N05049J	1.0	1.2	81 g-i	7.3	50 c-f	2.5	2.7	1.5	68 a-c	75 b-e	18.56 a-d	3915 ab	727 ab
HST 02-08	0.9	1.0	85 d-h	7.8	41 j	2.1	4.1	0.6	61 f	68 g	16.67 f	4380 a	730 ab
Mean	0.8	0.9	85.9	7.2	49.5	3.1	2.8	1.7	66.8	74.4	18.3	4778	877
LSD_{0.05}¹	0.9	0.4	4.9	0.4	4.7	2	1	2	3.4	1.3	0.01	1660	315

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.³ Due to planting errors; eight genotypes were removed from comparison at this location.

2009 Results by Location

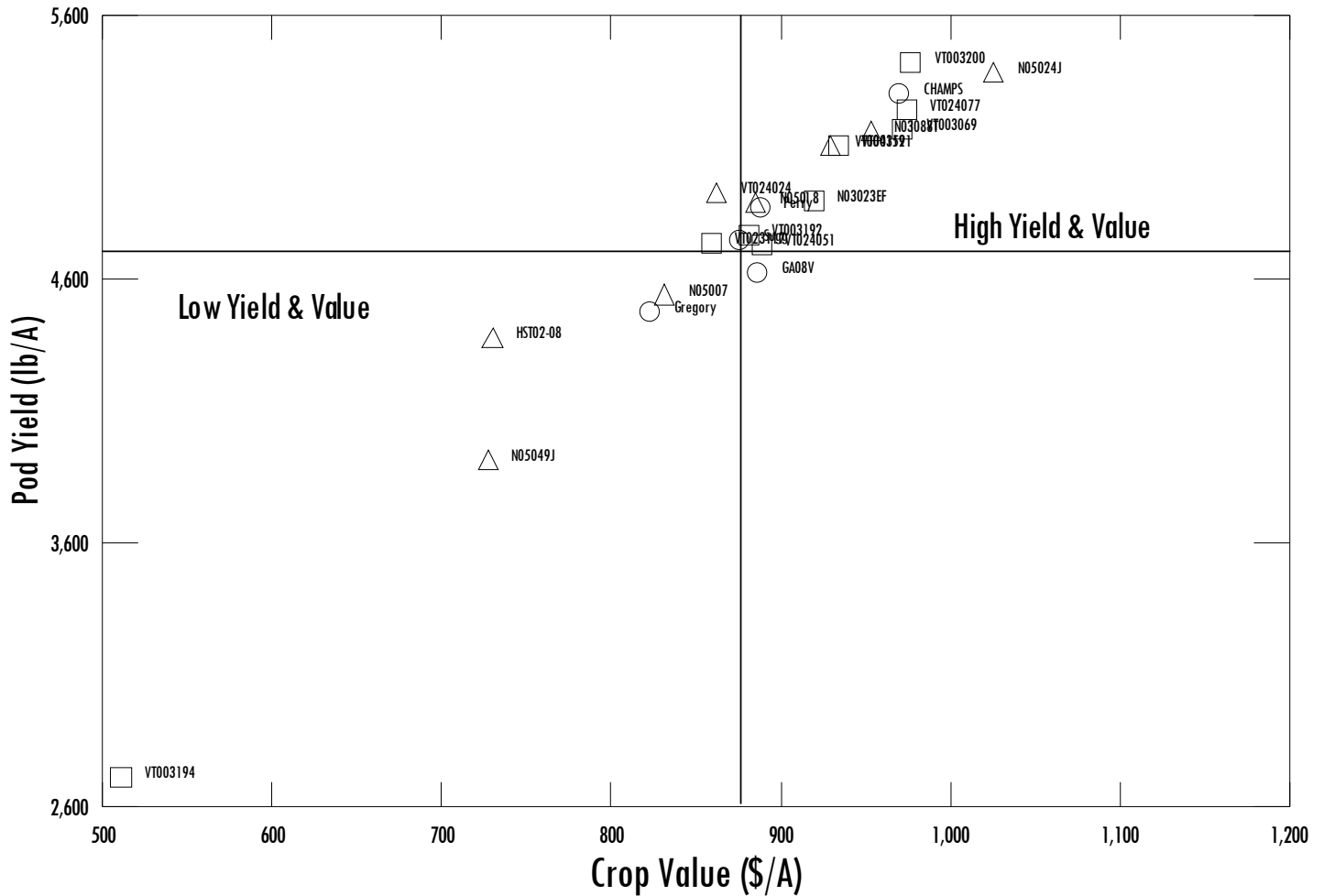


Figure 22. Summary of pod yield and crop value at Rocky Mount, NC, in 2009. Vertical bar represents mean crop value and horizontal bar mean pod yield of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for yield and value at this location and planting time.

2009 Results by Location

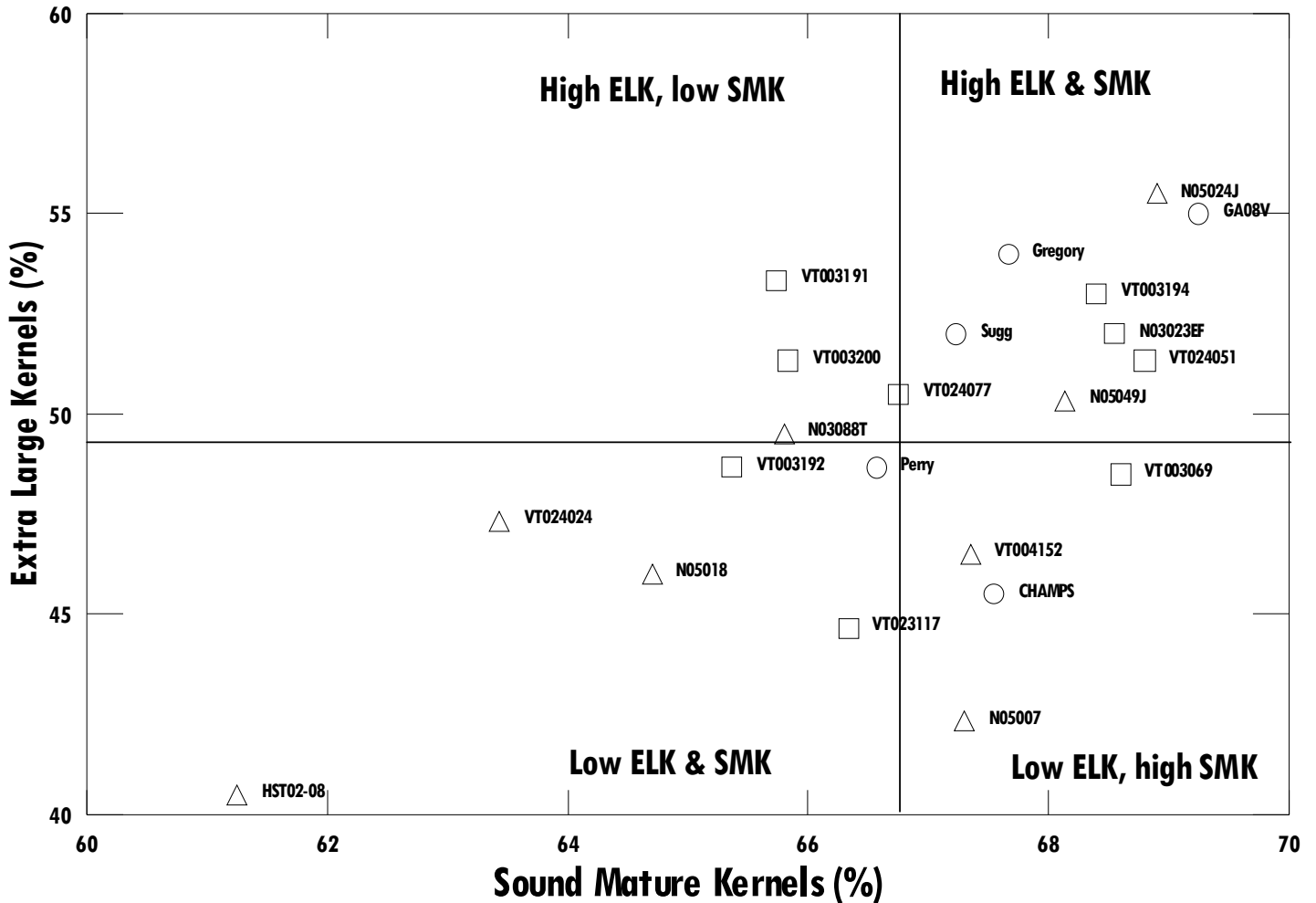


Figure 23. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Rocky Mount, NC, in 2009. Vertical bar represents mean of the SMK content and horizontal bar mean of the ELK content of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and planting time.

2009 Results by Location

Table 36. Performance of genotypes at Whiteville, NC, in 2009. Averages of three replicated plots planted on 5 May, dug on 12 October, and combined on 20 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	2.3	1.9	73 d-h	5.6	39 d-i	1.8	2.3	3.5	68 a	76 b-f	17.19 a-e	3490 a-f	630 a-e
Gregory	4.0	1.7	82 a-f	5.8	47 ab	3.3	1.6	6.2	63 c-e	74 d-i	14.40 g-i	3193 a-h	554 a-g
Perry	1.9	1.1	79 b-f	6.0	43 b-g	3.0	1.6	7.0	64 b-e	75 b-e	13.66 hi	2495 a-h	430 c-g
CHAMPS	2.8	2.3	73 d-h	6.1	38 e-h	4.0	2.2	4.6	65 a-e	75 b-f	15.88 a-g	1660 h	298 g
Phillips	1.3	1.6	75 c-g	5.8	47 ab	3.6	1.3	3.8	66 a-d	75 c-g	17.35 a-c	2728 a-h	497 a-g
Bailey	1.3	1.2	64 h	6.0	36 g-i	2.6	2.3	3.2	67 a-d	75 c-g	17.15 a-d	4156 ab	746 ab
Georgia 08V	5.5	1.9	85 a-c	5.9	52 a	6.1	1.0	3.8	66 a-d	77.3 a	17.60 ab	4125 a-c	780 a
Florida Fancy	2.4	1.9	72 f-h	6.2	39 d-h	5.2	1.8	4.2	63 d-f	74 e-i	16.32 a-g	3147 a-h	553 a-g
VA 98R	2.1	2.5	80 a-f	5.8	44 b-e	2.6	1.5	3.9	67 ab	75 a-e	17.00 a-e	3820 a-e	696 a-c
VT 024077	1.9	1.5	76 c-g	6.0	39 d-i	4.1	1.6	5.7	64 b-d	75 b-g	15.10 d-g	2447 d-h	430 c-g
VT 004152	2.6	1.8	82 a-f	6.0	41 b-h	3.0	2.0	4.4	66 a-d	75 b-f	16.54 a-g	2329 e-h	419 c-g
VT 003194	2.7	1.3	75 c-g	5.9	42 b-h	3.1	2.1	3.9	66 a-e	75 c-g	17.01 a-e	2896 a-h	518 a-g
VT 003069	2.1	1.5	81 a-f	6.0	43 b-f	4.0	1.3	5.7	65 a-f	76 a-c	15.56 b-h	4018 a-d	729 ab
VT 003191	2.9	4.3	81 a-f	5.9	40 c-h	4.4	2.1	8.6	59 f	74 e-i	12.23 i	2051 f-h	338 e-g
VT 003192	3.3	5.6	63 f	6.1	32 ij	4.2	2.5	3.3	64 a-e	74 e-i	16.65 a-f	2027 f-h	357 d-g
VT 003200	2.4	1.4	88 ab	5.8	39 d-i	4.7	1.2	4.5	62 ef	72 i	15.62 b-h	2421 d-h	417 c-g
VT 024024	1.9	0.9	83 a-d	5.9	39 d-h	3.4	1.5	3.9	65 a-e	73 g-i	16.33 a-f	3534 a-f	625 a-d
VT 023117	3.2	9.5	68 d-f	5.8	28 j	3.3	2.1	4.0	65 a-e	75 c-g	15.90 a-g	1822 gh	322 fg
VT 024051	2.5	2.1	84 a-c	6.0	39 d-h	2.6	1.4	3.5	65 a-e	73 hi	16.69 a-f	2916 a-h	510 a-g
N03023EF	1.6	3.3	76 c-g	5.9	43 b-f	3.4	1.7	3.8	65 a-e	74 f-i	16.63 a-f	3492 a-f	614 a-f
N04074FCT	1.2	1.1	78 c-g	5.9	47 a-c	2.9	1.5	3.1	68 a	75 b-f	18.06 a	3403 a-f	628 a-e
N05006	1.3	1.6	81 a-f	6.1	40 c-h	1.6	1.7	4.1	67 ab	75 d-g	16.47 a-g	3270 a-h	582 a-g
N05007	4.2	1.2	88 ab	6.1	36 hi	2.4	1.6	5.5	65 a-e	73 hi	15.39 c-h	2541 a-d	469 b-g
N05008	0.9	1.3	79 a-f	6.1	36 hi	3.1	1.6	5.0	65 b-f	74 d-h	15.70 b-h	3996 a-d	695 a-c
N05018	1.1	1.0	72 e-h	5.9	41 b-h	5.1	1.3	3.7	65 a-e	75 c-g	16.85 a-f	4087 a-c	737 ab
N03088T	0.8	1.0	79 a-e	5.8	47 ab	5.4	1.7	5.7	63 c-e	76 a-d	15.05 e-h	3336 a-f	594 a-g
N05024J	2.2	1.5	83 a-e	5.8	45 c-d	5.3	1.7	4.2	64 b-e	75 c-g	16.61 a-f	3607 a-f	646 a-d
N05049J	1.5	2.3	72 f-h	6.1	44 b-f	4.3	1.8	3.9	67 a-c	77 ab	17.30 a-d	2037 e	532 a-g
HST 02-08	0.7	1.6	89 a	6.0	37f-i	3.9	2.3	3.3	54 g	64 k	14.74 h-j	4288 a	650 a-d
Mean	2.1	2.0	77.4	6.0	40.7	3.6	1.7	4.2	64.9	74.4	16.3	3093	550
LSD_{0.05}¹	2.7	5.1	10.5	0.3	7.0	1.6	0.7	2.1	4.0	1.8	2.2	1636	296

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

2009 Results by Location

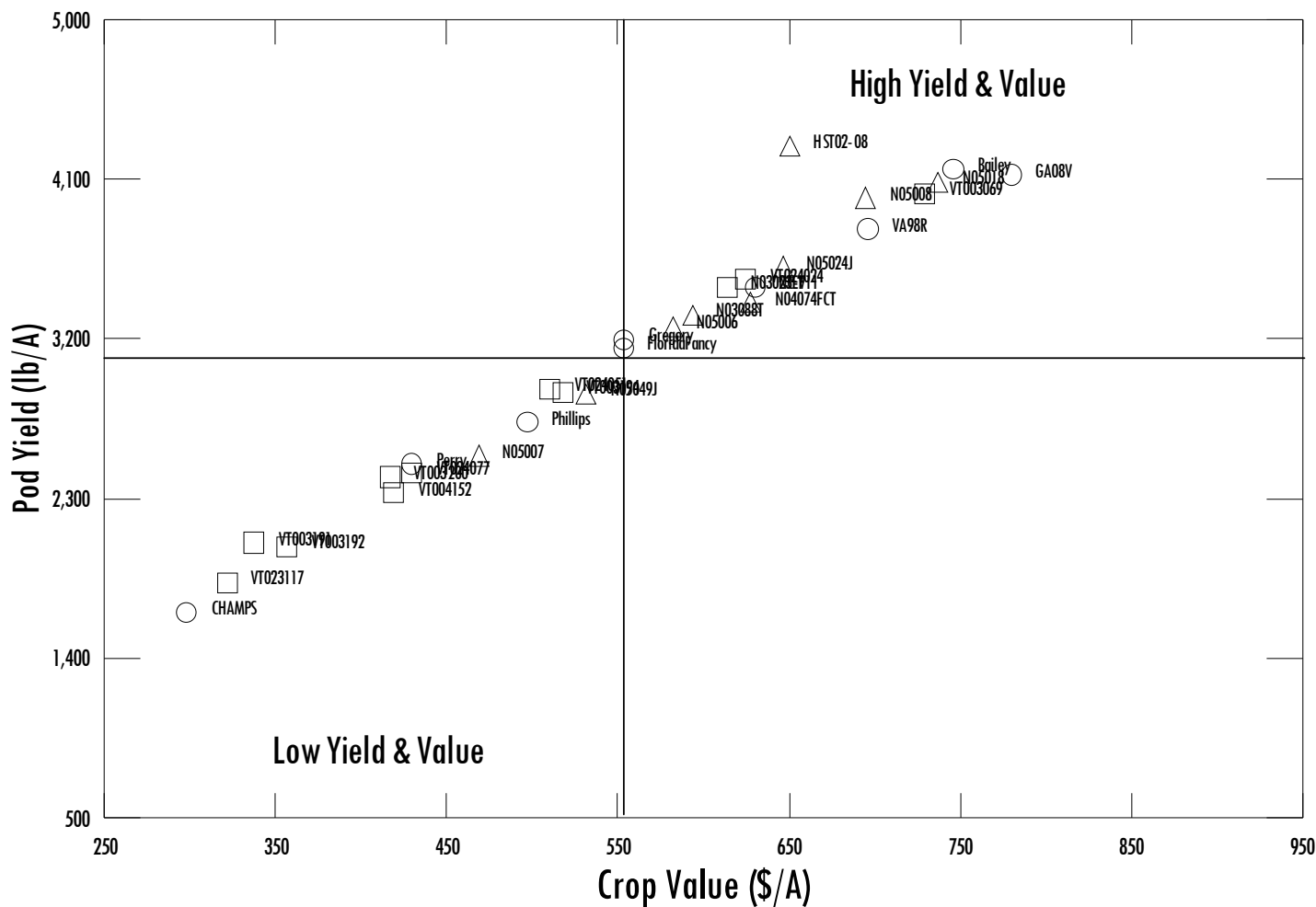


Figure 24. Summary of pod yield and crop value at Whiteville, NC, in 2009. Vertical bar represents mean crop value and horizontal bar mean pod yield of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for yield and value at this location and planting time.

2009 Results by Location

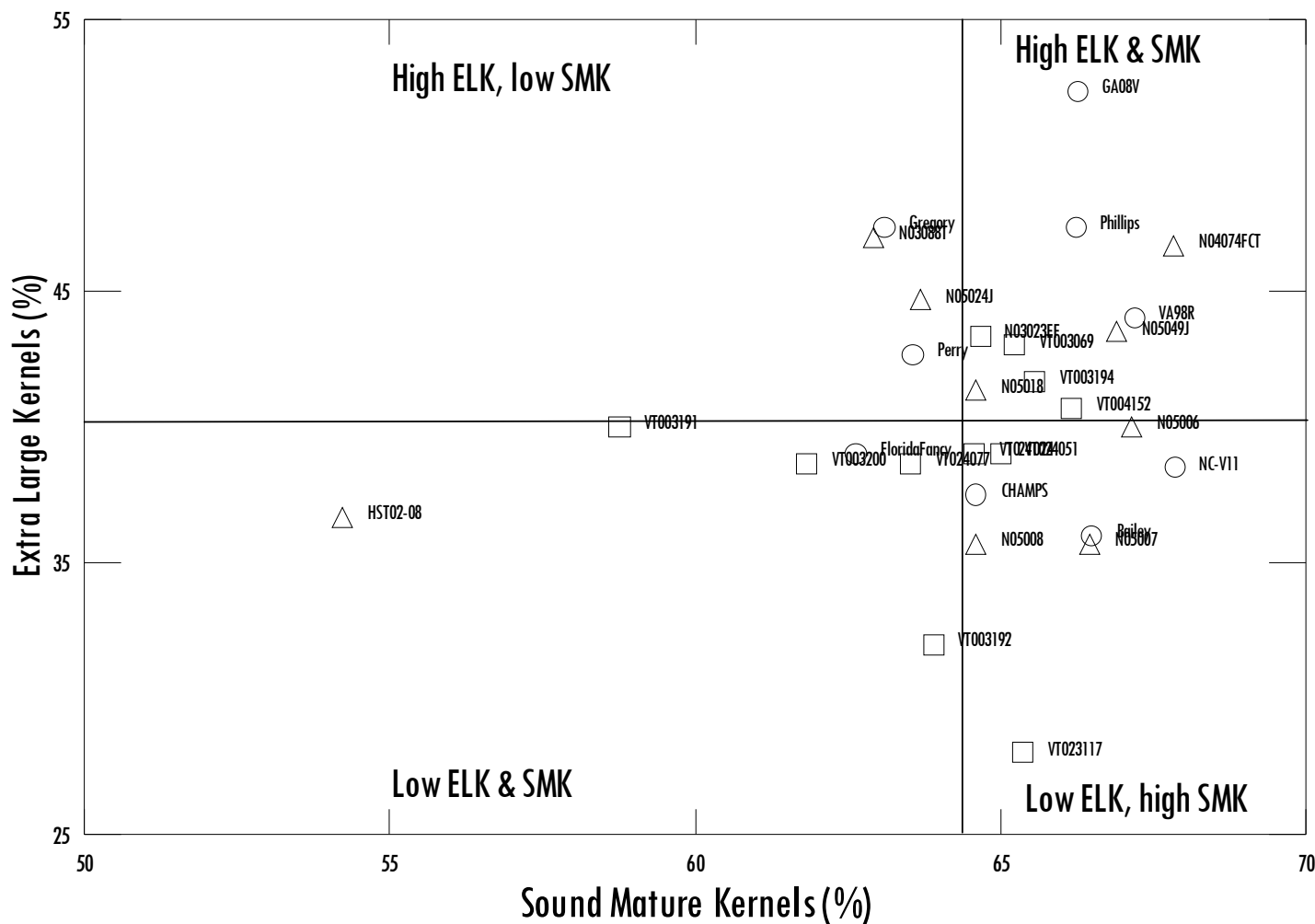


Figure 25. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Whiteville, NC, in 2009. Vertical bar represents mean of the SMK content and horizontal bar mean of the ELK content of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and planting time.

2009 Results by Location

Table 37. Performance of genotypes at Florence, SC, in 2009. Averages of three replicated plots planted on 4 May, dug on 9 October, and combined on 22 October.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	6.9	1.7	43 k	6.9	27 pq	2.2	3.3	2.5	65 a-f	73 f-m	17.27 e-h	1489 c-g	256 c-i
Gregory	11.0	2.5	79 a-c	6.8	46 a-g	2.0	2.5	4.5	65 a-f	74 c-k	17.50 c-h	1996 b-g	350 b-i
Perry	5.0	1.5	69 d-f	6.9	42 d-j	3.2	3.1	3.1	65 a-f	74 a-h	17.84 a-g	2686 a-c	480 a-c
CHAMPS	5.8	1.3	50 i-k	6.8	33 l-p	2.3	4.1	1.3	65 a-f	73 d-l	17.64 b-h	1121 d-g	198 d-i
Phillips	5.6	1.3	67 d-g	6.8	50 a-c	2.2	2.8	1.8	68 a	75 a-e	18.47 ab	2246 a-f	415 a-f
Bailey	6.4	1.5	60 gh	6.9	39 g-l	2.2	2.8	2.3	67 a-d	74 a-h	18.02 a-f	2461 a-d	445 a-d
Georgia 08V	12.9	1.8	79 a-c	7.0	52 a	4.1	1.8	3.3	67 a-c	76 ab	18.71 a	3413 a	641 a
Florida Fancy	6.2	1.8	74 b-d	6.7	44 c-i	3.6	2.0	2.7	64 a-f	73 f-m	17.74 b-g	2533 a-c	451 a-c
VA 98R	6.0	1.9	44 jk	6.8	31 m-p	3.3	3.0	3.9	64 c-f	74 c-j	17.39 c-h	1410 c-g	246 c-i
Sugg	4.6	1.2	69 d-f	6.9	48 a-e	3.2	3.3	3.6	66 a-f	76 a-c	18.11 a-e	2241 a-f	410 a-f
VT 024077	6.5	1.3	63 fg	6.7	45 a-h	3.7	2.2	3.6	66 a-f	75 a-d	18.17 a-d	1500 c-g	273 b-i
VT 004152	10.8	1.8	73 b-e	6.8	41 e-k	2.2	3.0	4.9	65 a-f	75 a-f	17.5 c-h	1715 b-g	304 b-f
VT 003194	5.3	1.0	66 d-g	6.7	44 c-i	2.2	3.0	2.7	68 ab	76 a-c	18.27 a-c	2401 a-e	440 a-e
VT 003069	10.3	2.2	74 b-d	6.5	47 a-f	2.5	2.4	3.6	68 a	77 a	18.43 ab	2530 a-c	470 a-c
VT 003191	6.8	1.6	71 c-f	6.8	49 a-d	2.5	2.7	3.4	66 a-f	75 a-g	17.99 a-f	2015 b-g	362 b-i
VT 003192	6.8	1.5	43 k	6.8	30 n-p	2.9	3.9	2.8	64 b-f	74 c-k	17.37 d-h	673 g	117 i
VT 003200	4.0	1.7	82 ab	6.7	43 c-j	3.5	2.5	2.7	63 ef	72 j-m	17.43 c-h	2313 a-e	403 a-g
VT 024024	5.8	2.2	69 d-f	6.8	36 j-n	2.3	3.4	3.0	62 f	71 lm	16.85 h	889 fg	149 hi
VT 023117	5.8	1.4	33 l	6.8	23 q	2.3	2.8	4.0	65 a-f	74 c-i	17.26 e-h	894 fg	152 g-i
VT 024051	7.5	1.9	66 d-g	6.6	33 l-p	2.5	3.1	2.9	64 c-f	72 h-m	17.17 f-h	1042 e-g	180 f-i
N03023EF	8.4	1.7	53 h-j	6.7	34 k-o	2.6	2.4	4.1	64 c-f	73 e-m	17.21 f-h	1121 d-g	197 d-i
N04074FCT	4.5	1.8	71 c-f	7.0	42 d-j	1.1	3.0	1.8	66 a-f	72 k-m	17.49 c-h	2937 ab	516 ab
N05006	5.8	1.5	69 d-f	7.0	37 i-n	2.1	3.3	2.2	63 d-f	71 m	17.09 gh	2163 a-f	371 b-h
N05007	3.3	1.3	79 a-c	6.6	41 f-k	1.7	2.2	2.4	67 a-e	73 d-l	17.85 a-g	2399 a-e	431 a-f
N05008	4.9	1.0	74 b-e	6.9	38 i-n	2.0	2.5	2.7	65 a-f	72 g-m	17.47 c-h	2401 a-e	423 a-f
N05018	5.6	1.3	65 e-g	6.6	45 b-i	4.3	2.7	2.7	65 a-f	74 b-h	18.01 a-f	2400 a-e	433 a-e
N03088T	5.8	1.6	73 c-e	7.0	49 a-d	2.7	3.9	3.4	66 a-f	76 a-c	18.02 a-f	2304 a-e	413 a-f
N05024J	7.5	1.8	81 ab	7.2	52 ab	2.6	1.7	1.8	68 ab	74 c-k	18.41 ab	1855 b-g	342 b-i
N05049J	4.3	1.6	59 g-i	6.7	38 h-m	2.8	3.2	3.0	63 f	72 l-m	17.17 f-h	1119 d-g	192 e-i
HST 02-08	2.8	2.2	87 a	7.1	28 o-q	1.4	4.2	3.2	50 g	58 n	13.40 i	2700 a-c	377 b-h
Mean	6.4	1.6	66.2	6.8	40.2	2.6	2.9	3.0	64.8	73.3	17.6	1966	348
LSD_{0.05}¹	2.7	0.7	8.8	0.4	7.4	1.6	1.0	1.5	3.7	2.3	0.01	1366	253

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

2009 Results by Location

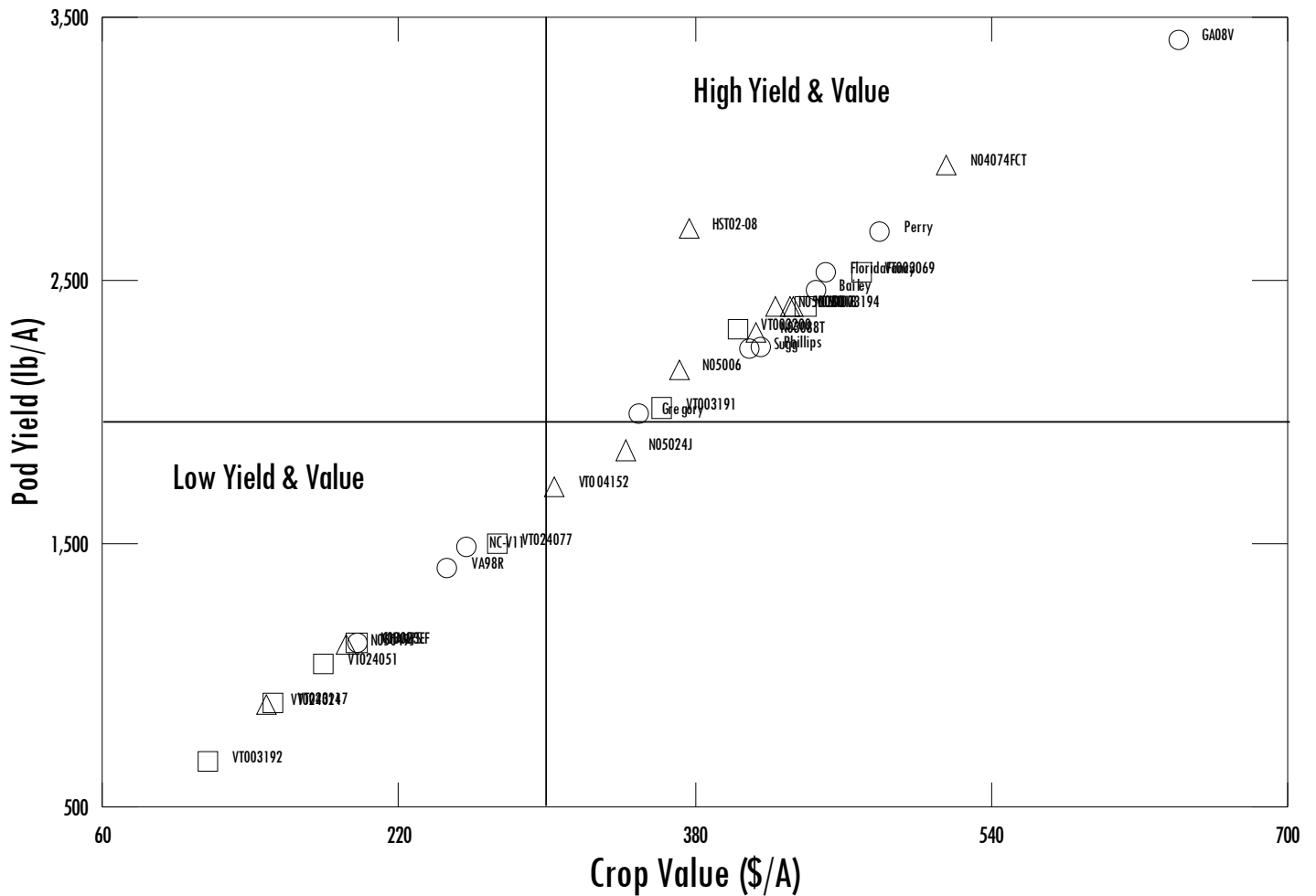


Figure 26. Summary of pod yield and crop value at Florence, SC, in 2009. Vertical bar represents mean crop value and horizontal bar mean pod yield of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for yield and value at this location and planting time.

2009 Results by Location

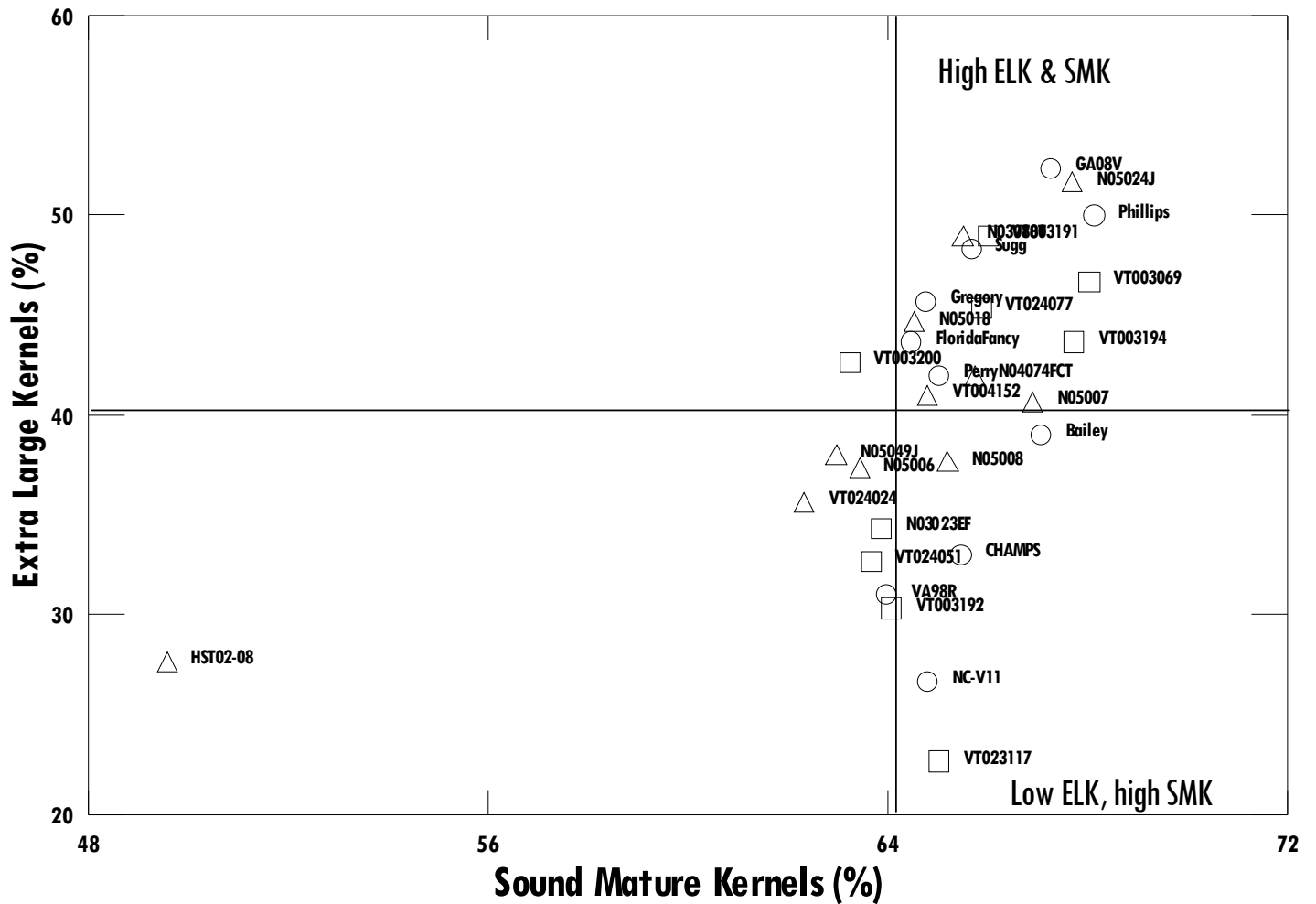


Figure 27. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at Florence, SC, in 2009. Vertical bar represents mean of the SMK content and horizontal bar mean of the ELK content of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for ELK and SMK content at this location and planting time.

2009 Results across Locations

Table 38. Performance of genotypes averaged across test locations in 2009.

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	2.1	1.1	73 h-l	6.8	39 mn	1.7	2.9	1.5	68 a-e	74 f-k	17.95 a-e	4939 a-c	899 a-c
Gregory	3.9	1.4	90 a	6.8	52 ab	1.5	2.4	2.8	67 c-f	73 i-l	17.20 f-h	4648 a-c	846 a-d
Perry	1.8	1.1	79 e-h	6.9	43 g-l	2.0	3.2	2.6	66 e-h	74 e-i	17.26 e-h	4636 a-c	831 a-d
CHAMPS	2.3	1.1	72 i-l	6.9	40 l-n	1.8	3.2	1.5	68 a-e	74 e-g	17.98 a-e	4446 a-c	814 a-d
Phillips	1.9	0.9	83 c-f	7.3	52 bc	1.6	2.2	1.7	69 a	75 c-e	18.23 ab	4727 a-c	882 a-d
Bailey	2.0	0.9	71 kl	7.1	41 j-m	1.8	3.4	1.2	67 c-f	74 g-l	17.94 a-f	5083 a	919 ab
Georgia 08V	5.1	1.3	88 a-c	7.0	55 a	3.3	2.2	1.9	68 a-d	76 bc	18.41 a	4760 a-c	896 a-c
Florida Fancy	2.7	1.3	84 b-e	7.0	46 fg	2.8	2.4	1.6	66 d-g	73 j-l	17.90 a-g	4494 a-c	817 a-d
VA 98R	2.1	1.1	71 l	7.0	41 l-m	2.3	2.6	2.3	67 c-f	75 d-f	17.67 a-h	4520 a-c	825 a-d
Sugg	1.8	0.8	79 e-g	6.9	49 c-e	2.6	3.4	1.9	67 c-f	75 c-e	18.06 a-d	4925 a-c	903 a-c
VT 024077	2.0	0.9	79 e-h	7.0	44 f-i	2.3	2.1	2.6	68 a-c	75 b-d	17.76 a-h	4735 a-c	876 a-d
VT 004152	3.3	1.2	86 a-d	6.8	39 mn	1.7	2.6	2.6	67 c-f	73 l	17.32 d-h	4323 a-c	777 a-e
VT 003194	1.9	1.0	76 g-k	6.8	44 f-i	1.6	3.0	1.8	68 a-e	71 m	17.94 a-f	4836 a-c	877 a-d
VT 003069	3.4	1.4	86 a-d	6.8	50 b-d	2.6	2.2	2.4	69 ab	76 a	18.21 ab	4750 a-c	897 a-c
VT 003191	2.5	1.3	82 c-f	6.9	46 e-g	2.5	2.8	2.7	66 f-i	74 g-l	17.18 gh	4603 a-c	827 a-d
VT 003192	2.2	1.6	71 l	6.8	40 mn	3.3	3.1	2.0	65 g-i	73 j-l	17.41 c-h	4097 c	732 de
VT 003200	1.6	1.1	90 a	6.6	44 g-l	2.5	2.3	2.2	65 hi	72 m	17.17 gh	4751 a-c	835 a-d
VT 024024	2.0	1.1	88 a-c	6.8	44 f-k	2.1	2.6	2.3	64 i	71 m	17.08 h	4630 a-c	811 a-d
VT 023117	2.2	2.1	70 l	6.9	37 no	1.8	3.0	2.1	68 a-e	75 ef	17.54 b-h	4136 bc	752 c-e
VT 024051	2.4	1.1	87 a-c	6.7	44 f-j	1.9	2.3	1.8	67 c-f	74 e-g	17.80 a-h	4569 a-c	829 a-d
N03023EF	2.6	1.2	75 g-l	6.7	45 fg	1.9	2.8	1.9	67 c-f	74 f-j	17.76 a-h	4633 a-c	846 a-d
N04074FCT	1.7	1.2	72 j-l	6.9	43 h-l	1.1	3.4	1.5	67 b-e	74 h-l	17.88 a-g	4242 a-c	762 b-e
N05006	1.8	1.2	81 d-g	6.9	41 j-m	1.3	2.8	1.9	67 c-f	73 kl	17.59 b-h	4840 a-c	869 a-d
N05007	1.8	0.8	89 ab	6.8	42 i-m	1.2	1.9	2.2	68 a-c	74 h-l	17.59 b-h	4711 a-c	860 a-d
N05008	1.4	0.8	86 a-d	6.7	42 h-m	1.7	1.8	2.1	69 a-c	74 e-i	17.83 a-h	4965 ab	913 ab
N05018	1.4	0.9	80 d-g	6.7	47 d-f	3.1	2.6	1.3	67 c-f	74 e-h	18.20 ab	5080 a	937 a
N03088T	1.8	1.0	77 f-i	6.8	49 b-d	3.0	3.1	2.3	67 c-f	76 ab	17.93 a-f	4751 a-c	881 a-d
N05024J	2.3	1.0	88 a-c	6.9	52 bc	2.5	2.1	1.9	68 a-e	74 e-g	18.12 a-c	4824 a-c	892 a-d
N05049J	1.6	1.3	77 g-j	7.0	45 f-h	1.9	3.1	1.6	67 c-f	74 f-l	17.87 a-g	4660 a-c	848 a-d
HST 02-08	1.1	1.3	89 a	7.0	35 o	1.8	3.6	1.7	56 j	64 n	15.12 i	4098 c	632 e
Mean	2.2	1.2	80.6	6.9	44.4	2.1	2.7	2.0	66.8	73.6	17.7	4647	843
LSD_{0.05}¹	1.2	0.7	5.6	0.5	3.2	0.6	0.6	0.9	1.8	0.8	0.7	856	160

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

2009 Results across Locations

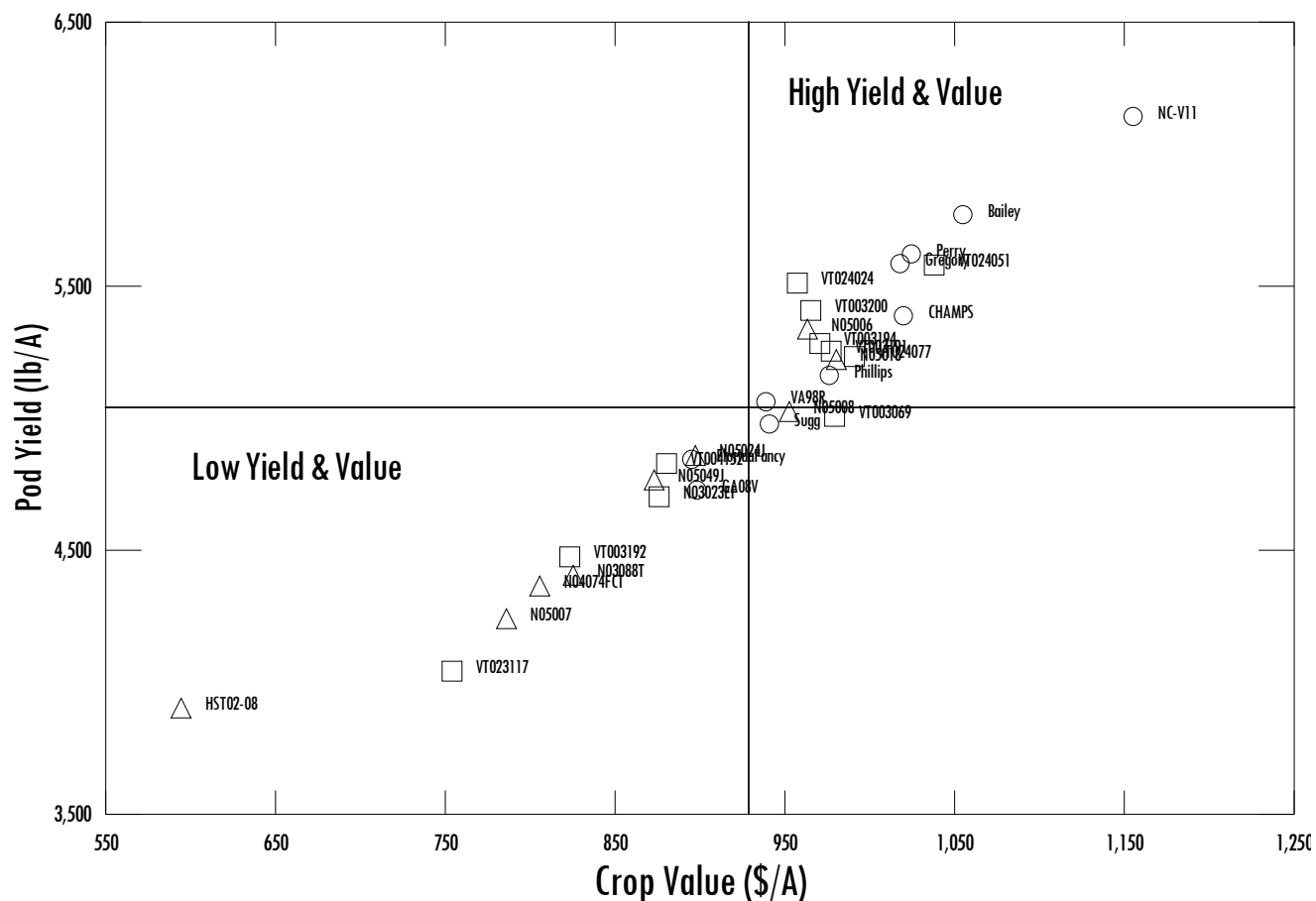


Figure 28. Summary of pod yield and crop value at all locations in 2009. Vertical bar represents mean crop value and horizontal bar mean pod yield of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for yield and value at all locations and planting times.

2009 Results across Locations

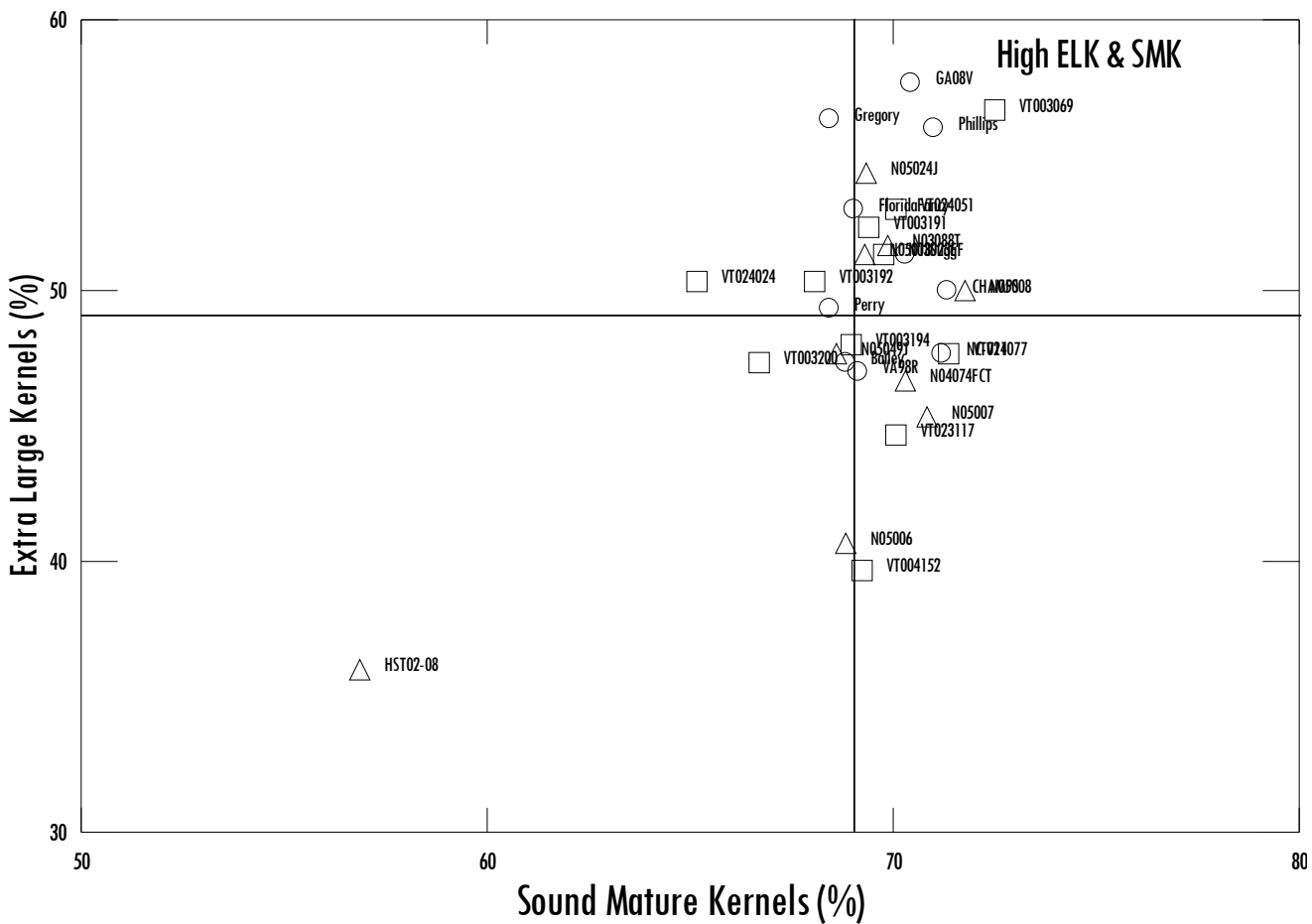


Figure 29. Summary of Extra Large Kernel (ELK) and Sound Mature Kernel (SMK) content at all locations in 2009. Vertical bar represents mean of SMK content and horizontal bar mean of the ELK content of 30 genotypes. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines. The right and upper rectangle shows the best genotypes for ELK and SMK at all locations and planting times.

2009 Results across Locations

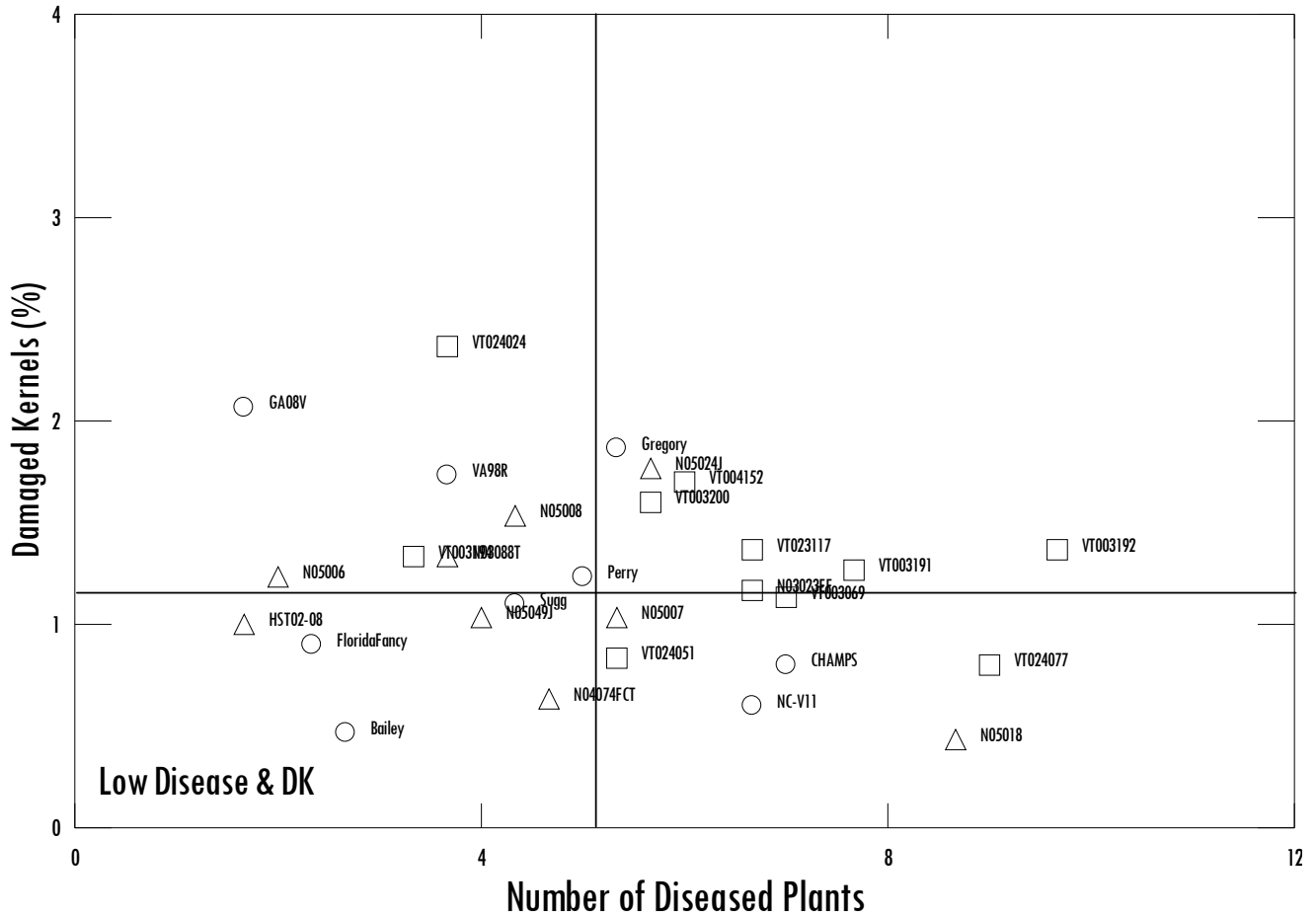


Figure 30. Summary of Damaged Kernel content and number of plants symptomatic for TSWV, SB, and CBR at all locations in 2009. Genotypes with least disease and damaged kernels are in the lower left rectangle. Circles represent commercial varieties, rectangles VT advanced lines, and triangles NCSU advanced lines.

Two-year Averages by Location

RESULTS – TWO-YEAR AVERAGES

Table 39. Performance of genotypes at Tidewater AREC (Suffolk), VA. Two-year averages (2008-2009).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	1.0	0.9	81 e-g	6.9 b-d	42 hi	1.4	3.2	1.1	67 c-e	73 e-g	17.96 b-d	5752 a-c	1034 a-e
Gregory	1.5	1.2	93 a	7.2 a-c	51 a-d	0.9	2.6	3.0	65 ef	72 h	16.51 e	4982 c	879 e
Perry	1.0	0.8	84 b-f	6.9 b-d	45 e-h	1.7	3.9	1.3	67 de	74 c-e	17.93 b-d	5740 a-c	1033 a-e
CHAMPS	1.5	1.1	82 d-g	7.6 a	42 hi	1.2	3.8	1.0	67 c-e	73 ef	17.88 b-d	5526 a-c	990 a-e
Phillips	1.2	0.7	88 a-e	7.0 b-d	52 ab	1.3	2.3	0.9	70 a-c	74 bc	18.66 a-c	5734 a-c	1071 a-d
Bailey	1.2	0.8	76 gh	7.0 b-d	44 gh	1.4	3.9	1.0	67 c-e	74 c-e	18.04 b-d	5795 a-c	1045 a-e
Florida Fancy	1.9	0.9	88 a-e	6.8 b-d	48 b-g	2.2	2.6	1.1	67 c-e	73 fg	18.12 a-d	5411 a-c	983 a-e
VA 98R	1.3	0.8	79 fg	7.1 b-d	44 e-h	1.9	3.5	2.0	67 de	74 c-e	17.78 b-d	5222 bc	940 b-e
Sugg	0.7	0.7	82 d-g	7.1 b-d	49 b-f	2.4	4.1	1.2	67 de	74 b-d	18.13 a-d	5668 a-c	1034 a-e
VT 024077	1.2	0.6	89 a-d	7.2 a-c	46 e-h	1.2	2.4	1.8	68 a-d	74 c-e	18.03 b-d	5774 a-c	1051 a-e
VT 004152	1.3	0.9	92 a	7.0 b-d	38 i	1.1	2.8	1.3	67 de	72 gh	17.67 cd	5628 a-c	995 a-e
VT 003194	0.9	0.7	83 d-g	7.0 b-d	45 e-h	1.1	3.3	1.7	67 c-e	73 de	17.80 b-d	5753 a-c	1032 a-e
VT 003069	1.3	1.0	92 a	7.0 b-d	55 a	2.3	2.1	1.5	71 ab	77 a	19.10 a	5558 a-c	1066 a-d
VT 024024	0.8	0.7	92 ab	6.8 b-d	44 f-h	1.4	3.1	2.7	63 f	70 i	16.22 e	5477 a-c	931 c-e
VT 024051	1.0	0.8	92 a	6.7 cd	48 b-g	1.1	2.7	1.3	67 de	72 f-h	17.83 b-d	5393 a-c	968 b-e
N04074FCT	1.0	0.9	70 h	6.9 b-d	43 gh	0.9	4.3	1.7	66 de	73 de	17.64 d	5082 c	901 de
N05007	1.1	0.7	91 a-c	6.5 d	43 gh	0.9	2.4	1.8	68 c-e	73 ef	17.70 cd	5796 a-c	1044 a-e
N05008	0.6	0.6	92 ab	6.7 b-d	47 d-g	0.8	1.6	0.9	71 a	74 b-d	18.71 ab	6184 a	1157 a
N05018	0.5	0.8	88 a-e	6.9 b-d	49 b-e	2.3	3.1	0.8	67 c-e	74 c-e	18.32 a-d	6018 ab	1103 a-c
N03088T	0.8	0.6	86 a-f	7.3 ab	49 b-f	2.2	3.4	1.4	68 a-d	75 b	18.44 a-d	5997 ab	1111 ab
N05024J	1.3	0.8	91 a-c	7.1 b-d	52 a-c	1.9	2.3	1.8	68 c-e	74 c-e	17.95 b-d	5709 a-c	1044 a-e
N05049J	0.8	0.9	83 c-g	6.9 b-d	47 e-g	1.6	3.2	1.1	68 b-e	74 c-e	18.29 a-d	5861 a-c	1073 a-d
Mean	1.1	0.8	86.1	7.0	46.5	1.5	3.0	1.5	67.4	73.5	17.9	5639.1	1022
LSD_{0.05}¹	0.5	0.3	7.8	0.5	4.5	0.8	1.7	1.2	2.9	1.1	1.0	895.0	175

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

Two-year Averages by Location

Table 40. Performance of genotypes at Southampton Co., VA. Two-year averages (2008-2009).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	0.5	0.6	85 a-c	6.8	49 b-d	1.1	1.8	0.6	70 a-c	74 c-f	18.63 bc	6133 a	1143 a
Gregory	0.9	1.0	94 a	6.6	55 a	1.1	1.5	1.8	68 e-g		17.92 ef	5949 a-c	1074 a-c
Perry	0.5	0.8	89 ab	6.5	50 b-d	1.7	2.4	1.3	68 b-g	74 c-g	18.29 b-e	5759 a-d	1056 a-d
CHAMPS	1.0	1.0	86 a-c	6.7	50 b-d	1.1	1.9	1.1	71 ab	75 b-d	18.67 a-c	5576 a-f	1042 a-d
Phillips	0.7	0.7	90 ab	6.8	55 a	1.0	1.5	1.2	71 ab	74 b-e	18.72 ab	5288 b-f	990 b-e
Bailey	0.8	0.8	87 ab	6.9	50 b-d	1.1	2.2	0.8	69 b-f	73 d-h	18.38 b-e	6013 ab	1106 ab
Florida Fancy	1.0	1.1	93 ab	6.7	53 ab	2.3	1.7	1.1	67 fg	72 hi	18.24 b-e	5230 c-f	955 c-e
VA 98R	0.6	0.6	83 bc	6.5	49 b-d	2.1	1.4	1.6	69 b-f	74 b-e	18.49 b-e	5355 a-f	994 b-e
Sugg	0.6	0.6	89 ab	6.5	53 ab	1.8	2.1	1.5	70 a-d	76 ab	18.82 ab	5498 a-f	1037 a-d
VT 024077	0.9	0.8	88 ab	6.7	48 cd	1.6	1.5	1.0	70 a-d	75 b-e	18.66 a-c	5944 a-c	1108 ab
VT 004152	1.0	0.7	90 ab	6.6	43 e	1.1	1.8	1.4	69 b-f	74 c-g	18.24 b-e	5275 b-f	964 c-e
VT 003194	0.4	0.8	88 ab	6.6	50 b-d	1.2	2.1	1.6	69 b-f	74 c-g	18.22 b-e	5686 a-f	1038 a-d
VT 003069	1.0	0.8	91 ab	6.5	56 a	2.1	1.5	1.5	72 a	77 a	19.25 a	5476 a-f	1056 a-d
VT 024024	0.8	1.2	95 a	6.6	50 b-d	0.9	1.9	1.9	66 g	71 i	17.43 f	5697 a-f	1003 a-e
VT 024051	0.6	0.6	95 a	6.6	52 a-c	1.3	1.6	1.7	68 c-g	73 f-h	18.07 c-e	5685 a-f	1034 a-d
N04074FCT	0.6	1.0	82 bc	6.7	43 e	0.6	2.7	0.9	69 b-f	73 e-h	18.10 c-e	4929 f	890 e
N05007	0.4	0.4	91 ab	6.8	47 de	0.7	1.4	1.1	70 ab	74 c-g	18.51 b-e	4954 ef	916 de
N05008	0.6	0.5	91 ab	6.8	49 b-d	1.0	1.3	1.8	70 a-e	74 c-g	18.25 b-e	5504 a-f	1009 a-e
N05018	0.3	0.9	89 ab	6.6	52 a-c	2.7	2.2	0.8	68 d-g	74 c-g	18.56 b-d	5725 a-e	1062 a-c
N03088T	0.6	0.7	75 c	6.8	52 a-c	1.4	2.4	1.7	70 a-e	75 bc	18.32 b-e	5242 b-f	974 b-e
N05024J	0.7	0.6	94 a	6.8	55 a	1.6	1.5	1.9	68 c-g	73 e-h	18.00 ef	5473 a-f	1000 b-e
N05049J	0.6	1.0	87 ab	6.6	50 b-d	1.2	2.0	1.1	68 b-f	73 e-h	18.21 b-e	5025 d-f	916 de
Mean	0.7	0.8	88.7	6.7	50.5	1.4	1.8	1.3	69.1	73.9	18.4	5519	1017
LSD_{0.05}¹	0.4	0.4	11.3	0.4	4.2	0.8	0.7	0.9	2.2	1.4	0.7	782	142

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

Two-year Averages by Location

Table 41. Performance of genotypes at Martin Co., NC. Two-year averages (2008-2009).

Variety or Line	% LSK	% FM	% Fancy	% Water	% ELK	% SS	% O K	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	1.2	1.0	82 g-i	8.7	43 bc	1.2	2.6	0.9	69 a-d	74 ab	18.35 a-c	5101 bc	937 bc
Gregory	2.4	1.2	91 a-c	7.8	55 a	0.9	1.9	1.5	69 a-d	73 a-c	18.30 a-c	5224 bc	964 a-c
Perry	1.0	1.3	79 h-j	8.4	45 bc	0.7	2.1	1.2	70 a-d	74 ab	18.48 a-c	5025 c	927 bc
CHAMPS	1.3	0.9	82 f-i	7.5	42 bc	1.5	2.6	1.6	69 a-e	74 ab	18.20 a-c	5307 a-c	970 a-c
Phillips	1.3	0.8	88 a-e	7.9	55 a	1.1	2.2	0.6	71 ab	75 ab	18.89 a	5663 a-c	1070 ab
Bailey	0.8	0.6	77 ij	8.4	45 bc	1.0	2.8	1.0	69 a-e	74 a-c	18.20 a-c	5672 a-c	1037 a-c
Florida Fancy	1.7	1.3	88 a-e	7.8	45 bc	1.9	2.2	1.0	68 de	73 bc	18.07 a-c	5050 bc	918 bc
VA 98R	1.0	1.0	79 h-j	8.0	39 c	1.5	2.2	1.5	69 a-d	75 ab	18.32 a-c	5275 a-c	970 a-c
Sugg	0.8	0.7	84 d-h	7.7	50 ab	1.8	2.4	2.0	69 a-e	75 a	18.32 a-c	5481 a-c	1016 a-c
VT 024077	0.9	0.8	82 f-i	8.2	45 bc	1.4	1.5	2.4	70 a-d	75 a	18.32 a-c	5686 a-d	1056 a-c
VT 004152	1.8	0.9	91 ab	7.7	46 bc	1.6	2.1	2.3	68 b-e	74 ab	18.01 a-c	5559 a-c	1010 a-c
VT 003194	0.9	0.9	82 e-i	7.9	45 bc	0.9	2.5	1.1	69 a-d	74 ab	18.34 a-c	5374 a-c	987 a-c
VT 003069	2.4	1.1	87 b-f	8.2	49 ab	1.6	1.7	2.4	70 a-d	75 a	18.54 ab	5339 a-c	996 a-c
VT 024024	1.1	1.0	91 ab	7.8	50 ab	1.1	2.2	1.8	66 e	71 c	17.58 c	5730 a-c	1016 a-c
VT 024051	1.4	0.7	92 ab	7.1	49 ab	1.3	1.9	1.9	68 b-e	73 a-c	18.09 a-c	5760 ab	1052 a-c
N04074FCT	1.0	0.9	75 j	8.2	38 c	0.8	3.1	1.2	68 b-e	73 a-c	17.95 a-c	5043 c	906 c
N05007	0.9	0.5	93 ab	8.4	44 bc	0.5	1.4	1.1	71 a	74 ab	18.64 ab	5639 a-c	1051 a-c
N05008	0.7	0.8	93 a	7.9	45 bc	0.8	1.5	1.7	70 a-c	74 ab	18.36 a-c	5945 a	1103 a
N05018	0.7	0.7	88 a-d	7.3	49 ab	2.1	1.9	1.5	69 a-d	75 ab	18.20 a-c	5537 a-c	1029 a-c
N03088T	1.4	0.7	85 c-g	7.9	50 ab	2.1	2.6	2.6	68 c-e	75 a	17.89 bc	5371 a-c	991 a-c
N05024J	1.4	0.7	93 ab	8.2	54 a	1.3	1.5	1.5	70 a-c	75 ab	18.68 ab	5056 bc	951 bc
N05049J	0.9	1.1	83 d-h	7.8	48 ab	0.7	2.8	1.2	68 b-e	73 a-c	18.09 a-c	5367 a-c	975 a-c
Mean	1.2	0.9	85.7	7.9	46.9	1.3	2.2	1.5	69.0	74.0	18.30	5418	997
LSD_{0.05}¹	0.8	0.4	5.5	1.8	9.0	1.0	0.9	1.1	3.0	2.0	1.90	715	158

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

Two-year Averages by Location

Table 42. Performance of genotypes at Florence, SC. Two-year averages (2008-2009).

Variety or Line	% LS K	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	3.5	1.3	64 d	6.2	35 e	5.1	3.0	3.2	61 ab	73 e-g	16.56 a-c	3238 a	558 a
Gregory	5.9	1.8	87 a	6.0	57 ab	4.3	2.4	4.8	61 ab	72 f-h	15.33 cd	3623 a	613 a
Perry	2.7	1.4	73 a-d	6.1	40 c-e	7.5	3.1	3.8	60 ab	74 b-f	16.36 a-d	3401 a	593 a
CHAMPS	3.1	1.1	68 b-d	6.1	40 c-e	4.8	3.1	2.4	64 a	74 a-d	17.42 a	3296 a	596 a
Phillips	3.0	2.3	76 a-d	6.0	47 a	7.4	2.5	3.3	62 ab	75 a-c	16.87 a-c	3738 a	669 a
Bailey	3.4	1.2	73 a-d	6.1	42 a-d	5.0	2.7	3.4	63 ab	74 b-e	16.82 a-c	4289 a	755 a
Florida Fancy	3.2	1.5	83 ab	6.0	43 a-d	8.5	1.8	2.8	59 ab	72 e-g	17.16 ab	3917 a	690 a
VA 98R	3.1	1.4	64 cd	6.2	35 e	5.9	3.3	4.7	59 ab	73 d-g	15.20 cd	3195 a	528 a
Sugg	2.4	1.1	79 a-d	6.2	46 a-c	6.8	2.9	5.6	59 ab	74 a-c	14.70 d	3746 a	639 a
VT 024077	3.3	1.0	72 a-d	6.0	42 a-d	8.3	2.3	4.5	59 ab	74 a-c	16.02 a-d	3336 a	577 a
VT 004152	5.7	1.4	83 a	6.1	44 a-d	4.6	2.3	5.1	63 ab	75 a-c	15.30 cd	3526 a	623 a
VT 003194	2.8	1.0	77 a-d	6.0	45 a-c	7.1	2.3	3.2	62 ab	75 ab	17.34 a	3838 a	693 a
VT 003069	5.4	1.6	83 ab	6.0	47 ab	6.6	1.9	4.0	63 ab	76 a	16.78 a-c	4055 a	736 a
VT 024024	3.0	1.9	80 a-c	6.1	39 de	6.4	3.0	3.8	58 ab	71 hi	15.43 b-d	3199 a	531 a
VT 024051	3.8	1.5	79 a-c	6.0	36 e	4.8	3.5	3.4	58 ab	70 i	15.48 b-d	3048 a	482 a
N04074FCT	2.3	1.4	81 ab	6.2	44 a-d	3.9	2.9	2.6	62 ab	72 gh	16.92 a-c	4018 a	698 a
N05007	1.7	1.0	85 a	6.0	43 a-d	4.4	2.1	2.9	64 a	74 b-f	17.35 a	3902 a	698 a
N05008	2.6	0.7	83 a	6.1	41 b-e	5.1	2.2	3.1	63 ab	73 c-g	16.92 a-c	3999 a	710 a
N05018	2.9	1.0	74 a-d	6.0	42 a-d	10.7	2.7	2.8	58 ab	74 b-f	17.19 ab	4064 a	718 a
N03088T	3.0	1.3	83 a	6.2	47 a	7.0	3.2	4.5	60 ab	75 ab	15.82 a-d	3705 a	649 a
N05024J	3.9	1.3	86 a	6.3	45 a-d	11.2	2.1	2.7	57 b	73 e-g	16.85 a-c	3353 a	583 a
N05049J	2.3	1.5	72 a-d	6.0	40 c-e	5.5	2.9	3.7	59 ab	72 gh	15.79 a-d	3118 a	526 a
Mean	3.3	1.4	77.5	6.1	42.7	6.4	2.6	3.7	60.6	73.4	16.3	3618	630
LSD_{0.05}¹	4.2	0.9	15.3	0.9	6.0	5.4	0.9	1.6	7.0	1.6	1.8	2254	385

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.

Two-year Averages by Location

Table 43. Performance of genotypes at all locations. Two-year averages (2008-2009).

Variety or Line	% LS K	% FM	% Fancy	% Water	% ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/cwt	Yield ² lb/A	Value \$/A
NC-V 11	1.5	1.0	79 h-i	6.9	41 h	2.2	2.5	1.6	67 a-d	73 fg	17.85 a-d	5233 ab	948 ab
Gregory	2.6	1.2	92 a	6.7	52 a	1.9	2.0	2.7	66 de	72 i	17.11 ef	4993 a-c	895 a-c
Perry	1.3	1.0	81 gh	6.8	44 ef	2.9	2.8	2.2	66 de	74 c-e	17.29 d-f	4906 a-c	887 a-c
CHAMPS	1.8	1.0	81 g-i	6.8	43 f-h	2.3	2.6	1.8	68 a-d	74 c-e	17.90 a-c	4917 a-c	896 a-c
Phillips	1.4	1.0	85 c-f	7.0	51 ab	2.7	1.9	1.8	68 ab	75 cd	18.15 ab	5066 a-c	941 a-c
Bailey	1.5	0.8	77 ij	7.0	44 e-g	2.4	2.7	1.5	67 a-e	74 e-g	17.92 a-c	5460 a	992 a
Florida Fancy	1.9	1.2	87 b-e	6.8	46 de	3.8	2.1	1.6	65 ef	73 hi	17.82 a-d	4871 bc	880 bc
VA 98R	1.4	1.0	78 ij	6.8	42 f-h	3.1	2.3	2.3	66 a-e	74 c-e	17.61 a-e	4911 a-c	893 a-c
Sugg	1.2	0.8	84 e-g	6.8	49 bc	3.4	2.7	2.3	66 b-e	75 c	17.75 a-d	5230 ab	958 ab
VT 024077	1.5	0.7	83 fg	7.0	44 e-g	3.1	1.8	2.7	67 a-e	75 cd	17.55 c-e	5176 a-c	946 ab
VT 004152	2.3	1.0	89 a-c	6.7	41 h	2.1	2.1	2.6	67 a-e	74 e-g	17.29 d-f	4884 bc	875 bc
VT 003194	1.3	0.8	81 f-h	6.8	46 de	2.4	2.4	2.0	67 a-e	74 e-g	17.86 a-d	5104 a-c	926 a-c
VT 003069	2.3	1.1	88 a-d	6.7	50 a-c	3.4	1.8	2.6	68 a	76 a	18.16 ab	5114 a-c	961 ab
VT 024024	1.4	1.0	90 ab	6.7	45 ef	2.8	2.2	2.5	64 f	71 j	16.86 f	5051 a-c	879 bc
VT 024051	1.7	0.9	90 ab	6.6	46 de	2.6	2.1	2.0	66 de	72 i	17.58 b-e	4965 a-c	890 a-c
N04074FCT	1.2	1.0	76 j	6.9	42 f-h	1.5	2.9	1.5	68 a-d	73 gh	17.88 a-d	4664 c	840 c
N05007	1.3	0.7	91 ab	6.8	42 gh	1.7	1.7	2.1	68 ab	73 gh	17.70 a-e	5101 a-c	926 a-c
N05008	1.1	0.7	89 a-c	6.7	43 f-h	2.1	1.6	2.0	68 a-c	74 e-g	17.81 a-d	5271 ab	962 ab
N05018	1.0	0.8	84 d-g	6.6	48 cd	4.3	2.2	1.5	66 c-e	74 c-e	18.18 a	5280 ab	973 ab
N03088T	1.3	0.8	83 e-g	6.8	49 bc	3.5	2.6	2.4	67 a-e	75 b	17.81 a-d	5144 a-c	951 ab
N05024J	1.6	0.8	90 ab	6.8	51 ab	4.1	1.8	2.0	66 de	74 e-g	17.96 a-c	5012 a-c	920 a-c
N05049J	1.2	1.2	81 gh	6.8	46 de	2.5	2.6	1.7	67 a-e	74 e-g	17.82 a-d	4896 bc	890 a-c
Mean	1.5	0.9	84.5	6.8	45.7	2.8	2.2	2.1	66.7	73.8	17.7	5057	920
LSD_{0.05}¹	0.8	0.2	3.9	0.4	2.6	1.2	0.5	0.7	1.9	0.6	0.6	558	105

¹ Fisher's least significant difference (LSD) at P = 0.05.² All yields are net, adjusted to 7% standard moisture and foreign material is deducted.