

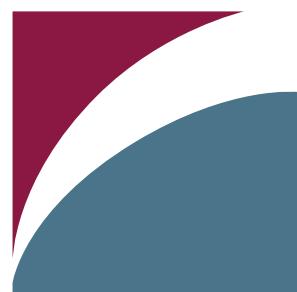
2018

Peanut Variety and Quality Evaluation Results

I. Agronomic and Grade Data

Tidewater Agricultural Research and Extension Center

Virginia Agricultural Experiment Station



**Virginia
Cooperative
Extension**

Virginia Tech
Virginia State University

SPES-93NP



PEANUT VARIETY AND QUALITY EVALUATION RESULTS 2018

I. Agronomic and Grade Data

Maria Balota, Ph.D.
Associate Professor Crop Physiology
Virginia Tech – Tidewater AREC

Jeffrey Dunne, Ph.D.
Assistant Professor, Peanut Breeder
North Carolina State University

Alexandre Brice Cazenave, Ph.D.
Research Associate
Virginia Tech – Tidewater AREC

Dan Anco, Ph.D.
Peanut Extension Specialist
Clemson University

TECHNICAL SUPPORT:
D. Redd, Ag Specialist
F. Bryant, Ag Specialist
E. White, Ag Technician
M. Douglas, Ag Technician
C. Daughtrey, Ag Technician
A. Acharya, Ag Technician

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

Information Series No 512
January 2019

Virginia Tech does not discriminate against employees, students, or applicants on the basis of race, color, sex, disability, age, veteran status, national origin, religion, sexual orientation, or political affiliation. Anyone having questions concerning discrimination or accessibility should contact the Equal Opportunity/Affirmative Action Office

ACKNOWLEDGEMENTS

FINANCIAL SUPPORT

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

Virginia Tech
Virginia Agricultural Experiment Station
NC State University
National Peanut Shellers Association
South Carolina Peanut Growers
North Carolina Peanut Growers
Virginia Crop Improvement Association



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: Anita Acharya, Frank Bryant, Carolyn Daughtrey, Melissa Douglas, Doug Redd, and Emily White.

Carolyn Daughtrey, below



Frank Bryant, below



Anita Acharya, below



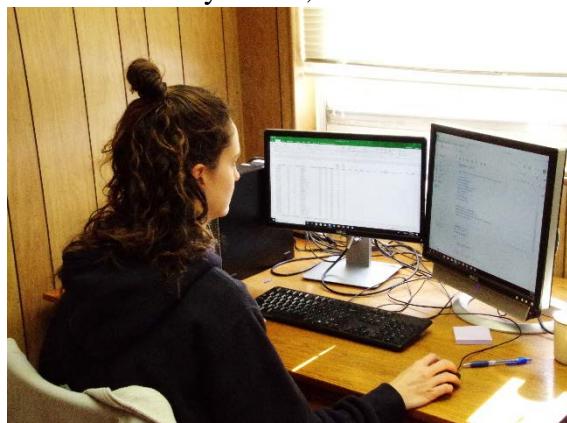
Doug Redd, below



Melissa Douglas, below



Emily White, below



All of the following cooperators are also acknowledged for their various support provided to the PVQE program in 2018.

LIST OF COOPERATORS

Virginia Tech, Virginia Agricultural Experiment Station, and VCIA

Mr. K. Jones, Farm Manager, Tidewater AREC
Mr. B. Slye, Assistant Farm Manager, Tidewater AREC
Mr. P. Browning, VCIA
Mr. T. Hardiman, VCIA

Other universities

Dr. J. Dunne, NCSU
Dr. D. Anco, Clemson
Dr. B. Tillman, University of Florida
Mr. C. Bogle, Upper Coastal Plain Research Station, NCSU

Growers

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

County Agents

Ms. L. Preisser, Isle of Wight Co., VA
Mr. S. Reiter, Prince George Co., VA
Mr. M. Parrish, Dinwiddie Co., VA
Mr. D. Sanders, Surry/Sussex Co. VA
Ms. S. Rutherford, Greensville Co. VA
Mr. J. Holland, Southampton Co., VA
Mr. L. Grimes, Martin Co., NC

Commodity Groups

Mr. D. Cotton, Virginia Peanut Board
Mr. B. Sutter, North Carolina Peanut Board
Mr. M. Copelan, South Carolina Peanut Board

Companies

Mr. M. Simmons, Birdsong Peanut
Mr. K. Bennett, Birdsong Peanut
Mr. J. Laine, Wakefield Peanut Company
Mr. B. Gwaltney, Indika Farms, Inc.

Mr. L. Fowler, Helena

Mr. H. Hamlin, Helena

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 (\$357.79 per ton for Virginia-type and \$354.86 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:

$$\text{Value} = (\text{Yield} * \text{Price})$$

Support Price (\$/cwt), crop price computed by the following formulas:

$$\text{Virginia-type} = (((\text{SMK} + \text{SS}) * 4.906) + (\text{OK} * 1.4)) / 2000 + (((\text{ELK} + \text{SXL}) * 0.35) / 2000)$$

$$\text{Runner-type} = (((\text{SMK} + \text{SS}) * 4.810) + (\text{OK} * 1.4)) / 2000$$

In each table, corrected ELK content is adding the SuperELK and ELK values.

TABLE OF CONTENTS

Technical Support	ii
List of Cooperators	iii
Abbreviations.....	iv
List of Tables	vi
Introduction.....	1
Plant Material and Test Location.....	2
Weather Conditions	5
Cultural Practices	9
2018 Results by Location.....	15
2018 Results across Locations	27
Two-year Averages by Location.....	28
Three-year Averages by Location.....	34

LIST OF TABLES

1.	Names and pedigrees of the genotypes (advanced breeding lines and commercial varieties) evaluated in 2018	3
2.	Planting, digging, and combining dates for test locations in 2018	4
3.	Temperatures, heat units, and precipitation at Tidewater AREC (Suffolk), VA in 2018.....	5
4.	Temperatures, heat units, and precipitation at Martin County, NC in 2018.....	6
5.	Temperatures, heat units, and precipitation at Rocky Mount, NC in 2018.....	7
6.	Temperatures, heat units, and precipitation at Bladen County, NC in 2018.....	7
7.	Temperatures, heat units, and precipitation at Blackville, SC in 2018.....	8
8.	Cultural practices used at Tidewater AREC (Suffolk), VA in 2018.....	10
9.	Cultural practices used at Martin County, NC in 2018.....	11
10.	Cultural practices used at Rocky Mount, NC in 2018	12
11.	Cultural practices used at Bladen County, NC in 2018	13
12.	Cultural practices used at Blackville, SC in 2018	14
13.	Content of jumbo pods based on farmers' stock grades, 2018	16
14.	Content of fancy pods based on farmers' stock grades, 2018.....	17
15.	Pod brightness (Hunter L Score) for jumbo pods in 2018.....	18
16.	Pod brightness (Hunter L Score) for fancy pods in 2018	19
17.	Grade characteristics, yield, and value of genotypes at Tidewater AREC (Suffolk), VA, Dig I - 2018	20
18.	Grade characteristics, yield, and value of genotypes at Tidewater AREC (Suffolk), VA, Dig II - 2018	21
19.	Grade characteristics, yield, and value of genotypes in Martin County, NC, Dig I – 2018.....	22
20.	Grade characteristics, yield, and value of genotypes in Martin County, NC, Dig II – 2018	23
21.	Grade characteristics, yield, and value of genotypes in Rocky Mount, NC – 2018.....	24
22.	Grade characteristics, yield, and value of genotypes in Bladen County, NC – 2018.....	25
22.	Grade Characteristics, yield, and value of genotypes in Blackville, SC – 2018.....	26
23.	Grade characteristics, yield, and value of genotypes averaged across all locations – 2018	27
24.	Grade characteristics, yield, and value of genotypes at Tidewater AREC – two year averages 2017-2018	28
25.	Grade characteristics, yield, and value of genotypes at Martin County, NC – two year averages 2017-2018	29
26.	Grade characteristics, yield, and value of genotypes at Rocky Mount, NC – two year averages 2017-2018.....	30
27.	Grade characteristics, yield and value of genotypes at Bladen County, NC – two year averages 2017-2018.....	31
28.	Grade characteristics, yield and value of genotypes Blackville, SC – two year averages 2017-2018.....	32
29.	Grade characteristics, yield and value of genotypes at all locations- two year averages 2017-2018	33

30.	Grade characteristics, yield and value of genotypes at Suffolk, VA - three year averages 2016-2018	34
31.	Grade characteristics, yield and value of genotypes at Martin County, NC - three year averages 2016-2018.....	35
32.	Grade characteristics, yield and value of genotypes at Rocky Mount, NC - three year averages 2016-2018	36
33.	Grade characteristics, yield and value of genotypes at Bladen, NC - three year averages 2016-2018.....	37
34.	Grade characteristics, yield and value of genotypes at Blackville, SC – three year averages 2016-2018.....	38
32.	Grade characteristics, yield and value of genotypes at all locations - three year averages 2016-2018.....	39

Introduction

INTRODUCTION

Due to suitability to the environmental conditions and existence of a strong peanut industry tailored to process primarily the large-seeded Virginia-type peanut, growers in Virginia, North Carolina, and South Carolina generally grow Virginia-type cultivars. In the view of a common interest in the Virginia-type peanut, the three states are working together through a multi-state project, the Peanut Variety Quality Evaluation (PVQE), to evaluate advanced breeding lines and commercial cultivars throughout their production regions. The objectives of this project are: 1) to determine yield, grade, quality, and disease response of commercial cultivars and advanced breeding lines at various locations in Virginia and the Carolinas, 2) develop a database for Virginia-type peanut to allow research-based selection of the best genotypes by growers, industry, and the breeding programs, and 3) to identify the most suited peanut genotypes for various regions that can be developed into varieties. This report contains agronomic and grade data of the PVQE tests in 2018.



Plant Material and Test Locations

PLANT MATERIAL AND TEST LOCATIONS

In 2018, PVQE included 26 genotypes: 5 commercial varieties, included the line N12008olCLSmT released in 2017 as Bailey II, and 21 advanced breeding lines developed by the North Carolina State University and University of Florida/Virginia Tech peanut breeding programs (Table 1). All breeding lines have the ‘high oleic acid’ characteristic and they are marked by ‘ol’ letters in their names; the commercial cultivars are conventional for this trait with the exception of Sullivan and Wynne. Genotypes were planted from May 10 through 27 at five locations: at the Tidewater AREC in Suffolk, VA, Martin Co., NC, the Upper Coastal Plain Research Station (UCPRS) near Rocky Mount, NC, Bladen County, NC, and the Edisto Research and Education Center at Blackville, SC. At Suffolk and Martin two digging dates and two replications within each digging date were planted in a RCBD design. The first digging date was approximately two weeks earlier than the optimum harvest date (the second digging date in this test). This setting allows identification of early maturing varieties. At the UCPRS and Bladen County, only one digging date (optimum) replicated twice at each site were planted. At the Edisto Research and Education Center, additional cultivars were used. For all locations, cultivars were compared with the breeding lines for yield and grading characteristics as the ultimate objective is development of improved Virginia-type peanut cultivars.



Plant Material and Test Locations

PLANT MATERIAL AND TEST LOCATIONS

Table 1. Names and parentage of the genotypes (advanced breeding lines and commercial varieties) evaluated in 2018.

Genotype Number	Variety or Line	Parentage
1	Bailey	NC 12C*2 / N96076L
2	Sullivan	Bailey / X03034 (F01)
3	Wynne	N03079FT / X03034(F01)
4	Emery	
5	Bailey II	Bailey / X07016 (BC2F1-04:F01)
6	08X09-1-2-1	
7	08X09-3-14-1	
8	09X37-1-19-2	
9	09X38-1-5-1	
10	09X39-1-11-2	
11	N13003olF	Bailey // X05027 (F01), Bailey / N02060ol (Per)
12	N13006ol	Bailey // X05027 (F01), Bailey / N02060ol (Per)
13	N13048+ol	N03079olFT // X03034 (F1), N03079FT / N02059ol (Per), X03155 (ol ol, BC1F1-04-01-S-04-S-01: F09) /3/ N05044FCSm
14	N13049olJ	
15	N13054ol	
16	N14002olJ	N03079FT // X05024 (F01), N03079FT / N02064ol
17	N14004olJ	Bailey // X05027 (F01), Bailey / N02060ol (Per) Phillips / N99121CSm, X00044 (F2-02-S-04-S-04: F08, 04 DPT 030) /3/ X05036 (F01), Phillips / N99121CSm, X00044 (F2-02-S-04-S-04: F08, 04 DPT 030) // N02064ol
18	N14007ol	
19	N14023ol	N01015T / N00098ol (Gre), X02083 (F2-01-S-01-S-05: F07) // Sugg
20	N14027olJ	
21	N14035olSmT	Sullivan /3/ X09006 (F01), Sullivan // SPT 07-01, NC-V 11 / GP-NC WS 11
22	N15017ol	
23	N15018olJ	
24	N15039ol	
25	N15041ol	
26	N15044olF	

Plant Material and Test Locations

Table 2. Planting, digging and combining dates for each test location in 2018. Dig I was considered an early digging, and Dig II and optimum digging time for peanut in V-C area.

Locations	Planting Date		Digging Date		Harvest Date	
	I	II	I	II	I	II
Tidewater AREC, Suffolk, VA	May 15	May 15	Sept. 20	Oct. 08	Sept. 26	Oct. 14
Martin County, NC	Jun. 1	Jun. 1	Oct. 1	Oct. 13	Oct. 15	Oct. 23
Rocky Mount, NC	May 25		Oct. 8		Oct. 18	
Bladen County, NC	May 22		Oct. 03		Oct. 16	
Blackville, SC	May 17		Oct. 12		Oct. 18	

Weather Conditions

WEATHER CONDITIONS

Weather information is provided in Tables 3 through 6, and Fig. 1.

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), and precipitation at Tidewater AREC, Suffolk VA, in 2018 peanut growing season. These data are provided by the Peanut/Cotton InfoNet of Tidewater AREC from 1 May to 22 October.

Month	AVG Air Temp	Max Air Temp	Min Air Temp	AVG Soil Temp	Heat units DD56	Rain
		°F			°F d	inch
May	73	83	64	71	535	4.1
June	77	88	67	78	626	4.1
July	77	87	68	81	650	8.2
August	78	90	69	85	685	5.9
September	77	88	68	81	615	4.4
October	66	77	55	74	250	2.3
Mean/Sum	75	86	66	79	3361	29.0

Weather Conditions

Table 4. Temperature of air and soil at 4 inches depth, light (photosynthetic active radiation - PAR), air relative humidity (RH), and precipitation at Martin County, NC, in 2018 peanut growing season. These data are provided by the State Climate Office of NC from 1 May to 13 October.

Month	AVG Air Temp	Max Air Temp	Min Air Temp	AVG Soil Temp	Heat units DD56	AVG PAR	Max PAR	RH	Rain
	°F			°F d		μmol m ⁻² s ⁻¹	%	inch	
May	73	82	65	73	540	448	2080	74	7.8
June	77	87	68	80	652	524	2114	76	2.9
July	77	86	68	80	600	479	2150	77	8.2
August	78	88	70	82	716	465	2058	78	3.5
September	77	87	70	81	668	397	1843	79	4.8
October	73	84	65	77	235	353	1698	77	1.6
Mean/Sum	76	86	68	79	3412	453	2020	77	28.8

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 5. Temperature of air and soil at 4 inches depth, peanut heat units (degree day – DD56) calculated based on a 56 °F temperature base (T_b), light (photosynthetic active radiation – PAR), air relative humidity (RH), and precipitation at Rocky Mount, NC, in 2018 peanut growing season. These data are provided by the State Climate Office of NC from 1 May to 8 October.

Month	AVG Air Temp	Max Air Temp	Min Air Temp	AVG Soil Temp	Heat units DD56	Avg PAR	Max PAR	RH	Rain
	°F				°F d	μmol m ⁻² s ⁻¹	%	inch	
May	73	82	65	73	542	456	2136	73	6.5
June	78	88	69	81	677	550	2145	71	2.9
July	78	88	69	82	699	503	2218	75	7.1
August	78	88	70	82	713	491	2108	79	3.7
September	77	87	70	81	677	381	1869	80	5.1
October	74	86	65	77	159	384	1769	80	0.1
Mean/Sum	77	87	68	80	3467	472	2080	76	25.5

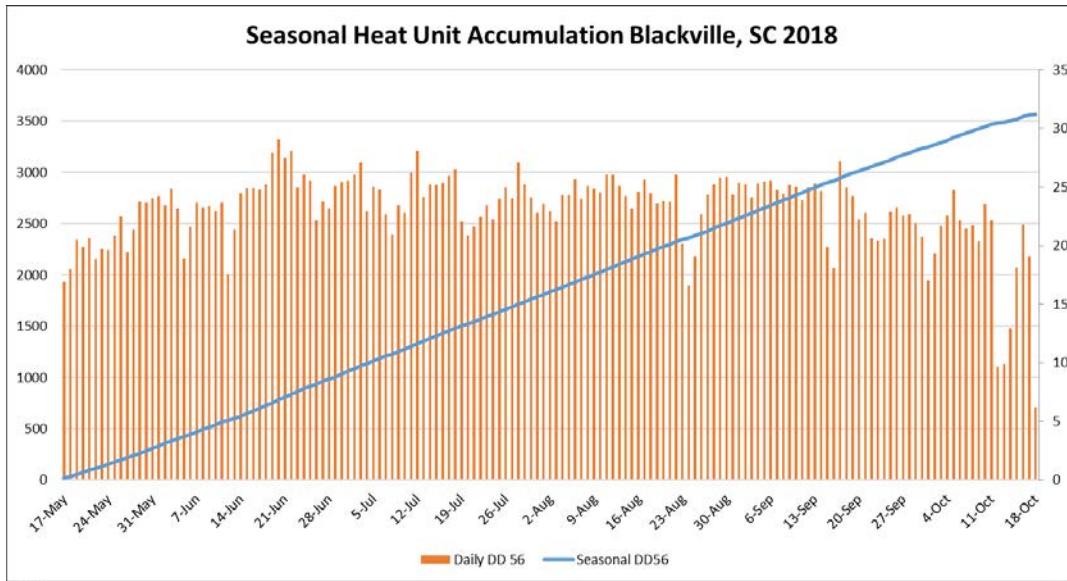
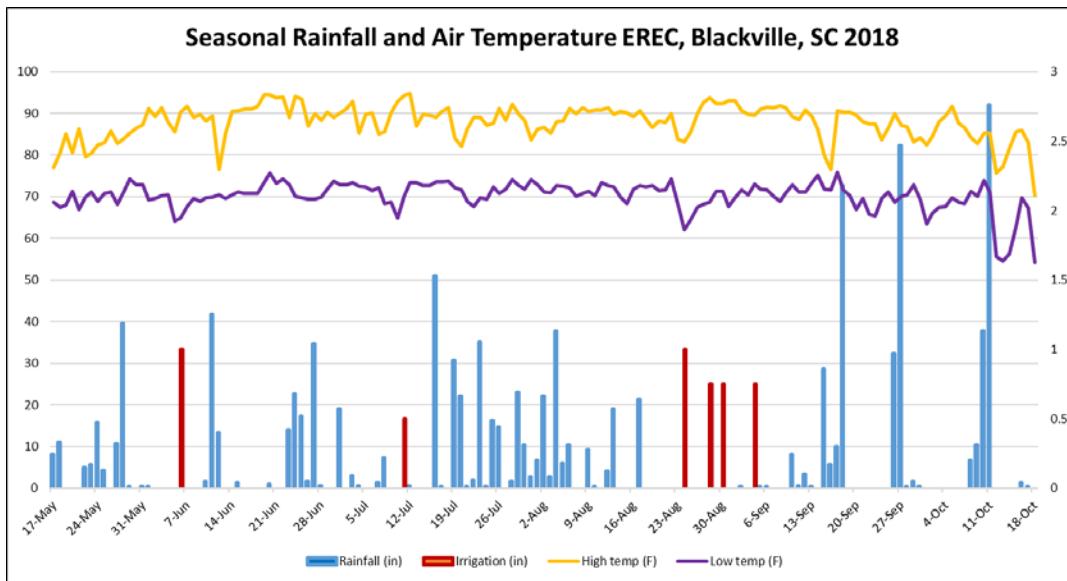
- ¹ Light is important for peanut growth and development. On a fully sunny day, maximum PAR approaches 2500 μmol m⁻² s⁻¹ and average PAR (average from sunrise to sunset) is approximately 600 μmol m⁻² s⁻¹. If these numbers are less, it denotes cloudy days, on which plants grow less.

Table 6. Temperature of air and soil at 4 inches depth, peanut heat units (degree day – DD56) calculated based on a 56 °F temperature base (T_b), light (photosynthetic active radiation – PAR), air relative humidity (RH), and precipitation at Bladen County, NC, in 2018 peanut growing season. These data are provided by the State Climate Office of NC from 1 May to 3 October.

Month	AVG Air Temp	Max Air Temp	Min Air Temp	AVG Soil Temp	Heat units DD56	Avg PAR	Max PAR	RH	Rain
	°F				°F d	μmol m ⁻² s ⁻¹	%	inch	
May	73	83	64	71	553	451	2001	76	5.9
June	78	90	70	81	711	511	2003	77	4.0
July	78	89	70	82	724	422	1942	78	4.0
August	79	90	71	83	759	477	2051	76	6.0
September	78	88	70	82	693	404	1925	79	23.6
October	74	87	63	78	57	465	1796	75	0.0
Mean/Sum	77	88	69	80	3497	453	1981	77	43.5

Weather Conditions

Figure 1. Temperature of air, peanut heat units (degree day – DD56) calculated based on a 56 °F temperature base (T_b), and precipitation at Blackville, SC, in 2018 peanut growing season. These data are from 17 May to 18 October.



Cultural Practices

CULTURAL PRACTICES

Cultural practices were performed according to VA, NC and SC recommendations. Plots were 35 ft rows planted on 36-inch centers (3-6 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 7 through 11 show planting dates, soil type, pH and mineral content, and cultural practices applied to the crops at each location.



Cultural Practices

Table 7. Cultural practices at Tidewater AREC (Suffolk), VA, for Digs I and II in 2018.

Planting Date:	May 15, 2018
Harvest Date:	Dig I - September 26, 2018; Dig II - October 14, 2018
Soil Type:	Enola, Nansemond, Uchee
Cultivation:	Conventional Till
Landplaster:	7/9/2018 Landplaster 1800 lbs/A
Fertility:	5/16/2018 Primo 9 oz/A 7/9/2018 Landplaster 1800 lb/A 6/26/2018 boron 1 qt/A 7/17/2018 Manganese 1 qt/A 6/14/2018 ENC 1 qt/A 7/13/2018 Boron 9 qt/A 7/19/2018 Boron 1 qt/A 4/10/2018 DAP 100 lbs/A
Herbicides:	5/13/2018 Prowl H2O 10 oz/A 5/16/2018 Prowl H2O 14 oz/A 7/3/2018 Dual Magnum 1 pt/A 5/16/2018 Strong-ARM .24 oz/A 6/19/2018 STORM 1.5 pt/A 6/19/2018 basagran 1 pt/A 6/27/2018 select max 16 oz/A
Insecticides:	5/16/2018 admire pro 10 oz/A 6/8/2018 orthene 6 oz/A 6/18/2018 orthene 6 oz/A 7/16/2018 besiege 10 oz/A 7/26/2018 danitol 10 oz/A 8/7/2018 besiege 10 oz/A 9/12/2018 besiege 10 oz/A
Fungicides:	5/16/2018 proline 5.7 oz/A 7/17/2018 bravo 1.5 pt/oz 8/7/2018 provost 10 oz/A 8/7/2018 omega 1 pt/A 8/21/2018 prioxan 8 oz/A 9/3/2018 provost 10 oz/A 9/12/2018 bravo 1.5 pt/A 9/12/2018 omega 1 pt/A

Cultural Practices

Table 8. Cultural practices at Martin Co., NC, for Digs I and II, in 2018.

Planting Date:	June 1, 2018
Harvest Date:	Dig I - October 15, 2018; Dig II – October 23, 2018
Soil Type:	Norfolk loamy fine sand
Cultivation:	Conventional Till
Landplaster:	7/12/2018 Landplaster 1500 lbs/A
Fertility:	6/23/2018 primo 9 oz/a 7/12/2018 calcium 1500 lb/a 5/23/2018 boron 1 qt/a 7/13/2018 boron 1 qt/a 7/13/2018 manganese 1 qt/a 8/7/2018 manganese 1 qt/a 8/7/2018 ENC 1 qt/a 8/22/2018 ENC 1 qt/a
Herbicides:	5/18/2018 Prowl h2o 1.5 pt/a 5/23/2018 dual mg 1.5 pt/a 7/10/2018 dual mg 1 pt/a 5/23/2018 strognarm .24 oz/a 7/10/2018 strongarm .24 oz/a 6/19/2018 storm 1.5 pt/a 6/19/2018 broadloom 1 pt/a
Insecticides:	6/18/2018 orthene 8 oz/a 6/29/2018 orthene 8 oz/a 7/13/2018 beseige 10 oz/a 7/24/2018 beseige 10 oz/a 8/7/2018 danitol 10 oz/a
Fungicides:	5/23/2018 proline 0.7 oz/a 7/24/2018 bravo 1.5 pt/a 8/7/2018 provost 10 oz/a 8/28/2018 omega 1 pt/a 8/28/2018 prioxan 8 oz/a 9/11/2018 provost 10 oz/a 9/11/2018 omega 1.5 pt/a 9/28/2018 bravo 1.5 pt/a

Cultural Practices

Table 9. Cultural practices at Rocky Mount, NC in 2018.

Planting Date:	May 25, 2018
Harvest Date:	October 18, 2018
Soil Type:	Aycock very fine sandy loam
Cultivation:	Conventional Till
Landplaster:	7/6/2018 Landplaster 1200 lbs/A
Fertility:	4/3/2018 0-0-62 Potash 7/10/2018 boron 1.66lb/A
Herbicides:	5/26/2018 valor 2 oz/A 5/26/2018 dual magnum 1.33 oz/A 6/14/2018 basagran 8 oz/A 6/14/2018 quick quat 5 oz/a 6/25/2018 clethodim 16 oz/a 6/25/2018 crop oil 18 oz/A 7/9/2018 ultra blazer 1.33 pt/a 7/9/2018 basagran 1.5 pt/a 7/9/2018 surfacnt 1,200 lb/a 7/9/2018 Lorsban 15G
Fungicides:	7/10/2018 bravo 1.5 pt/a 7/20/2018 provost 10.7 oz/A 7/20/2018 tec mag 1.5 lb/a 8/6/2018 provost 10.7 oz/a 8/6/2018 steward 11.3 oz/a 8/21/2018 bravo 1.5 pt/a 8/21/2018 headline 15 oz/a 8/21/2018 warrior 1.92 oz/a 8/31/2018 bravo 1.5 pt/a 9/11/2018 bravo 1.5 pt/a 9/11/2018 headline 15 oz/a 9/11/2018 blackhawk 2.2 oz/a 9/28/2018 bravo 1.5 pt/a

Cultural Practices

Table 10. Cultural practices at Bladen County, NC in 2018.

Planting Date:	May 22, 2018	
Harvest Date:	October 16, 2018	
Cultivation:	Conventional Till	
Landplaster:	- Landplaster 2200 lbs/A	
Fertility:	07/09/2018	- Manganese 10% 1.3 pt/A
	07/09/2018	- Boron 10% 1.3 pt/A
	07/24/2018	- Manganese 10% 1.3 pt/A
	07/24/2018	- Boron 10% 1.3 pt/A
	07/24/2018	- Kudos 7.25 oz
	08/07/2018	- 1 pint 32 % N
	08/24/2018	- 1 quart ENC
Insecticides:	08/07/2018	- Double take 4 oz
	08/24/2018	- Double take 3 oz
Fungicides:	07/09/2018	- Bravo 1.3 pt/A
	07/09/2018	- Alto 5.5 oz
	07/24/2018	- Elatus 9 oz/A
	08/07/2018	- Provost Opti 8 oz/A
	08/24/2018	- Elatus 9 oz/A
	09/11/2018	- Miravus 3.4 oz
	09/28/2018	- Generic Bravo 1 ½ pts
	09/28/2018	- Initiate 720

Cultural Practices

Table 11. Cultural practices at Blackville, SC in 2018.

Planting Date:	May 17, 2018
Harvest Date:	October 18, 2018
Soil Type:	Sandy loam
Cultivation:	Conventional Till
Landplaster:	- Gypsum 1500 lb/A
Fertility:	- 0-0-60 150 lbs/A - Boron 0.4 lb/A
Herbicides:	- Valor 3 oz/A - Prowl 1 qt/A - Dual Magnum 1.33 pt/A - Cadre 4 oz/A - 2,4 DB 16 oz/A
Insecticides:	- Thimet 4.8 lb/A (at plant) - Besiege 10 oz
Fungicides:	- Provost 10.7 oz/A (47,81 DAP) - Bravo 24 oz/A (28,95,120 DAP) - Fontelis 16 oz - Priaxor 4 oz (60 DAP) - Elatus 1.0 pt (60 DAP) - Tebuconazole 7.2 oz/A (28,95 DAP) - Bravo 1.0 pt (109 DAP)

RESULTS

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), and pod brightness (Hunter L score) for jumbo and fancy pods were measured. Pod yield was adjusted for 7% kernel moisture and price per pound calculated by the federal formulas. Crop value per acre was also computed. The results are presented in tables 12 to 23 for individual locations and all locations combined. Two- and three-year averages are presented in Tables 24-35.

2018 Results by Location

RESULTS – PODS

Table 12. Average percent of jumbo pods¹ based on farmers' grade at all locations in 2018.

Variety	Suffolk, VA		Martin County, NC		Rocky Mount, NC	Bladen, NC	Blackville, SC	Average of all Locations
	Dig I	Dig II	Dig I	Dig II				
Bailey	28 fg	26 c-e	28 jk	25 c	32 d-g	34 d	67 a	30 ij
Sullivan	37 d-g	19 de	30 i-k	32 bc	40 b-g	41 b-d	54 a	32 ij
Wynne	62 a-c	64 ab	63 a-d	55 a-c	47 a-g	53 a-d	64 a	56 c-f
Emery	70 ab	63 ab	66 a-d	69 a-c	42 a-g	59 a-d	57 a	61 b-e
Bailey II	22 g	19 e	22 k	25 c	23 g	39 cd	54 a	24 j
08X09-1-2-1	57 a-d	45 a-e	44 d-k	44 a-c	46 a-g	63 a-d	80 a	50 e-g
08X09-3-14-1	52 a-e	46 a-e	54 b-g	48 a-c	45 a-g	69 a-c	60 a	52 d-f
09X37-1-19-2	36 d-g	26 c-e	31 g-k	33 a-c	28 fg	44 b-d	65 a	33 ij
09X38-1-5-1	75 a	67 ab	68 a-c	78 ab	65 ab	78 a	48 a	70 ab
09X39-1-11-2	40 c-g	45 a-e	37 f-k	47 a-c	44 a-g	51 a-d	55 a	45 f-h
N13003olF	40 c-g	37 b-e	39 e-k	33 a-c	41 b-g	44 b-d	61 a	38 g-i
N13006ol	61 a-c	65 ab	56 b-f	56 a-c	53 a-e	72 ab	57 a	58 b-e
N13048+ol	65 ab	53 a-e	61 a-e	63 a-c	53 a-e	65 a-d	73 a	60 b-e
N13049olJ	57 a-d	55 a-d	50 c-j	48 a-c	46 a-g	62 a-d	61 a	54 d-f
N13054ol	50 b-f	47 a-e	54 b-h	52 a-c	42 a-g	64 a-d	69 a	51 d-f
N14002olJ	73 ab	74 a	80 a	85 a	67 a	79 a	78 a	75 a
N14004olJ	61 a-c	57 a-c	77 ab	74 a-c	62 a-c	78 a	59 a	67 a-c
N14007ol	31 e-g	27 c-e	31 h-k	38 a-c	38 c-g	34 d	43 a	33 h-j
N14023ol	66 ab	52 a-e	49 c-j	52 a-c	46 a-g	63 a-d	61 a	54 d-f
N14027olJ	64 ab	56 a-c	65 a-d	56 a-c	57 a-d	68 a-c	44 a	59 b-e
N14035olSmT	28 fg	40 a-e	53 c-i	50 a-c	28 e-g	38 cd	65 a	39 g-i
N15017ol	66 ab	61 a-c	59 a-f	67 a-c	62 a-c	59 a-d	50 a	62 b-e
N15018olJ	73 ab	75 a	63 a-d	64 a-c	50 a-f	78 a	70 a	68 a-c
N15039ol	56 a-d	56 a-c	58 a-f	45 a-c	46 a-g	59 a-d	69 a	54 d-f
N15041ol	65 ab	66 ab	67 a-d	67 a-c	53 a-e	66 a-c	53 a	63 b-d
N15044olF	67 ab	61 a-c	66 a-d	65 a-c	49 a-f	72 ab	58 a	62 b-e
SPAN-17							55 a	
Mean	53.7	49.9	52.4	52.4	46.2	58.7	60.1	51.9
MSD								12.4

¹Pods that rode a 38/64 inch opening on the pre-sizer.²Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Tukey's HSD test.³Tukey's minimum significant difference (MSD) at P=0.05.⁴Pre-sizer was adjusted for runner peanuts.

2018 Results by Location

Table 13. Average percent of fancy pods¹ based on farmers' grade at all locations in 2018.

Variety	Suffolk, VA		Martin County, NC		Rocky Mount, NC	Bladen, NC	Blackville, SC	Average of all Locations
	Dig I	Dig II	Dig I	Dig II				
Bailey	54 a-c	57 ab	62 ab	64 a	58 ab	50 a	25 a	56 ab
Sullivan	55 a-c	51 a-c	62 ab	55 ab	44 a-c	43 a-d	38 a	51 a-d
Wynne	32 c-f	30 c-e	30 d-h	35 ab	42 a-c	31 a-f	28 a	34 g-j
Emery	25 d-f	30 c-e	31 d-h	26 ab	50 a-c	32 a-f	34 a	32 g-j
Bailey II	65 a	66 a	68 a	65 a	61 a	51 a	36 a	62 a
08X09-1-2-1	21 d-f	46 a-e	46 b-e	49 ab	48 a-c	31 a-f	17 a	40 d-g
08X09-3-14-1	33 c-f	39 b-e	32 d-h	47 ab	40 a-c	22 c-f	31 a	36 g-i
09X37-1-19-2	48 a-e	55 a-c	56 a-c	57 ab	56 ab	45 ab	27 a	53 a-c
09X38-1-5-1	19 f	26 de	25 f-h	16 ab	28 c	18 ef	43 a	23 jk
09X39-1-11-2	44 a-f	45 a-e	47 b-e	23 ab	45 a-c	39 a-e	35 a	39 e-g
N13003olF	49 a-d	49 a-d	50 a-d	54 ab	46 a-c	45 a-c	30 a	49 b-f
N13006ol	34 b-f	30 c-e	40 c-g	40 ab	42 a-c	22 d-f	34 a	36 g-i
N13048+ol	30 c-f	41 b-e	34 d-h	33 ab	42 a-c	29 a-f	20 a	34 g-j
N13049olJ	37 a-f	39 b-e	44 b-f	46 ab	44 a-c	31 a-f	29 a	39 f-h
N13054ol	43 a-f	48 a-d	39 c-g	44 ab	48 a-c	30 a-f	25 a	41 c-g
N14002olJ	20 ef	22 e	17 h	12 b	25 c	14 f	19 a	19 k
N14004olJ	34 b-f	36 b-e	20 gh	21 ab	33 bc	18 ef	33 a	27 h-k
N14007ol	54 a-c	57 ab	49 a-d	52 ab	48 a-c	49 a	40 a	51 a-d
N14023ol	31 c-f	42 a-e	46 b-e	41 ab	48 a-c	29 a-f	28 a	39 e-g
N14027olJ	31 c-f	39 b-e	31 d-h	39 ab	35 bc	25 b-f	40 a	34 g-j
N14035ISmT	62 ab	52 a-c	42 b-f	42 ab	61 a	49 a	22 a	50 b-e
N15017ol	29 c-f	33 b-e	37 c-h	30 ab	33 bc	29 a-f	36 a	31 g-j
N15018olJ	22 d-f	21 e	33 d-h	30 ab	42 a-c	17 ef	20 a	27 i-k
N15039ol	37 a-f	39 b-e	35 d-h	45 ab	47 a-c	32 a-f	27 a	38 f-i
N15041ol	30 c-f	32 b-e	27 e-h	31 ab	40 a-c	25 b-f	34 a	31 g-j
N15044olF	28 c-f	34 b-e	31 d-h	32 ab	43 a-c	23 b-f	33 a	33 g-j
Span-17							31.5 a	
Mean	36.9	40.6	39.6	39.4	43.9	31.6	29.9	38.6
MSD								11.6

¹ Pods that fell through a 38/64 inch opening but rode a 34/64 inch opening on the pre-sizer.² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Tukey's HSD test.³ Tukey's minimum significant difference (MSD) at P = 0.05

2018 Results by Location

Table 14. Average of pod brightness¹ (Hunter L Score) for jumbo pods in 2018.

Variety	Suffolk, VA		Martin County, NC		Rocky Mount, NC	Bladen, NC	Blackville, SC	Average of all Locations
	Dig I	Dig II	Dig I	Dig II				
Bailey	45 a	45 a	40 a	46 a	44 a	37 a	45 a	43 a
Sullivan	43 ab	43 a	39 a	46 a	41 a	38 a	41 a	42 a
Wynne	42 ab	43 a	40 a	44 a	42 a	39 a	42 a	42 a
Emery	43 ab	43 a	40 a	46 a	44 a	38 a	33 a	42 a
Bailey II	43 ab	43 a	40 a	46 a	43 a	39 a	44 a	42 a
08X09-1-2-1	40 b	42 a	38 a	44 a	41 a	36 a	40 a	40 a
08X09-3-14-1	40 b	43 a	37 a	44 a	41 a	37 a	44 a	40 a
09X37-1-19-2	43 ab	44 a	38 a	44 a	41 a	38 a	43 a	41 a
09X38-1-5-1	42 ab	42 a	37 a	43 a	41 a	37 a	40 a	40 a
09X39-1-11-2	40 b	42 a	37 a	42 a	42 a	36 a	43 a	40 a
N13003olF	41 ab	43 a	39 a	45 a	42 a	39 a	45 a	43 a
N13006ol	43 ab	42 a	38 a	43 a	43 a	37 a	45 a	42 a
N13048+ol	42 ab	43 a	40 a	44 a	44 a	40 a	43 a	42 a
N13049olJ	42 ab	43 a	39 a	45 a	41 a	38 a	44 a	41 a
N13054ol	41 ab	44 a	39 a	45 a	42 a	37 a	42 a	42 a
N14002olJ	42 ab	44 a	41 a	47 a	44 a	38 a	42 a	43 a
N14004olJ	42 ab	44 a	41 a	45 a	43 a	40 a	43 a	43 a
N14007ol	42 ab	44 a	41 a	47 a	43 a	37 a	43 a	43 a
N14023ol	41 ab	44 a	40 a	44 a	43 a	38 a	43 a	42 a
N14027olJ	41 ab	44 a	39 a	47 a	44 a	36 a	44 a	42 a
N14035ISmT	43 ab	41 a	40 a	46 a	43 a	38 a	44 a	42 a
N15017ol	42 ab	43 a	40 a	46 a	43 a	38 a	45 a	42 a
N15018olJ	42 ab	41 a	39 a	45 a	42 a	36 a	44 a	41 a
N15039ol	44 ab	43 a	38 a	44 a	41 a	37 a	42 a	42 a
N15041ol	41 ab	44 a	40 a	42 a	43 a	37 a	45 a	41 a
N15044olF	40 b	43 a	38 a	44 a	42 a	36 a	43 a	41 a
Span-17							44 a	
Mean	42.04	43.04	39.1	44.7	42.4	37.7	42.8	41.7
MSD								3.7

¹ The higher the number the brighter the pod color.² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Tukey's HSD test.³ Tukey's minimum significant difference (MSD) at P = 0.05

2018 Results by Location

Table 15. Average of pod brightness¹ (Hunter L Score) for fancy pods in 2018.

Variety	Suffolk, VA		Martin County, NC		Rocky Mount, NC	Bladen, NC	Blackville, SC	Average of all Locations
	Dig I	Dig II	Dig I	Dig II				
Bailey	43 ab	44 a	41 ab	44 a	43 a	36 a	41 a	42 a
Sullivan	43 a-c	43 a	40 a-c	45 a	42 a	37 a	41 a	42 a
Wynne	41 a-c	43 a	40 a-c	42 a	41 a	36 a	41 a	41 a
Emery	41 a-c	43 a	39 a-c	43 a	44 a	35 a	43 a	41 a
Bailey II	42 a-c	43 a	39 a-c	46 a	43 a	38 a	43 a	42 a
08X09-1-2-1	40 a-c	41 a	38 a-c	43 a	41 a	33 a	42 a	40 a
08X09-3-14-1	40 c	41 a	37 bc	43 a	42 a	35 a	42 a	40 a
09X37-1-19-2	41 a-c	43 a	37 c	44 a	42 a	38 a	41 a	41 a
09X38-1-5-1	41 a-c	41 a	38 a-c	43 a	42 a	37 a	39 a	40 a
09X39-1-11-2	40 a-c	41 a	38 a-c	41 a	43 a	37 a	43 a	40 a
N13003olF	42 a-c	42 a	41 a-c	45 a	42 a	37 a	40 a	41 a
N13006ol	42 a-c	42 a	38 a-c	44 a	44 a	37 a	42 a	41 a
N13048+ol	41 a-c	42 a	39 a-c	44 a	43 a	37 a	41 a	41 a
N13049olJ	41 a-c	43 a	39 a-c	45 a	43 a	36 a	42 a	41 a
N13054ol	41 a-c	44 a	39 a-c	44 a	42 a	37 a	39 a	41 a
N14002olJ	42 a-c	44 a	38 a-c	46 a	42 a	36 a	42 a	41 a
N14004olJ	43 a-c	43 a	40 a-c	44 a	42 a	37 a	43 a	42 a
N14007ol	43 a	43 a	41 a	45 a	43 a	37 a	44 a	42 a
N14023ol	42 a-c	43 a	39 a-c	46 a	42 a	35 a	41 a	41 a
N14027olJ	41 a-c	42 a	38 a-c	44 a	42 a	35 a	41 a	40 a
N14035olSmT	42 a-c	43 a	39 a-c	44 a	43 a	34 a	39 a	40 a
N15017ol	40 a-c	42 a	39 a-c	44 a	43 a	35 a	44 a	40 a
N15018olJ	42 a-c	43 a	39 a-c	45 a	41 a	36 a	42 a	41 a
N15039ol	42 a-c	42 a	38 a-c	44 a	42 a	35 a	40 a	41 a
N15041ol	41 a-c	43 a	37 a-c	43 a	42 a	35 a	42 a	41 a
N15044olF	40 bc	42 a	38 a-c	44 a	42 a	34 a	42 a	40 a
Span-17							42 a	
Mean	41.5	40.6	38.9	43.9	42.4	36.0	41.5	40.9
MSD								4.00

¹ The higher the number the brighter the pod color.² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Tukey's HSD test.³ Tukey's minimum significant difference (MSD) at P = 0.05.

2018 Results by Location

RESULTS – YIELD AND GRADE BY LOCATION

Table 16. Performance of genotypes at Tidewater AREC (Suffolk), VA, in 2018. Dig I averages of two replicated plots planted on 8 May, dug on 18 September, and combined on 29 September.

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total	Support	Yield ¹ lb/A	Value \$/A
											Kernels	Price \$/lb		
Bailey	0.5	0.7	82 a	7.1	30 a-e	5.2 cd	3.5	1.5	0.8	67	72 a	0.18 a	5527 a	991 a
Sullivan	0.3	0.8	91 a	7.0	31 a-e	6.4 b-d	2.9	2.2	0.6	66	71 a	0.18 a	4819 a	847 a
Wynne	0.7	0.9	94 a	6.5	30 a-e	4.1 cd	2.8	1.9	0.8	65	70 a	0.17 a	4538 a	785 a
Emery	0.7	0.9	94 a	6.7	36 a-c	10 b-d	3.2	1.3	1.4	67	73 a	0.18 a	5276 a	947 a
Bailey II	0.4	0.7	86 a	7.4	38 ab	5.2 cd	2.6	2.2	1.0	66	72 a	0.18 a	5609 a	1000 a
08X09-1-2-1	0.7	0.8	78 a	7.5	22 e	14.3 ab	4.0	2.9	2.8	60	70 a	0.17 a	4809 a	769 a
08X09-3-14-1	0.6	1.0	85 a	6.9	23 de	13 a-c	2.8	3.6	0.9	64	71 a	0.17 a	5003 a	867 a
09X37-1-19-2	0.7	0.7	84 a	7.3	30 a-e	7.3 b-d	2.7	2.4	1.0	66	72 a	0.18 a	4926 a	864 a
09X38-1-5-1	0.5	0.5	94 a	6.6	25 c-e	19 a	6.1	1.8	1.0	63	72 a	0.18 a	4793 a	858 a
09X39-1-11-2	0.7	0.7	84 a	6.8	28 a-e	13 a-c	3.5	2.2	0.5	65	71 a	0.18 a	5475 a	964 a
N13003olF	0.6	0.8	88 a	7.5	30 a-e	3.0 d	3.1	2.3	1.1	63	70 a	0.17 a	4787 a	814 a
N13006ol	0.7	1.1	95 a	7.1	38 ab	3.5 cd	2.7	2.1	0.4	65	70 a	0.18 a	4939 a	868 a
N13048+ol	0.8	0.6	95 a	7.2	22 e	3.6 cd	2.4	2.4	2.7	60	67 a	0.16 a	5416 a	848 a
N13049olJ	1.3	1.2	94 a	6.9	30 a-e	3 d	3.2	2.4	0.6	64	71 a	0.17 a	5432 a	943 a
N13054ol	0.6	0.5	93 a	7.4	29 a-e	6.2 b-d	4.2	2.5	0.4	62	70 a	0.17 a	5133 a	879 a
N14002olJ	0.8	0.7	93 a	6.6	33 a-d	12 a-d	3.1	1.5	0.9	65	71 a	0.18 a	5745 a	1015 a
N14004olJ	0.7	1.0	94 a	7.2	31 a-e	7.1 b-d	3.5	2.7	2.0	63	71 a	0.17 a	4898 a	834 a
N14007ol	0.7	0.7	85 a	6.6	27 b-e	7.1 b-d	4.3	2.6	2.6	63	73 a	0.17 a	4735 a	807 a
N14023ol	0.6	0.6	97 a	7.1	28 a-e	3.3 d	3.3	2.4	0.9	63	70 a	0.17 a	5470 a	927 a
N14027olJ	0.9	0.9	95 a	7.4	30 a-e	5.3 cd	3.8	2.6	1.3	61	69 a	0.17 a	5209 a	867 a
N14035ISmT	0.4	0.9	90 a	6.7	30 a-e	5.2 cd	2.6	2.2	0.5	66	71 a	0.18 a	4814 a	848 a
N15017ol	0.5	0.7	95 a	6.7	38.5 a	7.7 b-d	2.4	2.1	1.2	65	71 a	0.18 a	5409 a	943 a
N15018olJ	0.5	0.9	95 a	7.4	31 a-e	11 a-d	2.9	2.6	1.3	64	71 a	0.17 a	5256 a	905 a
N15039ol	0.4	0.9	93 a	7.3	34 a-d	7.0 b-d	2.3	1.9	0.6	68	73 a	0.18 a	5206 a	942 a
N15041ol	0.8	0.9	95 a	6.9	28 a-e	3.9 cd	4.5	2.6	0.5	61	69 a	0.17 a	5302 a	897 a
N15044olF	0.8	0.8	94 a	6.5	29 a-e	4.5 cd	4.1	2.5	0.7	63	70 a	0.17 a	5457 a	943 a
Mean	0.6	0.8	91	6.9	30	7.3	3.2	2.2	1.0	64	71	0.17	5153	891

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

2018 Results by Location

Table 17. Performance of genotypes at Tidewater AREC (Suffolk), VA in 2018. Dig II averages of two replicated plots planted on 8 May, dug on 4 October, and combined on 18 October.

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	1.5	0.7	83 ab	6.7	34 a-d	10 d-f	6.2	1.8	0.4	67 a	75 a-c	0.18 a	6002 a	1122 a
Sullivan	0.8	0.9	70 b	6.7	37 ab	13 d-f	4.1	1.9	0.7	67 a	73 a-c	0.18 a	4703 a	862 a
Wynne	1.2	0.7	94 ab	7.2	37 a	14 c-f	2.3	1.8	1.6	67 a	72 bc	0.18 a	4695 a	838 a
Emery	1.9	0.6	93 ab	6.7	41 a	13 c-f	4.6	1.0	2.1	67 a	74 a-c	0.19 a	5004 a	918 a
Bailey II	0.6	0.6	85 ab	6.6	38 a	11 d-f	5.8	1.7	1.6	65 a	74 a-c	0.18 a	5480 a	1000 a
08X09-1-2-1	1.4	1.0	91 ab	7.8	22 e	29 ab	5.3	1.8	1.9	64 a	73 a-c	0.18 a	5514 a	986 a
08X09-3-14-1	1.4	0.7	85 ab	7.4	26 c-e	24 a-c	4.9	1.1	1.3	69 a	76 a	0.19 a	5331 a	1013 a
09X37-1-19-2	1.2	0.8	81 ab	6.6	33 a-d	12 d-f	5.6	2.4	0.7	65 a	74 a-c	0.18 a	5528 a	1012 a
09X38-1-5-1	1.7	0.7	92 ab	6.8	25 de	30 a	6.6	1.2	2.1	65 a	75 a-c	0.19 a	5666 a	1039 a
09X39-1-11-2	1.0	0.4	90 ab	7.2	27 b-e	27 ab	6.4	1.2	0.6	65 a	74 a-c	0.19 a	5359 a	996 a
N13003olF	1.7	0.8	86 ab	6.8	38 a	7 ef	6.5	1.8	0.5	65 a	74 a-c	0.18 a	4610 a	847 a
N13006ol	1.2	1.1	95 ab	7.3	39 a	13 d-f	3.2	2.0	1.5	65 a	71 c	0.18 a	5334 a	941 a
N13048+ol	1.2	0.8	94 ab	7.0	34 a-d	5 f	5.9	1.9	1.1	63 a	72 bc	0.18 a	5399 a	951 a
N13049olJ	0.8	0.6	94 ab	7.1	32 a-e	8 ef	3.7	3.1	1.3	64 a	72 a-c	0.18 a	5443 a	956 a
N13054ol	0.5	0.7	95 ab	6.4	34 a-d	7 ef	8.1	1.6	0.7	63 a	74 a-c	0.18 a	5303 a	972 a
N14002olJ	1.3	0.9	95 ab	6.4	40 a	13 c-f	5.2	1.1	2.1	66 a	74 a-c	0.18 a	5514 a	1011 a
N14004olJ	1.0	0.7	93 ab	6.5	39 a	10 d-f	5.4	1.4	0.8	67 a	74 a-c	0.19 a	5060 a	942 a
N14007ol	1.6	1.0	84 ab	7.0	34 a-c	14 c-f	7.4	1.4	1.6	65 a	75 a-c	0.19 a	4808 a	889 a
N14023ol	0.8	0.6	94 ab	6.7	36 ab	8 ef	6.2	1.4	1.5	63 a	72 bc	0.18 a	5328 a	945 a
N14027olJ	1.0	0.8	94 ab	7.1	34 a-d	10 d-f	6.0	1.3	0.7	65 a	73 a-c	0.18 a	5818 a	1061 a
N14035lSmT	0.7	1.4	91 ab	7.7	33 a-d	18 b-e	3.2	2.0	2.2	66 a	73 a-c	0.18 a	5647 a	996 a
N15017ol	1.4	1.9	94 ab	6.7	41 a	11 d-f	4.5	1.1	0.6	69 a	75 a-c	0.19 a	6220 a	1177 a
N15018olJ	0.6	0.4	96 a	8.9	36 ab	20 a-d	4.0	1.0	0.6	68 a	74 a-c	0.19 a	5508 a	1029 a
N15039ol	1.1	0.8	94 ab	6.8	37 a	18 b-e	5.3	1.3	1.8	67 a	76 ab	0.19 a	5497 a	1025 a
N15041ol	1.2	0.6	98 a	7.1	36 ab	11 d-f	6.0	1.5	0.7	65 a	73 a-c	0.18 a	6021 a	1099 a
N15044olF	1.0	0.6	95 ab	6.9	37 ab	8 ef	5.3	1.9	1.3	65 a	73 a-c	0.18 a	5742 a	1038 a
Mean	1.1	0.8	91	6.9	35	14	5.3	1.6	1.6	65	73	0.18	5405	987

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

2018 Results by Location

Table 18. Performance of genotypes at Martin Co., NC, in 2018. Dig I averages of two replicated plots planted on 24 May, dug on 1 October, and combined on 19 October.

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total	Support	Yield ¹ lb/A	Value \$/A
											Kernels	Price \$/lb		
Bailey	0.7	0.9	89 a-c	6.8	32 a-c	5.1 ab	4.8	2.5	0.3	64 a-c	72 a-c	0.18 a-c	6298 a	1118 a
Sullivan	0.4	0.9	91 a-c	6.4	30 a-c	5.7 ab	4.7	1.3	0.7	67a-c	73 a-c	0.18 a-c	5233 a	950 a
Wynne	0.5	1.0	93 ab	7.0	33 a-c	7.2 ab	4.2	1.1	0.6	66 a-c	71 a-c	0.18 a-c	5453 a	975 a
Emery	0.6	0.8	97 a	7.0	40 ab	12.8 ab	2.4	1.3	0.5	70 a	74 ab	0.19 ab	6165 a	1155 a
Bailey II	0.4	0.7	90 a-c	6.8	41 a	7.0 ab	5.2	1.1	0.3	68 ab	74 a	0.19 a	6655 a	1252 a
08X09-1-2-1	0.8	0.8	90 a-c	7.2	29 a-c	10.1 ab	3.5	2.4	0.4	67 a-c	73 a-c	0.18 a-c	5932 a	1072 a
08X09-3-14-1	0.7	0.8	86 a-c	7.4	27 bc	12.4 ab	3.6	1.1	0.9	68 ab	73 a-c	0.18 a-c	6299 a	1150 a
09X37-1-19-2	0.9	1.1	87 a-c	6.9	30 a-c	4.9 ab	3.7	1.8	0.8	66 a-c	72 a-c	0.18 a-c	5938 a	1050 a
09X38-1-5-1	0.5	0.7	93 ab	6.8	29 a-c	15.0 a	6.4	1.8	1.7	64 a-c	74 ab	0.18 a-c	6407 a	1142 a
09X39-1-11-2	0.6	0.8	84 bc	6.9	32 a-c	6.9 ab	3.4	1.2	0.5	67 a-c	72 a-c	0.18 a-c	5735 a	1033 a
N13003olF	1.2	1.2	89 a-c	6.9	34 a-c	3.3 b	6.4	2.0	1.2	62 bc	71 a-c	0.17 a-c	5800 a	1011 a
N13006ol	0.8	0.8	95 ab	6.8	37 a-c	8.3 ab	6.3	1.2	1.1	64 a-c	72 a-c	0.18 a-c	6258 a	1135 a
N13048+ol	0.6	0.9	95 ab	6.9	30 a-c	5.3 ab	4.2	2.1	1.1	64 a-c	72 a-c	0.18 a-c	6021 a	1059 a
N13049olJ	0.7	0.9	94 ab	7.4	28 bc	4.3 ab	3.6	2.0	0.8	65 a-c	71 a-c	0.17 a-c	5835 a	1017 a
N13054ol	0.6	1.0	93 ab	6.7	29 a-c	5.4 ab	6.6	1.6	1.5	62 bc	71 a-c	0.17 a-c	6128 a	1059 a
N14002olJ	1.1	1.1	97 a	7.1	37 a-c	7.1 ab	5.9	1.6	2.4	61 bc	71 a-c	0.17 a-c	5495 a	937 a
N14004olJ	0.5	1.0	97 a	6.7	37 a-c	7.1 ab	4.0	1.3	3.3	64 a-c	72 a-c	0.17 a-c	5982 a	997 a
N14007ol	0.5	1.1	80 c	6.7	30 a-c	5.8 ab	8.0	1.6	2.2	62 bc	73 a-c	0.18 a-c	5355 a	941 a
N14023ol	0.5	1.0	95 ab	6.8	27 c	3.5 b	6.2	2.3	1.2	61 bc	70 bc	0.17 bc	6514 a	1105 a
N14027olJ	0.7	1.1	96 ab	6.6	28 bc	3.5 b	5.8	1.6	1.5	62 a-c	71 a-c	0.17 a-c	5916 a	1014 a
N14035lSmT	0.4	1.2	94 ab	6.7	37 a-c	11.0 ab	2.5	1.4	1.7	66 a-c	71 a-c	0.18 a-c	5410 a	948 a
N15017ol	1.6	1.3	96 ab	6.8	34 a-c	3.4 b	4.2	2.1	1.8	63 a-c	71 a-c	0.17 a-c	5824 a	994 a
N15018olJ	0.4	0.7	95 ab	6.9	32 a-c	6.9 ab	5.0	1.6	1.0	65 a-c	72 a-c	0.18 a-c	5916 a	1049 a
N15039ol	0.4	1.1	93 ab	6.8	33 a-c	9.4 ab	3.5	1.7	1.3	66 a-c	73 a-c	0.18 a-c	5903 a	1058 a
N15041ol	0.6	1.4	94 ab	6.8	28 bc	5.0 ab	6.8	2.2	1.4	60 bc	70 a-c	0.17 bc	5896 a	1008 a
N15044olF	0.4	1.2	96 ab	6.7	28 bc	3.0 b	5.6	2.4	1.8	60 c	69 c	0.17 c	6254 a	1033 a
Mean	0.6	0.9	92	6.8	32	6.9	4.8	1.7	1.1	64	71.9	0.18	5947	1049

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

2018 Results by Location

Table 19. Performance of genotypes at Martin Co., NC, in 2018. Dig II averages of two replicated plots planted on 24 May, dug on 19 October, and combined on 27 October.

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.5	0.9	89 ab	9.1	37 a-d	6.9 cd	3.1	1.5	0.3	69 a-c	74 a-c	0.19 a-c	6601 a	1228 a
Sullivan	0.4	1.4	86 ab	10.8	36 a-d	12.4 a-d	3.6	2.5	0.6	66 a-c	73 a-c	0.18 a-c	5658 a	1027 a
Wynne	0.6	1.3	90 ab	10.4	37 a-d	14.4 a-d	2.4	2.6	0.8	67 a-c	73 a-c	0.18 a-c	6452 a	1172 a
Emery	0.5	0.9	95 ab	10.2	39 a-d	19.5 a-d	1.4	2.0	0.6	70 ab	74 a-c	0.19 a-c	7343 a	1378 a
Bailey II	0.5	1.0	90 ab	10.5	44 a	13.9 a-d	3.3	2.2	1.2	68 a-c	75 a-c	0.19 a-c	7609 a	1411 a
08X09-1-2-1	0.8	0.8	92 ab	12.2	33 a-d	21.9 a-d	1.9	2.7	0.7	68 a-c	74 a-c	0.18 a-c	6349 a	1169 a
08X09-3-14-1	0.4	0.8	95 ab	13.0	30 d	30.1 a	2.0	1.6	0.4	72 a	76 ab	0.19 a	7288 a	1407 a
09X37-1-19-2	1.3	1.4	89 ab	11.7	37 a-d	13.1 a-d	2.6	2.3	0.7	68 a-c	74 a-c	0.18 a-c	6690 a	1232 a
09X38-1-5-1	0.7	0.9	94 ab	10.8	29 d	25.5 ab	5.0	2.2	0.5	67 a-c	74 a-c	0.19 a-c	6946 a	1296 a
09X39-1-11-2	0.9	0.6	70 b	10.6	29 d	24.0 a-c	3.6	2.5	1.0	67 a-c	74 a-c	0.18 a-c	6502 a	1195 a
N13003olF	0.5	1.5	87 ab	9.1	37 a-d	6.5 cd	4.0	2.7	1.4	63 c	71 c	0.17 c	6446 a	1115 a
N13006ol	0.7	1.2	96 ab	9.8	42 a-c	10.5 b-d	2.3	1.8	0.8	67 a-c	72 bc	0.18 a-c	5896 a	1055 a
N13048+ol	0.5	1.0	95 ab	10.5	34 a-d	9.4 b-d	3.2	3.1	1.3	65 a-c	73 a-c	0.18 bc	6502 a	1151 a
N13049olJ	0.4	1.0	94 ab	11.4	33 a-d	11.3 b-d	3.9	1.5	0.5	68 a-c	73 a-c	0.18 a-c	7204 a	1319 a
N13054ol	0.5	1.1	96 a	12.2	34 a-d	11.9 b-d	3.8	2.8	0.8	66 a-c	73 a-c	0.18 a-c	7337 a	1320 a
N14002olJ	0.9	0.9	96 a	10.1	38 a-d	19.6 a-d	3.2	1.0	0.6	68 a-c	73 a-c	0.19 a-c	7604 a	1409 a
N14004olJ	0.3	0.9	94 ab	9.2	40 a-d	11.5 b-d	3.8	1.2	0.9	67 a-c	73 a-c	0.18 a-c	7026 a	1297 a
N14007ol	0.8	1.0	90 ab	9.1	36 a-d	17.4 a-d	2.6	2.1	0.7	71 ab	76 a	0.19 ab	6447 a	1228 a
N14023ol	0.5	1.1	93 ab	11.4	33 a-d	5.9 d	3.2	2.3	0.8	66 a-c	72 a-c	0.18 a-c	6635 a	1182 a
N14027olJ	0.4	0.9	95 ab	11.5	32 b-d	11.1 b-d	5.4	1.9	2.1	64 bc	73 a-c	0.18 a-c	7088 a	1251 a
N14035lSmT	0.4	1.7	92 ab	11.8	31 cd	23.2 a-d	1.1	2.9	1.0	69 a-c	74 a-c	0.18 a-c	5888 a	1077 a
N15017ol	0.5	1.0	96 a	9.2	43 ab	10.7 b-d	2.4	1.7	1.1	69 a-c	74 a-c	0.19 a-c	6643 a	1225 a
N15018olJ	0.4	0.9	94 ab	10.0	37 a-d	13.9 a-d	2.8	1.4	1.2	69 a-c	74 a-c	0.19 a-c	6783 a	1261 a
N15039ol	0.6	1.1	89 ab	9.5	42 a-c	12.8 a-d	3.7	1.5	1.5	69 a-c	76 a	0.19 ab	6847 a	1293 a
N15041ol	0.7	1.1	97 a	10.7	31 cd	11.4 b-d	3.8	2.2	1.7	65 bc	72 a-c	0.18 bc	7229 a	1262 a
N15044olF	0.6	1.3	97 a	11.0	37 a-d	9.4 b-d	2.5	2.4	1.5	67 a-c	74 a-c	0.18 a-c	7671 a	1383 a
Mean	0.5	1.0	92	10	36	14	3.1	2.1	0.9	67	74	0.18	6796	1244

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

2018 Results by Location

Table 20. Performance of genotypes at Rocky Mount, NC, in 2018. Averages of two replicated plots planted on 1 June, dug on 25 September, and combined on 4 October.

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	1.3	1.3	90 a	6.8	34 ab	2.6 c	6.0	3.3	0.7	62 a	72 a	0.17 a	6700 a	1171 a
Sullivan	1.7	2.1	84 a	7.0	29 ab	5.0 c	5.3	5.0	1.0	58 a	70 a	0.17 a	5048 a	830 ab
Wynne	1.4	1.5	89 a	7.0	33 ab	3.7 c	4.4	3.7	1.1	62 a	71 a	0.17 a	4746 a	815 b
Emery	1.1	1.9	92 a	6.9	36 ab	3.9 c	3.7	2.0	0.3	67 a	73 a	0.18 a	5959 a	1085 ab
Bailey II	1.1	1.0	84 a	6.9	41 a	2.5 c	4.4	2.6	0.5	65 a	72 a	0.18 a	5969 a	1067 ab
08X09-1-2-1	1.3	1.4	94 a	6.9	32 ab	12.0 ab	6.5	3.0	1.1	61 a	71 a	0.18 a	5804 a	1009 ab
08X09-3-14-1	1.4	1.1	85 a	6.9	34 ab	6.0 c	5.0	3.8	0.8	63 a	73 a	0.18 a	6354 a	1121 ab
09X37-1-19-2	1.1	1.5	84 a	6.8	29 ab	2.7 c	5.8	3.7	0.9	62 a	72 a	0.17 a	5690 a	984 ab
09X38-1-5-1	0.9	1.2	93 a	6.8	29 ab	12.9 a	7.1	3.1	1.7	60 a	72 a	0.17 a	6220 a	1072 ab
09X39-1-11-2	1.1	1.8	89 a	6.8	38 ab	7.3 a-c	3.9	1.9	0.3	67 a	73 a	0.18 a	5793 a	1053 ab
N13003olF	1.4	2.4	87 a	7.1	34 ab	4.7 c	4.0	3.0	0.6	63 a	71 a	0.17 a	6342 a	1099 ab
N13006ol	1.2	0.9	95 a	7.1	36 ab	5.8 c	3.8	2.8	0.6	65 a	72 a	0.17 a	6200 a	1096 ab
N13048+ol	1.3	1.1	95 a	6.7	31 ab	1.5 c	6.6	3.1	0.9	60 a	70 a	0.17 a	5790 a	986 ab
N13049olJ	1.3	1.3	90 a	7.0	28 b	3.3 c	7.0	4.2	1.3	58 a	71 a	0.17 a	6467 a	1079 ab
N13054ol	1.3	1.3	90 a	7.1	32 ab	4.0 c	7.3	2.9	0.5	60 a	71 a	0.17 a	6505 a	1122 ab
N14002olJ	1.3	1.7	92 a	6.9	39 ab	6.0 c	4.8	3.9	1.7	59 a	69 a	0.17 a	6137 a	1010 ab
N14004olJ	1.4	1.1	94 a	7.0	33 ab	2.5 c	7.0	3.8	2.6	57 a	70 a	0.16 a	6525 a	1058 ab
N14007ol	1.1	1.0	85 a	7.2	35 ab	5.3 c	6.7	2.9	1.2	63 a	73 a	0.18 a	5828 a	1039 ab
N14023ol	1.2	1.8	94 a	7.0	33 ab	2.9 c	7.3	3.9	0.6	58 a	69 a	0.17 a	6558 a	1095 ab
N14027olJ	1.0	1.1	91 a	7.1	30 ab	2.9 c	8.2	3.5	1.0	59 a	71 a	0.17 a	6066 a	1040 ab
N14035lSmT	0.8	2.5	89 a	7.0	38 ab	3.8 c	4.1	3.8	0.2	62 a	70 a	0.17 a	5423 a	935 ab
N15017ol	1.0	0.8	95 a	6.9	39 ab	4.8 c	5.5	3.3	1.2	61 a	71 a	0.17 a	6497 a	1122 ab
N15018olJ	0.6	1.5	91 a	6.9	32 ab	6.4 bc	5.7	4.0	1.0	60 a	70 a	0.17 a	6395 a	1077 ab
N15039ol	0.7	1.1	93 a	6.8	40 ab	3.6 c	4.5	3.3	1.1	63 a	72 a	0.18 a	6269 a	1105 ab
N15041ol	0.9	1.5	93 a	7.0	32 ab	3.7 c	6.4	3.3	1.3	60 a	71 a	0.17 a	6545 a	1106 ab
N15044olF	0.9	2.0	92 a	7.0	33 ab	2.7 c	6.8	4.3	0.9	58 a	70.1 a	0.17 a	6127 a	1032 ab
Mean	1.1	1.4	90	6.9	33	4.7	5.7	3.4	0.9	61	71	0.17	6075	1047

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

2018 Results by Location

Table 21. Performance of genotypes at Bladen County, NC, in 2018. Averages of three replicated plots planted on 16 May, dug on 26 September, and combined on 5 October.

Variety	% LSK	% FM	% Fancy	% Wat er	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.8	0.7	84 a	7.5	35 a	4.3 a	3.8	1.3	2.1	66 a-c	73 a-d	0.17 a-c	4459 a-c	789 a
Sullivan	0.3	0.8	84 a	7.7	34 a	6.5 a	6.4	1.1	0.7	65 a-c	74 a-c	0.18 ab	5224 a-c	959 a
Wynne	0.4	0.9	84 a	7.1	32 a	7.7 a	6.4	1.4	1.5	63 a-d	73 a-d	0.18 a-c	4370 a-c	775 a
Emery	0.6	0.5	91 a	7.2	41 a	8.7 a	4.5	0.8	1.9	68 ab	75 a-c	0.19 ab	4781 a-c	881 a
Bailey II	0.5	0.6	90 a	5.3	41 a	7.7 a	6.5	1.0	0.4	68 ab	75 a	0.19 ab	5346 a-c	1017 a
08X09-1-2-1	0.6	0.8	94 a	7.9	29 a	23.9 a	5.1	1.3	1.1	66 a-c	74 a-c	0.18 ab	5452 a-c	1002 a
08X09-3-14-1	1.0	0.6	91 a	7.7	31 a	15.7 a	3.7	1.1	0.5	69 a	74 a-c	0.19 ab	5711 ab	1068 a
09X37-1-19-2	0.4	0.6	89 a	7.5	32 a	11.6 a	2.8	1.3	1.1	69 a	75 a-c	0.18 ab	5201 a-c	964 a
09X38-1-5-1	0.5	0.6	96 a	7.6	28 a	18.7 a	7.7	1.3	3.6	61 a-d	74 a-c	0.18 a-c	5837 a	1004 a
09X39-1-11-2	0.6	0.5	89 a	7.4	34 a	14.0 a	5.9	1.1	0.6	67 a-c	74 a-c	0.19 ab	5335 a-c	993 a
N13003olF	0.3	0.9	89 a	7.8	38 a	4.05 a	3.8	0.8	0.8	69 ab	74 a-c	0.18 ab	4392 a-c	814 a
N13006ol	0.4	0.7	93 a	7.4	38 a	4.6 a	4.8	1.2	1.5	65 a-c	73 a-d	0.18 ab	4454 a-c	797 a
N13048+ol	0.4	0.8	94 a	8.1	29 a	2.0 a	8.1	1.3	2.4	60 a-d	72 a-d	0.17 a-c	5055 a-c	864 a
N13049olJ	0.3	1.0	93 a	7.9	28 a	4.2 a	7.7	1.1	3.6	59 bcd	72 b-d	0.17 bc	5255 a-c	872 a
N13054ol	0.4	0.7	93 a	7.4	30 a	4.7 a	6.7	1.1	2.6	62 a-d	72 a-d	0.17 a-c	5763 a	988 a
N14002olJ	0.4	0.9	93 a	7.9	35 a	10.0 a	5.0	0.9	2.2	63 a-d	72 cd	0.17 a-c	5348 a-c	929 a
N14004olJ	0.6	0.6	96 a	7.6	36 a	8.3 a	6.8	0.9	3.5	61 a-d	73 a-d	0.17 a-c	4201 bc	716 a
N14007ol	0.7	1.1	83 a	7.2	29 a	6.1 a	6.0	1.5	1.7	65 a-c	75 a-c	0.18 ab	4088 c	739 a
N14023ol	0.7	0.9	92 a	7.5	29 a	2.7 a	9.3	1.5	2.1	60 b-d	73 a-d	0.17 a-c	5236 a-c	910 a
N14027olJ	0.7	1.0	93 a	7.6	27 a	3.3 a	9.1	1.7	3.1	58 cd	72 b-d	0.17 bc	5415 a-c	904 a
N14035lSmT	0.4	0.9	86 a	7.6	38 a	9.8 a	6.0	1.1	1.1	66 a-c	74 a-c	0.19 ab	4865 a-c	903 a
N15017ol	0.6	0.9	88 a	7.4	32 a	4.2 a	6.0	2.0	1.6	62 a-d	72 cd	0.17 a-c	5099 a-c	881 a
N15018olJ	0.6	1.2	94 a	7.6	33 a	11.1 a	5.2	1.2	2.6	63 a-d	72 a-d	0.17 a-c	5261 a-c	914 a
N15039ol	0.7	0.6	91 a	7.7	36 a	39.4 a	5.2	0.9	1.1	68 ab	75 ab	0.19 a	4931 a-c	955 a
N15041ol	0.4	1.2	91 a	7.5	24 a	3.2 a	7.7	2.1	5.8	55 d	70 d	0.16 c	4989 a-c	688 a
N15044olF	0.6	0.7	94 a	7.4	28 a	4.5 a	6.8	1.2	2.4	61 a-d	72 cd	0.17 a-c	5174 a-c	882 a
Mean	0.5	0.8	90	7.5	32	9.3	5.9	1.2	1.9	64	73	0.18	5048	893

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

2018 Results by Location

Table 22. Performance of genotypes at Blackville, SC, in 2018. Averages of two replicated plots planted on 24 May, dug on 18 October and combined on 19 October.

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.4	0.6	92 a	6.3	28 ab	14 c-f	13.9	3.4	1.0	56 a	75 a-d	0.17 a	4337 a-c	841 a-c
Sullivan	0.8	0.6	92 a	6.0	29 ab	12 ef	16.7	2.5	0.7	55 a	75 a-d	0.17 a	4361 a-c	864 a-c
Wynne	0.5	1.2	92 a	6.2	23 ab	16 b-f	21.9	2.6	1.3	50 a	76 ab	0.16 a	4498 a-c	892 a-c
Emery	0.3	1.1	90 a	6.2	25 ab	17 b-f	14.1	2.4	1.4	57 a	75 a-c	0.17 a	4109 ab	811 bc
Bailey II	0.5	0.9	89 a	6.5	28 ab	14 c-f	15.5	3.0	1.2	55 a	75 a-d	0.18 a	4682 a-c	917 a-c
08X09-1-2-1	0.9	1.0	96 a	6.1	22 ab	27 a	13.1	2.2	0.9	58 a	75 a-d	0.18 a	5381 ab	1064 ab
08X09-3-14-1	0.3	1.0	91 a	5.9	23 ab	24 a-c	20.2	1.2	0.8	55 a	77 a	0.17 a	5794 a	1203 a
09X37-1-19-2	0.4	0.8	92 a	6.3	29 ab	13 ef	13.7	2.7	1.6	56 a	74 a-d	0.18 a	5049 a-c	976 a-c
09X38-1-5-1	1.2	0.9	90 a	5.9	21 ab	25 ab	19.2	1.8	1.4	54 a	76 ab	0.17 a	5370 a-c	1076 ab
09X39-1-11-2	0.8	0.7	90 a	5.9	23 ab	23 a-d	15.4	3.0	0.9	55 a	74 a-d	0.18 a	5333 a-c	1035 a-c
N13003olF	0.7	1.0	91 a	6.1	30 ab	11 f	16.6	3.0	0.8	54 a	75 a-d	0.17 a	4185 a-c	825 bc
N13006ol	1.1	1.2	90 a	6.1	30 ab	11 f	16.0	2.7	1.1	54 a	74 b-d	0.15 a	4084 bc	788 bc
N13048+ol	0.8	1.1	93 a	6.3	26 ab	9 f	15.0	2.6	3.2	51 a	72 d	0.17 a	4750 a-c	844 a-c
N13049olJ	0.6	1.0	89 a	6.2	23 ab	11 f	21.1	2.8	2.6	47 a	74 a-d	0.18 a	4931 a-c	918 a-c
N13054ol	0.3	0.7	94 a	6.1	24 ab	13 ef	18.6	2.3	1.5	52 a	75 a-d	0.18 a	4922 a-c	950 a-c
N14002olJ	0.5	1.3	97 a	6.0	27 ab	18 a-f	16.9	2.0	3.0	52 a	74 a-d	0.17 a	4077 a-c	767 bc
N14004olJ	0.6	0.7	91 a	5.9	26 ab	13 d-f	19.1	1.9	3.9	50 a	75 a-d	0.19 a	3715 c	669 c
N14007ol	0.5	0.7	83 a	6.2	27 ab	13 d-f	19.2	2.6	1.7	53 a	76 ab	0.18 a	3778 bc	743 bc
N14023ol	0.2	1.0	89 a	6.3	27 ab	11 f	18.4	2.4	2.3	51 a	74 b-d	0.17 a	4773 a-c	898 a-c
N14027olJ	0.5	0.9	84 a	6.2	24 ab	8 f	21.0	2.3	4.0	46 a	74 b-d	0.18 a	4717 a-c	813 bc
N14035olSmT	0.4	2.5	86 a	6.4	28 ab	13 ef	9.2	4.8	1.9	56 a	72 cd	0.19 a	3903 bc	727 bc
N15017ol	0.7	1.1	86 a	6.1	31 a	15 b-f	13.9	2.6	1.5	56 a	74 a-d	0.18 a	5262 a-c	1025 a-c
N15018olJ	0.5	1.2	90 a	6.1	19 b	21 a-e	20.6	3.1	2.2	48 a	74 b-d	0.19 a	5106 a-c	959 a-c
N15039ol	1.2	0.8	96 a	6.1	26 ab	22 a-e	17.3	2.1	1.8	55 a	76 ab	0.17 a	4747 a-c	940 a-c
N15041ol	0.7	1.0	87 a	6.2	26 ab	13 ef	16.7	2.5	2.1	52 a	73 b-d	0.18 a	4885 a-c	913 a-c
N15044olF	0.9	1.0	91 a	6.2	29 ab	16 b-f	12.3	2.6	1.0	59 a	74 a-d	0.16 a	4791 a-c	939 a-c
Mean	0.6	1.0	90	7.2	26	15.5	16.7	2.6	1.8	53	75	0.18	4674	900

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

Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Tukey's HSD test.

2018 Results across Locations

Table 23. Performance of genotypes averaged across test locations in 2018.

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.8	0.8	87 b-e	7.2	33 a-h	6.8 f	5.9	2.2	0.8	64 ab	73.2 a-e	0.18 a-d	5703 a	1037 ab
Sullivan	0.7	1.0	85 c-e	7.3	32 a-h	8.7 d-f	6.2	2.3	0.7	63 ab	72.7 a-e	0.17 a-d	5006 a	906 ab
Wynne	0.7	1.1	91 a-e	7.3	32 a-h	9.5 c-f	6.3	2.1	1.1	63 ab	72.4 a-e	0.17 a-d	4964 a	893 b
Emery	0.8	0.9	93 ab	7.3	37 a-d	12.2 a-f	4.8	1.5	1.1	67 a	74.1 a-c	0.18 a	5519 a	1025 ab
Bailey II	0.6	0.8	88 a-e	7.3	39 a	8.7 d-f	6.2	1.9	0.9	65 ab	73.9 a-c	0.18 ab	5907 a	1095 ab
08X09-1-2-1	0.9	0.9	91 a-e	7.9	27 h	19.8 ab	5.6	2.3	1.2	64 ab	72.8 a-e	0.18 a-d	5606 a	1010 ab
08X09-3-14-1	0.8	0.8	88 a-e	7.9	28 gh	17.8 a-c	6.0	1.9	0.8	66 ab	74.5 a	0.19 a	5968 a	1118 a
09X37-1-19-2	0.9	1.0	84 e	7.6	31 b-h	9.2 c-f	5.3	2.4	1.0	65 ab	73.1 a-e	0.18 a-d	5574 a	1011 ab
09X38-1-5-1	0.8	0.8	93 ab	7.3	27 h	20.9 a	8.3	1.9	1.7	62 ab	73.7 a-d	0.18 a-c	5891 a	1069 ab
09X39-1-11-2	0.8	0.8	85 de	7.4	30 e-h	16.5 a-d	6.0	1.9	0.6	65 ab	73.1 a-e	0.18 a-c	5647 a	1038 ab
N13003olF	0.9	1.2	88 a-e	7.3	34 a-f	5.6 f	6.3	2.2	0.9	63 ab	72.1 a-e	0.18 a-d	5223 a	932 ab
N13006ol	0.9	1.0	94 ab	7.4	37 ab	8.1 d-f	5.6	2.0	1.0	64 ab	72.0 a-e	0.18 a-d	5309 a	954 ab
N13048+ol	0.8	0.9	94 ab	7.5	30 e-h	5.1 f	6.5	2.4	1.8	61 ab	71.1 e	0.17 d	5562 a	957 ab
N13049olJ	0.7	1.0	92 a-d	7.7	29 f-h	6.1 f	7.2	2.4	1.5	61 ab	71.9 c-e	0.17 cd	5795 a	1015 ab
N13054ol	0.6	0.8	93 ab	7.6	30 d-h	7.5 ef	7.9	2.1	1.1	61 ab	72.1 a-e	0.18 a-d	5870 a	1041 ab
N14002olJ	0.9	1.1	94 a	7.3	36 a-e	12.2 a-f	6.3	1.7	1.8	62 ab	72.0 b-e	0.18 a-d	5703 a	1011 ab
N14004olJ	0.7	0.8	94 ab	7.2	34 a-f	8.6 d-f	7.1	1.9	2.4	61 ab	72.6 a-e	0.18 a-d	5343 a	930 ab
N14007ol	0.8	0.9	84 e	7.1	31 b-h	9.9 c-f	7.7	2.1	1.7	63 ab	74.4 ab	0.18 a-c	5005 a	912 ab
N14023ol	0.6	1.0	93 ab	7.5	30 c-h	5.3 f	7.7	2.3	1.3	60 ab	71.4 de	0.17 cd	5788 a	1009 ab
N14027olJ	0.7	0.9	92 a-d	7.6	29 e-h	6.3 f	8.5	2.1	1.9	59 b	71.7 c-e	0.17 cd	5747 a	992 ab
N14035olSmT	0.5	1.4	90 a-e	7.9	34 a-g	12.1 b-f	3.2	2.2	1.1	64 ab	72.3 a-e	0.18 a-d	5136 a	919 ab
N15017ol	0.4	2.5	93 a-c	6.5	37 a-c	8.2 d-f	9.3	4.8	2.0	64 ab	72.5 a-e	0.18 a-d	5851 a	1052 ab
N15018olJ	0.9	1.1	93 ab	7.1	31 b-h	12.9 a-f	5.6	2.1	1.3	62 ab	72.4 a-e	0.18 a-d	5746 a	1027 ab
N15039ol	0.5	1.0	92 a-d	7.7	35 a-e	16.1 a-e	6.6	2.1	1.4	65 ab	74.4 ab	0.19 a	5629 a	1045 ab
N15041ol	0.7	0.9	93 ab	7.3	29 e-h	7.3 ef	5.9	1.8	1.3	59 ab	71.2 e	0.17 d	5838 a	996 ab
N15044olF	0.7	1.1	94 ab	7.4	32 b-h	6.8 f	7.4	2.3	1.9	62 ab	72.0 c-e	0.18 b-d	5888 a	1036 ab
Mean	0.7	1.0	91	7.5	32.1	10.3	6.5	2.2	1.3	63	72.6	0.18	5586	1001
MSD			7.5		6.5					7.2	2.4	0.009	1217	222

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

Two-year Averages by Location

RESULTS – TWO-YEAR AVERAGES

Table 24. Performance of genotypes at Tidewater AREC (Suffolk), VA. Two-year averages (2017-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.7	0.7	87 a-c	7.0	33 a-c	9 a-c	4.3	2.2	0.6	66 a-c	73 ab	0.19 ab	6165 a	1115 a
Sullivan	0.4	0.9	86 bc	6.9	31 b-e	12 a-c	3.9	3.2	0.7	62 a-c	70 b	0.18 ab	5288 a	899 a
Wynne	0.8	0.8	94 ab	7.0	32 a-d	12 a-c	3.0	2.5	1.1	64 a-c	70 ab	0.18 ab	5074 a	874 a
Emery	0.9	0.9	95 a	7.0	37 ab	16 a-c	3.9	1.7	1.1	67 ab	73 ab	0.19 a	5751 a	1043 a
Bailey II	0.5	0.6	87 a-c	7.1	39 a	10 a-c	4.1	1.9	0.7	67 ab	74 ab	0.19 a	5991 a	1095 a
08X09-1-2-1	0.8	0.9	88 a-c	7.6	21 f	22 a	3.4	2.5	1.3	65 a-c	72 ab	0.18 ab	5783 a	1009 a
08X09-3-14-1	0.9	0.8	85 c	7.0	26 d-f	17 a-c	3.1	2.3	0.6	68 a	74 ab	0.19 ab	5848 a	1065 a
09X37-1-19-2	0.7	0.8	85 c	7.0	32 a-d	11 a-c	3.9	3.1	0.8	65 a-c	73 ab	0.18 ab	5745 a	1021 a
09X38-1-5-1	0.9	0.6	94 a-c	6.9	24 ef	21 ab	7.1	2.5	1.2	62 bc	72 ab	0.18 ab	5813 a	1025 a
09X39-1-11-2	0.7	0.6	87 a-c	6.9	29 c-e	19 a-c	4.4	2.6	0.5	65 a-c	73 ab	0.18 ab	5850 a	1045 a
N13003olF	1.0	0.9	88 a-c	7.2	36 ab	6 c	5.1	2.4	0.7	64 a-c	72 ab	0.18 ab	5683 a	1005 a
N13006ol	0.7	0.9	96 a	7.1	39 a	10 a-c	3.8	1.8	0.7	66 a-c	72 ab	0.18 ab	5846 a	1054 a
N13048+ol	0.8	0.8	95 ab	7.2	28 c-e	8 bc	4.0	2.7	2.0	61 c	70 b	0.17 b	5897 a	965 a
N14002olJ	0.6	0.8	95 ab	6.7	36 a-c	16 a-c	4.5	1.4	1.3	65 a-c	72 ab	0.18 ab	6508 a	1153 a
N14004olJ	0.7	0.8	95 ab	6.8	35 a-c	14 a-c	5.2	1.8	0.9	66 a-c	74 ab	0.19 a	5860 a	1080 a
N14007ol	0.8	0.8	86 bc	6.8	33 a-c	20 a-c	5.4	1.9	1.2	67 ab	75 a	0.19 a	5804 a	1084 a
N14023ol	0.5	0.7	96 a	7.0	32 a-d	9 a-c	4.9	2.3	1.0	64 a-c	72 ab	0.18 ab	6119 a	1069 a
N14035olSmT	0.5	1.3	90 a-c	7.3	32 a-d	15 a-c	2.8	3.2	0.9	65 a-c	72 ab	0.18 ab	5296 a	931 a
Mean	0.7	0.8	90	7.0	31	13	4.3	2.3	1.0	64	72	0.2	5795	1029
MSD			9.2		7.3	14				6	5	0.02	1729	353

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

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

Two-year Averages by Location

Table 25. Performance of genotypes at Martin Co., NC. Two-year averages (2017-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.7	0.8	91 a-d	7.2	38 ab	8 d	3.1	2.1	0.2	69 a	74 a	0.19 a	6474 a	1194 a
Sullivan	0.3	1.0	88 a-d	7.6	34 a-d	14 b-d	3.6	1.8	0.4	67 a	73 a	0.19 a	5978 a	1094 a
Wynne	0.5	0.9	92 a-c	7.6	35 a-d	14 b-d	2.9	1.8	0.4	68 a	73 a	0.19 a	6235 a	1140 a
Emery	0.6	0.8	93 a-c	7.5	36 a-d	21 a-c	2.3	1.6	0.4	71 a	75 a	0.19 a	6740 a	1273 a
Bailey II	0.5	0.7	88 a-d	7.5	38 a	14 b-d	3.7	1.7	0.8	69 a	75 a	0.19 a	6988 a	1300 a
08X09-1-2-1	0.8	0.7	92 a-c	8.1	31 b-e	19 a-d	2.6	2.3	0.3	69 a	74 a	0.19 a	6301 a	1156 a
08X09-3-14-1	0.6	0.6	87 a-d	8.5	30 de	22 ab	2.5	1.8	0.3	70 a	75 a	0.19 a	6798 a	1283 a
09X37-1-19-2	0.8	1.0	85 b-d	8.1	34 a-d	11 b-d	3.0	2.6	0.4	68 a	74 a	0.19 a	6528 a	1191 a
09X38-1-5-1	0.5	0.7	93 a-c	7.7	25 e	27 a	6.7	2.0	0.8	66 a	75 a	0.19 a	6968 a	1294 a
09X39-1-11-2	0.8	0.6	82 d	7.5	30 c-e	21 ab	4.1	1.8	0.4	68 a	74 a	0.19 a	6405 a	1186 a
N13003olF	0.8	1.1	88 a-d	7.4	38 ab	9 d	3.8	2.3	0.8	66 a	73 a	0.18 a	6495 a	1166 a
N13006ol	0.8	0.9	95 ab	7.3	39 a	14 b-d	4.2	1.8	0.6	66 a	73 a	0.19 a	6670 a	1213 a
N13048+ol	0.7	0.9	94 a-c	7.5	33 a-d	9 cd	4.2	2.6	0.8	65 a	73 a	0.18 a	6770 a	1212 a
N14002olJ	0.8	0.9	96 a	7.5	37 a-c	17 a-d	3.7	1.1	0.9	68 a	73 a	0.19 a	6878 a	1267 a
N14004olJ	0.5	0.8	92 a-d	7.3	34 a-d	18 a-d	3.6	1.4	1.1	67 a	73 a	0.19 a	6782 a	1232 a
N14007ol	0.6	0.9	84 cd	7.2	34 a-d	15 b-d	4.9	1.8	0.9	68 a	76 a	0.19 a	6344 a	1187 a
N14023ol	1.2	1.0	94 a-c	7.8	33 a-d	10 cd	4.6	1.9	0.5	66 a	73 a	0.18 a	6769 a	1218 a
N14035olSmT	0.3	1.2	89 a-d	7.9	36 a-d	16 a-d	1.9	2.6	0.7	68 a	74 a	0.19 a	5772 a	1050 a
Mean	0.7	0.9	90	7.6	34	15	3.6	1.9	0.6	67	73	0.18	6549	1202
MSD			10		7.5	12				5.3	3.3	0.01	1338	307

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

Two-year Averages by Location

Table 26. Performance of genotypes at Rocky Mount, NC. Two-year averages (2017-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.9	1.3	90 ab	6.7	33 a	11 a	5.1	2.5	0.8	64 a	72 ab	0.18 a	6863 a	1214 a
Sullivan	1.1	2.2	89 ab	6.6	34 a	11 a	3.9	3.5	0.6	63 a	71 ab	0.18 a	5683 a	985 a
Wynne	0.9	1.5	92 ab	6.9	31 a	14 a	3.9	3.0	0.8	64 a	71 ab	0.18 a	5941 a	1038 a
Emery	0.8	1.7	94 ab	6.7	35 a	16 a	3.6	1.6	0.2	69 a	74 a	0.19 a	6359 a	1181 a
Bailey II	0.7	1.1	87 ab	6.6	38 a	9 a	3.6	2.9	0.4	64 a	71 ab	0.18 a	6535 a	1141 a
08X09-1-2-1	0.9	1.6	95 ab	6.6	35 a	14 a	4.5	2.4	1.0	63 a	71 ab	0.18 a	6671 a	1161 a
08X09-3-14-1	1.0	1.5	88 ab	6.7	35 a	12 a	4.1	2.6	0.6	66 a	73 a	0.19 a	6608 a	1199 a
09X37-1-19-2	0.8	1.4	88 ab	6.6	29 a	13 a	5.2	2.3	0.5	64 a	72 ab	0.18 a	5999 a	1065 a
09X38-1-5-1	0.6	1.3	92 ab	6.7	29 a	17 a	6.4	2.6	1.4	61 a	71 ab	0.18 a	6858 a	1178 a
09X39-1-11-2	0.9	1.8	92 ab	6.7	36 a	13 a	3.7	1.8	0.3	67 a	72 ab	0.19 a	6624 a	1198 a
N13003olF	1.0	2.2	89 ab	6.8	36 a	10 a	3.9	2.3	0.5	65 a	71 ab	0.18 a	6719 a	1188 a
N13006ol	0.7	1.3	96 a	6.9	39 a	11 a	3.3	1.8	0.4	67 a	73 ab	0.19 a	6833 a	1241 a
N13048+ol	1.0	1.6	96 a	6.7	31 a	8 a	4.6	2.3	1.1	60 a	68 b	0.17 a	6662 a	1103 a
N14002olJ	0.8	1.3	94 ab	6.7	36 a	14 a	3.9	2.6	1.2	62 a	70 ab	0.18 a	6993 a	1195 a
N14004olJ	1.0	1.5	95 ab	6.8	34 a	12 a	5.4	2.7	1.7	61 a	71 ab	0.18 a	6985 a	1185 a
N14007ol	0.8	1.2	86 b	6.8	36 a	11 a	5.8	2.8	0.9	63 a	73 ab	0.18 a	6559 a	1164 a
N14023ol	0.9	1.9	95 ab	6.8	32 a	12 a	6.1	2.7	0.8	60 a	70 ab	0.18 a	6903 a	1177 a
N14035olSmT	1.2	3.0	92 ab	6.8	37 a	11 a	3.2	2.9	0.4	64 a	70 ab	0.18 a	6004 a	1042 a
Mean	0.9	1.6	91	6.7	34	12	4.4	2.5	0.7	63	71	0.18	6544	1147
MSD		10		11	24					11	4.3	0.01	2151	420

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

Two-year Averages by Location

Table 27. Performance of genotypes at Bladen, NC. Two-year averages (2017-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.6	0.8	87 ab	6.7	35 a-c	9 ab	3.5	1.7	1.1	67 ab	73 a	0.18 a	5142 a-c	922 ab
Sullivan	0.2	1.1	88 ab	6.8	34 a-c	12 ab	5.1	1.2	0.3	67 ab	73 a	0.19 a	5413 a-c	991 ab
Wynne	0.3	1.0	88 ab	6.4	35 a-c	11 ab	4.8	1.5	0.7	65 ab	72 a	0.18 a	4916 a-c	880 ab
Emery	0.4	0.6	93 a	6.5	39 ab	15 ab	3.3	1.1	1.0	69 a	74 a	0.19 a	5479 a-c	1012 ab
Bailey II	0.4	0.8	90 ab	5.6	39 ab	12 ab	5.0	1.4	0.2	68 ab	74 a	0.19 a	5899 ab	1100 a
08X09-1-2-1	0.6	0.7	92 ab	6.9	31 a-c	19 ab	2.8	1.2	0.6	68 a	73 a	0.19 a	5582 a-c	1017 ab
08X09-3-14-1	0.7	0.8	89 ab	6.9	32 a-c	15 ab	2.6	1.3	0.3	69 a	73 a	0.19 a	5498 a-c	1009 ab
09X37-1-19-2	0.3	0.7	89 ab	6.7	33 a-c	11 ab	2.9	1.4	0.8	69 a	74 a	0.19 a	5376 a-c	993 ab
09X38-1-5-1	0.3	0.5	95 a	6.7	29 c	22 a	6.3	1.1	1.9	65 ab	75 a	0.19 a	6036 a	1094 a
09X39-1-11-2	0.4	0.7	92 ab	6.6	32 a-c	17 ab	4.8	1.7	0.4	67 ab	74 a	0.19 a	5334 a-c	979 ab
N13003olF	0.3	1.0	87 ab	6.9	38 a-c	7 b	3.8	1.4	0.4	68 ab	73 a	0.19 a	5094 a-c	931 ab
N13006ol	0.3	0.7	93 a	6.7	40 a	10 ab	3.3	1.0	0.8	67 ab	72 a	0.19 a	5271 a-c	956 ab
N13048+ol	0.3	0.7	94 a	7.0	32 a-c	6 b	5.5	1.5	1.2	63 ab	71 a	0.18 a	5631 a-c	975 ab
N14002olJ	0.4	0.9	94 a	6.8	36 a-c	17 ab	4.2	0.8	1.4	67 ab	74 a	0.19 a	5573 a-c	1017 ab
N14004olJ	0.5	0.9	95 a	6.7	34 a-c	13 ab	4.9	1.4	1.8	64 ab	72 a	0.18 a	4471 bc	780 b
N14007ol	0.5	1.2	84 b	6.6	31 a-c	10 ab	4.7	1.9	1.0	66 ab	74 a	0.19 a	4353 c	787 b
N14023ol	0.5	1.1	93 a	6.7	30 bc	7 b	7.5	1.7	1.3	62 b	72 a	0.18 a	5613 a-c	981 ab
N14035olSmT	0.3	0.9	88 ab	6.8	37 a-c	12 ab	3.8	1.7	0.6	67 ab	73 a	0.19 a	5123 ac	933 ab
Mean	0.4	0.8	90	6.7	34	12	4.4	1.4	0.9	66	73	0.18	5322	964
MSD		9		10	13.3					6.4	4	0.01	1510	296

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

Two-year Averages by Location

Table 28. Performance of genotypes at Blackville, SC. Two-year averages (2017-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.8	0.7	85 a	5.9	31 a	11 b-d	12	3.4	0.9	57 a	73 a	0.18 ab	4655 a	883 a
Sullivan	0.8	0.9	88 a	5.7	32 a	12 b-d	14	2.9	0.6	56 a	73 a	0.18 ab	4356 a	836 a
Wynne	0.8	1.0	88 a	5.8	31 a	15 a-c	15	2.7	1.1	55 a	73 a	0.18 ab	4792 a	924 a
Emery	0.5	1.0	90 a	5.9	33 a	15 ab	10	2.0	0.9	61 a	74 a	0.18 a	4500 a	885 a
N13003olF	0.6	0.8	87 a	5.8	37 a	10 b-d	14	2.5	0.8	57 a	74 a	0.18 a	5031 a	987 a
N13006ol	1.1	1.1	87 a	5.8	35 a	10 b-d	12	2.5	0.8	57 a	72 a	0.18 ab	4619 a	882 a
N13048+ol	0.8	1.1	91 a	6.0	30 a	9 cd	13	2.6	2.5	53 a	71 a	0.17 b	5048 a	908 a
N14002olJ	0.6	1.2	94 a	5.8	35 a	19 a	13	2.0	2.2	55 a	72 a	0.18 ab	4640 a	874 a
N14004olJ	0.6	0.7	91 a	5.7	33 a	13 a-d	14	2.5	3.1	53 a	73 a	0.17 ab	4421 a	792 a
N14007ol	0.9	0.7	81 a	5.9	32 a	13 a-d	15	2.5	1.5	56 a	76 a	0.19 a	4010 a	788 a
N14023ol	0.4	2.0	91 a	6.0	27 a	8 d	15	2.7	2.7	50 a	71 a	0.17 b	4993 a	891 a
N14035olSmT	0.4	1.6	85 a	6.0	34 a	11 b-d	8	3.7	1.2	58 a	71 a	0.17 ab	4142 a	770 a
Mean	0.7	1.0	88	5.8	32	12	12.9	2.7	1.5	56	73	0.17	4600	868
MSD			14			17				11	6	0.01	1836	338

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Tukey's HSD test.³ At this location, Bailey II, 08X09-1-2-1, 08X09-3-14-1, 09X37-1-19-2, 09X38-1-5-1, and 09X39-1-11-2 were not grown in 2017.

Two-year Averages at All Locations

Table 29. Performance of genotypes at all locations. Two-year averages (2017-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.7	0.8	88 c-e	6.8	34 a-e	9 ef	5.0	2.3	0.6	65 a-c	73 a-c	0.18 a-c	5991 ab	1090 ab
Sullivan	0.5	1.1	87 de	6.9	32 d-f	12 c-f	5.3	2.5	0.5	63 a-c	72 cd	0.18 b-d	5426 ab	971 ab
Wynne	0.7	1.0	91 a-d	6.9	32 c-f	13 b-f	5.0	2.2	0.8	64 a-c	72 cd	0.18 b-d	5466 ab	981 ab
Emery	0.7	1.0	93 ab	6.8	36 a-d	17 a-d	4.2	1.6	0.7	67 a	74 ab	0.19 a	5903 ab	1101 ab
Bailey II	0.5	0.7	88 c-e	6.8	37 ab	11 c-f	4.9	2.0	0.7	66 ab	73 a-c	0.18 ab	6266 ab	1152 a
08X09-1-2-1	0.8	0.9	91 a-d	7.4	27 gh	19 ab	4.0	2.2	0.8	65 a-c	72 a-d	0.18 a-c	6017 ab	1083 ab
08X09-3-14-1	0.7	0.9	87 de	7.3	29 f-h	18 a-c	4.3	2.0	0.5	67 a	74 ab	0.18 ab	6199 ab	1154 a
09X37-1-19-2	0.7	0.9	85 e	7.2	32 d-g	11 c-f	4.4	2.5	0.7	65 a-c	73 a-c	0.18 a-c	5914 ab	1072 ab
09X38-1-5-1	0.6	0.7	93 a-c	7.0	25 h	22 a	7.7	2.1	1.2	62 bc	73 a-c	0.18 a-c	6329 a	1146 ab
09X39-1-11-2	0.7	0.8	87 de	6.9	30 e-g	19 ab	5.1	2.1	0.5	65 a-c	73 a-c	0.18 a-c	6020 ab	1100 ab
N13003olF	0.8	1.2	88 c-e	7.0	37 a-c	8 f	5.6	2.2	0.7	64 a-c	72 b-d	0.18 a-c	5886 ab	1063 ab
N13006ol	0.7	1.0	93 ab	6.9	38 a	11 d-f	4.9	1.8	0.7	65 a-c	72 b-d	0.18 a-c	5965 ab	1087 ab
N13048+ol	0.7	1.0	94 a	7.0	30 e-g	8 f	5.6	2.4	1.5	61 c	70 d	0.17 d	6096 ab	1048 ab
N14002olJ	0.7	0.9	95 a	6.8	36 a-d	16 a-d	5.4	1.5	1.3	64 a-c	72 b-d	0.18 a-c	6282 ab	1132 ab
N14004olJ	0.6	0.9	93 ab	6.8	34 a-e	14 b-f	6.0	1.8	1.5	63 a-c	72 a-d	0.18 a-c	5880 ab	1054 ab
N14007ol	0.7	0.9	84 e	6.7	33 b-f	14 b-e	6.6	2.1	1.1	65 a-c	74 a	0.18 ab	5602 ab	1040 ab
N14023ol	0.7	1.2	94 a	7.0	31 e-g	9 ef	6.8	2.2	1.1	61 c	71 cd	0.18 cd	6183 ab	1089 ab
N14035olSmT	0.5	1.5	89 b-e	7.1	34 a-e	13 b-f	3.5	2.9	0.8	65 a-c	72 b-d	0.18 b-d	5343 b	958 b
Mean	0.7	1.0	90	7.1	33	14	5.2	2.1	0.9	64	72	0.18	5932	1072

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

Three-year Averages by Location

Table 30. Performance of genotypes at Tidewater AREC (Suffolk), VA. Three-year averages (2016-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A	
Bailey	0.6	0.7	87 d	7.0	32 a-c	8 c-e	3.9	2.7	1.1	64 ab	72 a	0.18 a	5696 a	1002 a	
Sullivan	0.8	0.8	87 d	7.1	28 cd	10 c-e	3.6	3.5	1.6	60 ab	69 a	0.17 a	5035 a	821 a	
Wynne	0.7	1.0	94 a-c	7.2	30 b-d	10 c-e	3.0	3.0	2.2	60 ab	69 a	0.16 a	4710 a	763 a	
Emery	0.8	0.9	94 a-c	7.0	34 ab	13 b-d	3.9	2.3	2.9	62 ab	71 a	0.17 a	5188 a	865 a	
Bailey II	0.6	0.7	88 cd	7.2	37 a	9 c-e	3.5	2.5	1.4	65 a	72 a	0.18 a	5670 a	1004 a	
08X09-3-14-1	0.8	1.0	84 d	7.4	24 d	15 a-c	2.5	3.3	2.1	63 ab	71 a	0.17 a	5357 a	913 a	
09X38-1-5-1	0.8	0.8	94 a-c	6.9	24 d	20 a	7.7	2.5	1.9	59 ab	72 a	0.17 a	5397 a	928 a	
09X39-1-11-2	0.7	0.7	88 d	6.8	27 cd	18 ab	3.9	3.0	1.9	62 ab	71 a	0.17 a	5455 a	922 a	
N13003olF	0.8	0.9	89 b-d	7.2	36 a	5 e	4.2	2.6	0.8	63 ab	71 a	0.18 a	5470 a	959 a	
N13006ol	0.7	1.1	94 ab	7.1	37 a	8 c-e	3.4	2.4	1.7	63 ab	70 a	0.17 a	5518 a	949 a	
N13048+ol	0.7	0.9	95 a	7.1	27 cd	6 de	4.9	3.1	3.1	57 b	68 a	0.16 a	5659 a	878 a	
N14035olSmT	0.5	1.3	89 a-d	7.3	30 b-d	12 b-e	3.2	3.6	1.7	62 ab	70 a	0.17 a	4957 a	843 a	
Mean	0.7	0.9	90	7.1	30	11	3.9	2.9	1.9	62	71	0.17	5343	904	
MSD			6.1		6	7.1					7	4	0.02	1325	314

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

Three-year Averages by Location

Table 31. Performance of genotypes at Martin Co., NC. Three-year averages (2016-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.7	0.9	87 ab	7.1	33 a	7 c	3.5	2.1	0.9	65 a	71 a	0.18 a	5483 a	982 a
Sullivan	0.4	1.1	85 ab	7.4	29 a	10 bc	3.7	2.1	1.3	64 a	71 a	0.17 a	5022 a	885 a
Wynne	0.7	1.0	88 ab	7.3	30 a	11 bc	3.6	2.1	1.3	63 a	70 a	0.17 a	5189 a	914 a
Emery	0.7	0.9	90 ab	7.5	32 a	16 a-c	2.9	1.8	0.9	67 a	73 a	0.18 a	5572 a	1028 a
Bailey II	0.6	0.7	86 ab	7.3	34 a	11 bc	4.1	1.8	1.6	65 a	72 a	0.18 a	5996 a	1075 a
08X09-3-14-1	0.7	0.8	84 ab	8.5	26 a	18 ab	2.4	2.0	1.1	67 a	72 a	0.18 a	5899 a	1072 a
09X38-1-5-1	0.6	0.7	92 a	7.4	25 a	21 a	6.7	2.1	1.8	62 a	72 a	0.18 a	5917 a	1061 a
09X39-1-11-2	0.8	0.7	82 b	7.2	27 a	18 ab	4.6	1.9	1.1	64 a	72 a	0.18 a	5433 a	979 a
N13003olF	0.7	1.2	84 ab	7.2	32 a	6 c	3.9	2.2	1.2	63 a	70 a	0.17 a	5476 a	956 a
N13006ol	0.8	1.1	91 a	7.1	33 a	10 bc	4.9	1.8	1.3	62 a	70 a	0.17 a	5823 a	1014 a
N13048+ol	0.7	1.1	92 a	7.3	27 a	6 c	5.5	2.5	3.1	59 a	70 a	0.17 a	5817 a	942 a
N14035olSmT	0.3	1.2	85 ab	7.6	30 a	12 a-c	2.4	2.5	1.5	64 a	70 a	0.17 a	4891 a	855 a
Mean	0.6	1.0	87	7.4	30	12	4.0	2.1	1.4	64	71	0.17	5543	980
MSD			9		10	10				8	5	0.02	2167	485

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

Three-year Averages by Location

Table 32. Performance of genotypes at Rocky Mount, NC. Three-year averages (2016-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A	
Bailey	1.0	1.1	89 a-c	6.5	31 ab	9 a	4.0	2.7	0.9	63 ab	70 a	0.17 a	6085 a	1056 a	
Sullivan	0.9	1.7	89 a-c	6.4	32 ab	10 a	4.0	3.3	0.6	62 ab	69 a	0.17 a	5360 a	916 a	
Wynne	1.0	1.3	93 a-c	6.6	30 ab	13 a	3.7	2.8	1.3	62 ab	70 a	0.17 a	5603 a	953 a	
Emery	0.9	1.5	93 a-c	6.5	34 ab	14 a	2.9	2.2	0.6	66 a	72 a	0.18 a	5974 a	1077 a	
Bailey II	0.8	0.9	89 bc	6.4	37 a	9 a	3.4	2.9	0.7	63 ab	70 a	0.17 a	6073 a	1047 a	
08X09-3-14-1	0.9	1.3	87 c	6.6	31 ab	11 a	3.2	3.4	1.2	63 ab	71 a	0.17 a	6027 a	1046 a	
09X38-1-5-1	0.7	1.0	93 a-c	6.5	28 b	19 a	6.1	2.5	1.5	60 ab	70 a	0.17 a	6323 a	1083 a	
09X39-1-11-2	1.4	1.6	91 a-c	6.5	34 ab	14 a	3.2	2.3	0.7	65 ab	71 a	0.18 a	6219 a	1099 a	
N13003olF	1.0	1.9	89 a-c	6.5	34 ab	8 a	3.6	2.5	0.5	63 ab	70 a	0.17 a	6239 a	1086 a	
N13006ol	0.9	1.1	95 ab	6.6	38 a	9 a	3.5	2.1	0.6	65 ab	71 a	0.18 a	6339 a	1124 a	
N13048+ol	0.8	1.2	96 a	6.4	31 ab	8 a	5.0	2.4	1.3	59 b	68 a	0.17 a	6314 a	1038 a	
N14035olSmT	0.9	2.3	91 a-c	6.6	35 ab	10 a	2.8	3.6	0.7	62 ab	69 a	0.17 a	5464 a	924 a	
Mean	0.94	1.4	91	6.5	33	11	3.8	2.7	0.9	63	70	0.17	6002	1038	
MSD		7		8	15						7	4	0.12	1980	413

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

Three-year Averages by Location

Table 33. Performance of genotypes at Bladen, NC. Three-year averages (2016-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.6	0.8	87 a-c	7.0	34 a	10 c	2.9	2.2	0.9	65 ab	71 a	0.18 ab	4965 a	875 a
Sullivan	0.3	1.2	86 bc	6.9	33 a	12 bc	4.3	1.9	0.6	64 ab	71 a	0.18 ab	5235 a	930 a
Wynne	0.5	1.0	89 a-c	6.8	35 a	14 a-c	3.9	1.7	0.8	65 ab	71 a	0.18 ab	5078 a	904 a
Emery	0.4	0.9	91 a-c	6.9	39 a	16 a-c	2.7	1.4	0.9	68 a	73 a	0.18 a	5418 a	994 a
Bailey II	0.3	0.8	89 a-c	6.2	40 a	14 a-c	4.0	1.7	0.4	67 a	73 a	0.19 a	5851 a	1082 a
08X09-3-14-1	0.6	1.0	86 bc	7.5	32 a	15 a-c	2.0	2.1	0.5	67 a	72 a	0.18 ab	5303 a	953 a
09X38-1-5-1	0.4	0.4	94 a	6.8	32 a	23 a	5.6	1.3	1.4	65 ab	73 a	0.18 a	5958 a	1086 a
09X39-1-11-2	0.4	0.7	90 a-c	6.9	33 a	20 ab	4.0	2.1	0.5	66 a	73 a	0.18 a	5406 a	988 a
N13003olF	0.2	1.0	86 bc	7.0	39 a	7 c	3.4	1.5	0.4	67 a	72 a	0.18 ab	5151 a	933 a
N13006ol	0.3	0.8	92 ab	6.8	40 a	11 bc	3.1	1.3	0.7	66 a	71 a	0.18 ab	5306 a	950 a
N13048+ol	0.3	0.8	93 ab	7.2	30 a	6 c	5.8	1.9	1.4	61 b	70 a	0.17 b	5631 a	954 a
N14035olSmT	0.3	1.1	84 c	7.0	37 a	12 bc	3.1	2.4	0.6	65 ab	71 a	0.18 ab	4948 a	882 a
Mean	0.4	0.9	89	6.9	35	13	3.7	1.8	0.7	66	72	0.18	5354	961
MSD			7		12	9				5	4	0.01	1105	224

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

Three-year Averages by Location

Table 34. Performance of genotypes at Blackville, SC. Three-year averages (2016-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total	Support Price	Yield ¹ lb/A	Value \$/A
	Kernels										\$/lb			
Bailey	0.7	0.7	86 a	5.7	34 a	7 a	10.8	3.3	0.9	57 ab	72 a	0.18 a	4622 a	848 a
Sullivan	0.6	1.0	88 a	5.7	34 a	8 a	11.8	3.0	0.8	56 ab	71 a	0.18 a	4307 a	788 a
Wynne	0.6	1.3	88 a	5.7	32 a	10 a	13.3	2.9	1.0	53 ab	70 a	0.17 a	4563 a	829 a
Emery	0.5	1.1	89 a	5.7	36 a	10 a	9.3	2.4	0.9	60 a	72 a	0.18 a	4403 a	828 a
N13003olF	0.6	1.3	87 a	5.7	34 a	7 a	13.3	2.8	0.9	55 ab	72 a	0.18 a	4500 a	840 a
N13006ol	1.0	1.1	89 a	5.7	36 a	7 a	10.5	2.6	0.9	57 ab	71 a	0.17 a	4342 a	793 a
N13048+ol	0.6	1.3	92 a	5.8	28 a	6 a	12.4	3.1	2.6	49 b	68 a	0.16 a	4836 a	808 a
N14035olSmT	0.4	1.8	83 a	5.8	36 a	8 a	7.6	3.4	1.0	59 a	71 a	0.17 a	4148 a	752 a
Mean	0.6	1.2	88	5.7	34	8	11.1	3.0	1.1	56	71	0.17	4465	811
MSD			10		12	12				9	7	0.02	1350	323

¹ All yields are net, adjusted to 7% standard moisture and foreign material is deducted.² Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Tukey's HSD test.³ At this location, Bailey II, 08X09-1-2-1, 08X09-3-14-1, 09X37-1-19-2, 09X38-1-5-1, and 09X39-1-11-2 were not grown in 2017.

Three-year Averages at All Locations

Table 35. Performance of genotypes at all locations. Three-year averages (2016-2018).

Variety	% LSK	% FM	% Fancy	% Water	% ELK	% Super ELK	% SS	% OK	% DK	% SMK	% Total Kernels	Support Price \$/lb	Yield ¹ lb/A	Value \$/A
Bailey	0.7	0.8	87 cd	6.8	33 a-d	8 ef	4.6	2.5	0.9	63 ab	71 ab	0.18 a	5433 ab	964 a
Sullivan	0.6	1.1	86 d	6.9	30 c-f	10 d-f	5.0	2.8	1.1	61 a-c	70 a-c	0.17 ab	5002 ab	864 a
Wynne	0.7	1.0	91 a-c	6.9	31 b-e	11 c-e	4.8	2.5	1.5	61 a-c	70 bc	0.17 ab	5006 ab	863 a
Emery	0.7	1.0	91 ab	6.9	34 a-c	14 b-d	4.1	2.0	1.4	65 a	72 a	0.18 a	5331 ab	955 a
Bailey II	0.6	0.8	88 b-d	8.2	36 a	10 c-f	4.6	2.3	1.2	64 ab	72 ab	0.18 a	5772 a	1032 a
08X09-3-14-1	0.7	1.0	85 d	7.4	27 ef	15 bc	3.8	2.6	1.3	64 ab	72 ab	0.18 a	5594 ab	992 a
09X38-1-5-1	0.6	0.8	93 a	6.8	26 f	20 a	7.8	2.2	1.7	60 bc	72 ab	0.18 a	5729 ab	1008 a
09X39-1-11-2	0.8	0.9	87 cd	6.8	29 d-f	17 ab	4.9	2.5	1.2	63 ab	71 ab	0.18 a	5516 ab	975 a
N13003olF	0.7	1.2	87 cd	6.8	35 ab	6 f	5.2	2.3	0.8	63 ab	71 a-c	0.18 a	5398 ab	955 a
N13006ol	0.7	1.1	93 a	6.8	36 a	9 ef	4.8	2.1	1.2	62 ab	70 a-c	0.17 a	5524 ab	970 a
N13048+ol	0.6	1.0	93 a	6.9	28 ef	6 f	6.3	2.7	2.5	57 c	69 c	0.16 b	5676 ab	920 a
N14035olSmT	0.5	1.4	87 d	7.0	32 a-d	11 c-e	3.5	3.1	1.2	63 ab	70 a-c	0.17 ab	4893 b	851 a
Mean	0.7	1.0	89	7.0	30	11	4.9	2.5	1.3	62	71	0.17	5406	945

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

www.ext.vt.edu

Produced by Virginia Cooperative Extension, Virginia Tech, 2018

Virginia Cooperative Extension programs and employment are open to all, regardless of age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, veteran status, or any other basis protected by law. An equal opportunity/affirmative action employer. Issued in furtherance of Cooperative Extension work, Virginia Polytechnic Institute and State University, Virginia State University, and the U.S. Department of Agriculture cooperating. Edwin J. Jones, Director, Virginia Cooperative Extension, Virginia Tech, Blacksburg; M. Ray McKinnie, Administrator, 1890 Extension Program, Virginia State University, Petersburg.