

2018

Peanut Variety and Quality Evaluation Results

Quality Data

Tidewater Agricultural Research and Extension Center

Virginia Agricultural Experiment Station



**Virginia
Cooperative
Extension**

PEANUT VARIETY AND QUALITY EVALUATION RESULTS 2018

II. Quality 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
March 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

Virginia Carolina Peanut Association

South Carolina Peanut Growers

North Carolina Peanut Growers

Clemson University



TECHNICAL SUPPORT

The following agricultural specialists, technicians, and lab assistants are gratefully acknowledged for their professionalism, and dedication to achieve tasks on time and in a collegial manner:

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



Figure 1: Carolyn Daughtrey



Figure 2: Frank Bryant



Figure 3: Anita Acharya



Figure 4: Doug Redd



Figure 5: Melissa Douglas

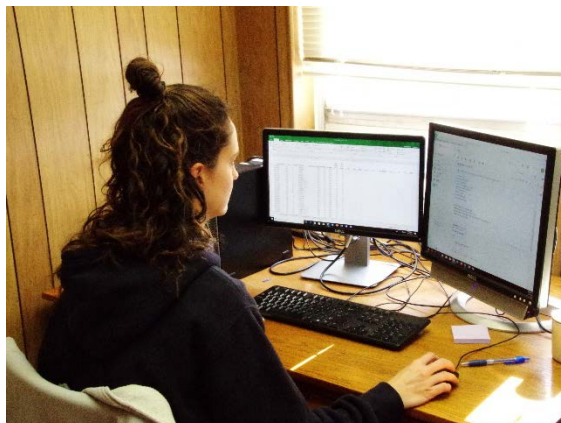


Figure 6: Emily White

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

BASF Corporation

Bayer Crop Science

Coastal Chemical Corporation

DuPont

Dow Agro Sciences LLC

Helena

Syngenta Crop Protection

AMVAC

TABLE OF CONTENTS

Acknowledgements	i
Technical Support	ii
List of Cooperators	iii
Table of Contents	iv
List of Tables	v
Introduction.....	1
Plant Material and Test Location.....	2
2018 Blanching Results	4
2018 Fatty Acid Results.....	22

List of Tables

1. Breeding lines and varieties evaluated in 2018.....2

2. Laboratory sample blanching of Extra Large Kernels (ELK)
From Tidewater AREC (Suffolk), VA, Dig 1, 2018.....4

3. Laboratory sample blanching of Extra Large Kernels (ELK)
From Tidewater AREC (Suffolk), VA, Dig 2, 2018.....5

4. Laboratory sample blanching of Extra Large Kernels (ELK)
From Tidewater AREC (Suffolk), VA, Average of all Digs, 2018.....6

5. Laboratory sample blanching of Extra Large Kernels (ELK)
from Martin County, NC, Dig 1, 2018.....7

6. Laboratory sample blanching of Extra Large Kernels (ELK)
from Martin County, NC, Dig 2, 2018.....8

7. Laboratory sample blanching of Extra Large Kernels (ELK)
from Martin County, NC, Average of all Digs, 20189

8. Laboratory sample blanching of Extra Large Kernels (ELK). Averages from
Tidewater AREC (Suffolk), VA and Martin County, NC, 2018.....10

9. Laboratory sample blanching of Extra Large Kernels (ELK). Averages from
Tidewater AREC (Suffolk), VA and Martin County, NC.
Two years averages (2017-2018).....11

10. Laboratory sample blanching of Extra Large Kernels (ELK). Averages from
Tidewater AREC (Suffolk), VA and Martin County, NC.
Three years averages (2016-2018).....12

11. Laboratory sample blanching of Medium Kernels from
Tidewater AREC (Suffolk), VA, Dig 1, 201813

12. Laboratory sample blanching of Medium Kernels from
Tidewater AREC (Suffolk), VA, Dig 2, 201814

13. Laboratory sample blanching of Medium Kernels from
Tidewater AREC (Suffolk), VA, Average of all Digs, 201815

14. Laboratory sample blanching of Medium Kernels from Martin County, NC,
Dig 1, 201816

15. Laboratory sample blanching of Medium Kernels from Martin County, NC,
Dig 2, 201817

16. Laboratory sample blanching of Medium Kernels from Martin County, NC,
Average of all Digs, 201818

17. Laboratory sample blanching of Medium Kernels. Averages from
Tidewater AREC (Suffolk), VA and Martin County, NC, 2018.....19

18. Laboratory sample blanching of Medium Kernels. Averages
from Tidewater AREC (Suffolk), VA and Martin County, NC,
Two years averages (2017-2018).....20

19. Laboratory sample blanching of Medium Kernels. Averages from
Tidewater AREC (Suffolk), VA and Martin County, NC.
Three years averages (2016-2018).....21

20. Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio,
% Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total
Long Chain Saturated from Tidewater AREC (Suffolk), VA, Dig 1, 2018.....22

21. Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio,
% Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total
Long Chain Saturated from Tidewater AREC (Suffolk), VA, Dig 2, 2018.....24

22. Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio,
% Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total
Long Chain Saturated from Tidewater AREC (Suffolk), VA,
average of all Digs, 201826

23. Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio,
% Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total
Long Chain Saturated from Martin County, NC, Dig 1, 2018.....28

List of tables continued

24.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Martin County, NC, Dig 2, 2018.....	30
25.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Martin County, NC, Average of all Dig, 2018	32
26.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Rocky Mount, NC, 2018	34
27.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Bladen, NC, 2018	36
28.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Blackville, SC, 2018.....	38
29.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Averaged across all locations, 2018	40
30.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Two years averages across all locations, (2017- 2018).....	42
31.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Three years averages across all locations, (2016- 2018).....	44

INTRODUCTION

Along with agronomic and grade information, data on kernel and pod quality are essential for release of new peanut cultivars to ensure acceptability by the entire peanut trade. The present report contains the quality data collected on 5 Virginia-type cultivars that currently are on the market and 21 advanced breeding lines tested in the Peanut Variety and Quality Evaluation (PVQE) small plots in 2018. The small PVQE plots with 26 varieties were tested at five locations in Virginia, North Carolina, and South Carolina: Suffolk, VA, Martin Co., NC, Rocky Mount, NC, Bladen Co., NC, and Blackville, SC. At Suffolk, VA and at Martin Co., NC, two digs were achieved. For the other locations, only one dig was tested. Each genotype was replicated 2 times at each location and digging date. Varieties' names and pedigree are presented in Table 1. Since none of the advanced breeding lines were proposed for release, PVQE seed increase plots were not planted in 2018. A detailed description of the plant material, test locations, weather conditions, and cultural practices is included in the PVQE 2018 Results. I. Agronomic and Grade Data, at <https://pubs.ext.vt.edu/AREC/AREC-231/AREC-231.html>.

2018 SMALL PLOT TESTS

Blanching evaluations were determined by a laboratory sample blancher of two 250 g peanut samples from the early-dig at Martin Co., NC, and the Tidewater AREC. Tables 2 through 19 contain blanching data for the extra-large kernels (ELK) and medium size kernels. Statistical analysis were determined for percentage of splits, whole blanched, not blanched, and partially blanched.

Small Plot Tests

PLANT MATERIAL AND TEST LOCATIONS

Table 1. Names and pedigree 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	
3	Wynne	Bailey / X03034 (F01)
4	Emery	N03079FT / X03034(F01)
5	Bailey II	
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 / X07016 (BC2F1-04:F01)
12	N13006ol	Bailey // X05027 (F01), Bailey / N02060ol (Per)
13	N13048+ol	Bailey // X05027 (F01), Bailey / N02060ol (Per)
14	N13049olJ	Bailey // X05027 (F01), Bailey / N02060ol (Per)
15	N13054ol	N03079olFT // X03034 (F1), N03079FT / N02059ol (Per), X03155 (ol ol, BC1F1-04-01-S-04-S-01: F09) /3/ N05044FCSm
16	N14002olJ	Bailey // X03036 (F01), Bailey / Brantley, X03157 (ol ol, BC1F1-04-01-S-04-S-05: F09) /3/ SPT 06-06
17	N14004olJ	N02006 // X05012 (F01), N02006 / N02064ol
18	N14007ol	N03079FT // X05024 (F01), N03079FT / N02064ol
19	N14023ol	Bailey // X05027 (F01), Bailey / N02060ol (Per)
20	N14027olJ	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
21	N14035olSmT	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
22	N15017ol	N00088ol (92R) // N01013T / N00088ol (92R), X03134 (BC1F1-02-01-02: F04) /3/ Sugg
23	N15018olJ	N00088ol (92R) // N01013T / N00088ol (92R), X03134 (BC1F1-02-01-02: F04) /3/ Sugg
24	N15039ol	N02054ol (11) // N02005 / N02054ol (11), X03138 (BC1F1-11-03-01: F04) /3/ N03084FT
25	N15041ol	N01015T / N00098ol (Gre), X02083 (F2-01-S-01-S-05: F07) // Sugg
26	N15044olF	Bailey /4/ X07013 (BC2F1-03: F01), Bailey // X05027 (F01), Bailey / N02060ol (Per), X05249 (BC1F1-04-01: F03 ol ol) /3/ Bailey

Small Plot Tests

Fatty acid content and composition of the sound mature kernels (SMK) was determined by gas chromatography and expressed as % from total seed oil content. Iodine value, oleic/linoleic (O/L) ratio, % total saturated, polyunsaturated/saturated (P/S) ratio, and % total long chain-saturated acids were also calculated using the following formulas:

$$\text{Iodine Value} = (\% \text{ oleic}) (0.8601) + (\% \text{ linoleic}) (1.7321) + (\% \text{ eicosenoic}) (0.7854)$$

$$\text{Oleic/Linoleic (O/L) ratio} = \% \text{ oleic} / \% \text{ linoleic}$$

$$\% \text{ Total Saturated} = \% \text{ palmitic} + \% \text{ stearic} + \% \text{ arachidic} + \% \text{ behenic} + \% \text{ lignoceric}$$

$$\text{Polyunsaturated/Saturated (P/S) ratio} = \% \text{ polyunsaturated (linoleic)} / \% \text{ total saturated}$$

$$\% \text{ Total Long Chain Saturated} = \% \text{ arachidic} + \% \text{ behenic} + \% \text{ lignoceric}$$

The definition of a high oleic peanut is a peanut line and seed that has an oleic acid content of from about 74% to about 84% and a linoleic acid content of from about 2% to about 8%, each based upon the total fatty acid content of the seed, and a ratio of the amount of oleic acid to linoleic acid in the seed of from about 9:1 to about 42:1.

Fatty acid composition is reported from all 2018 PVQE locations and digging dates in Tables 20 through 28. Table 29 shows the content of the fatty acids averaged across all locations in 2018. Two- and three-year averages are included in Tables 30 and 31.

Statistics:

Analysis of Variance was run for the cultivars and breeding lines on individual digging dates and locations, and averaged digging dates, locations, and years. When significant differences between cultivars and lines were detected, means were compared by the Fisher LSD test and the minimum significant difference was included in the tables. These values were used to compare the varieties.

For example in Table 2, the difference between Bailey and Sullivan for percent whole blanched kernels is 0.7 (95-94.3) and this is not a significant difference because it is smaller than 3.4, which is the Fisher's least significant difference (LSD). Bailey and Sullivan are, therefore, not significantly different from each other for this trait. However, Bailey and 08X09-3-14-1 are significantly different for the percent whole blanched kernels because their means difference is 3.6; and this difference is more than 3.4.

Blanching Results

Table 2. Laboratory sample blanching of Extra Large Kernels (ELK) from Tidewater AREC (Suffolk) VA, Dig 1, 2018 (18 September).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	6.0	4.9	1.1	1.7	94.3	0	2.5
Sullivan	5.9	4.9	1.1	1.7	95.0	0	1.7
Wynne	6.0	4.9	1.1	1.6	93.4	0	3.4
Emery	6.0	4.9	1.1	1.5	94.4	0	2.6
Bailey II	5.9	4.9	1.1	2.1	92.4	0	3.9
08X09-1-2-1	5.9	5.0	1.0	2.5	92.5	0	3.4
08X09-3-14-1	5.9	4.9	1.0	2.3	90.7	0	5.1
09X37-1-19-2	6.1	4.9	1.2	2.1	92.9	0	3.3
09X38-1-5-1	5.9	4.9	1.0	2.2	91.2	0	5.1
09X39-1-11-2	6.0	5.0	1.0	1.9	94.5	0	2.0
N13003olF	6.0	4.9	1.1	0.9	95.3	0	2.3
N13006ol	6.0	4.9	1.1	1.5	95.0	0	1.8
N13048+ol	5.9	4.8	1.2	1.6	94.0	0	2.8
N13049olJ	5.9	4.8	1.1	2.3	93.4	0	2.7
N13054ol	5.6	4.8	1.2	2.9	92.1	0	3.5
N14002olJ	5.9	4.8	1.1	1.0	94.3	0	3.1
N14004olJ	5.9	4.9	1.0	1.6	92.3	0	4.6
N14007ol	6.0	4.9	1.1	1.3	94.6	0	2.5
N14023ol	5.9	4.8	1.1	2.6	92.1	0	3.9
N14027olJ	5.9	4.8	1.1	2.3	92.7	0	3.3
N14035olSmT	5.9	4.9	1.0	2.0	92.5	0	3.8
N15017ol	6.0	5.0	1.1	1.2	94.2	0	3.0
N15018olJ	5.9	4.9	1.1	1.1	93.5	0	3.8
N15039ol	5.8	4.7	1.1	2.3	92.8	0	3.3
N15041ol	5.9	4.9	1.0	2.3	91.7	0	4.5
N15044olF	5.8	4.9	1.0	2.7	92.9	0	2.8
Mean	6	4.9	1.0	1.9	93	0	3.2
CV (%)	1	1	6	28	1	0	28
Fisher LSD	0.4	0.3	0.2	1.7	3.4	0	2.4

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 3. Laboratory sample blanching of Extra Large Kernels (ELK) from Tidewater AREC (Suffolk) VA, Dig 2, 2018 (18 October).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.7	4.7	0.95	0.9	93.2	0	4.8
Sullivan	5.7	4.9	0.85	1.6	93.8	0	3.1
Wynne	5.8	4.9	0.90	1.7	92.4	0	4.3
Emery	5.8	4.8	0.95	1.1	95.1	0	2.3
Bailey II	5.7	4.7	0.95	1.9	93.2	0	3.2
08X09-1-2-1	5.7	4.8	0.90	1.6	92.8	0	4.0
08X09-3-14-1	5.7	4.8	0.95	3.9	89.6	0	4.9
09X37-1-19-2	5.7	4.8	0.90	1.8	93.0	0	3.6
09X38-1-5-1	5.7	4.8	0.95	2.6	91.0	0	4.8
09X39-1-11-2	5.8	4.8	0.95	2.8	92.2	0	3.5
N13003olF	5.7	4.8	0.90	1.7	94.3	0	2.5
N13006ol	5.8	4.9	0.90	2.4	91.5	0	4.6
N13048+ol	5.8	4.9	0.90	2.9	89.6	0	5.9
N13049olJ	5.8	4.9	0.95	3.0	89.2	0	5.8
N13054ol	5.6	4.7	0.90	3.3	91.1	0	4.0
N14002olJ	5.8	4.8	0.95	1.1	95.8	0	1.5
N14004olJ	5.8	4.8	0.95	1.5	93.4	0	3.5
N14007ol	5.7	4.8	0.90	0.9	94.5	0	3.0
N14023ol	5.7	4.8	0.90	2.4	93.3	0	2.7
N14027olJ	5.8	4.8	1.00	2.7	93.5	0	3.0
N14035olSmtT	5.7	4.8	0.90	2.3	91.0	0	5.2
N15017ol	5.6	4.7	0.90	2.2	93.8	0	2.4
N15018olJ	5.7	4.7	1.00	1.3	94.0	0	3.1
N15039ol	5.7	4.8	0.90	1.4	94.3	0	2.7
N15041ol	5.7	4.8	0.90	4.3	88.2	0	6.0
N15044olF	5.7	4.8	0.90	2.6	92.5	0	3.3
Mean	5.7	4.8	0.9	2.1	93	0	3.7
CV (%)	1	1	4	41	2	0	31
Fisher LSD	0.13	0.15	2.06	1.57	2.73	0	2.19

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 4. Laboratory sample blanching of Extra Large Kernels (ELK). Averages of both digging dates from Tidewater AREC (Suffolk), VA, 2018.

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8	4.8	1.0	1.3	93.7	0	3.6
Sullivan	5.8	4.9	1.0	1.6	94.4	0	2.4
Wynne	5.9	4.9	1.0	1.6	92.9	0	3.9
Emery	5.9	4.9	1.0	1.3	94.7	0	2.4
Bailey II	5.8	4.8	1.0	2.0	92.8	0	3.5
08X09-1-2-1	5.8	4.9	0.9	2.0	92.6	0	3.7
08X09-3-14-1	5.8	4.8	1.0	3.1	90.1	0	5.0
09X37-1-19-2	5.9	4.9	1.0	2.0	92.9	0	3.4
09X38-1-5-1	5.8	4.8	1.0	2.4	91.1	0	4.9
09X39-1-11-2	5.9	4.9	1.0	2.3	93.3	0	2.7
N13003olF	5.8	4.9	1.0	1.3	94.8	0	2.4
N13006ol	5.9	4.9	1.0	1.9	93.2	0	3.2
N13048+ol	5.8	4.8	1.0	2.2	91.8	0	4.4
N13049olJ	5.8	4.8	1.0	2.6	91.3	0	4.2
N13054ol	5.8	4.7	1.1	3.1	91.6	0	3.7
N14002olJ	5.8	4.8	1.0	1.0	95.0	0	2.3
N14004olJ	5.8	4.8	1.0	1.5	92.9	0	4.0
N14007ol	5.8	4.8	1.0	1.1	94.5	0	2.7
N14023ol	5.8	4.8	1.0	2.5	92.7	0	3.3
N14027olJ	5.8	4.8	1.0	2.5	93.1	0	3.1
N14035olSmT	5.8	4.8	1.0	2.1	91.7	0	4.5
N15017ol	5.8	4.8	1.0	1.7	94.0	0	2.7
N15018olJ	5.8	4.8	1.0	1.2	94.0	0	3.5
N15039ol	5.7	4.8	1.0	1.8	93.5	0	3.0
N15041ol	5.8	4.9	0.9	3.3	89.9	0	5.2
N15044olF	5.7	4.8	0.9	2.6	92.7	0	3.0
Mean	5.8	4.8	0.1	2.0	93	0	3.5
CV (%)	1	1	4	31	1	0	24
Fisher LSD	0.25	0.15	0.16	1.10	2.28	0	1.69

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 5. Laboratory sample blanching of Extra Large Kernels (ELK) from Martin County, NC, Dig 1, 2018 (1 October).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.7	4.8	0.9	1.1	95.1	0	2.3
Sullivan	5.7	4.8	0.9	1.7	92.9	0	3.8
Wynne	5.7	4.8	0.9	2.2	92.9	0	3.3
Emery	5.7	4.9	0.8	2.0	94.8	0	1.6
Bailey II	5.8	4.9	0.9	2.6	92.3	0	3.5
08X09-1-2-1	5.8	4.8	1.0	2.4	89.4	0	6.7
08X09-3-14-1	5.7	4.8	0.9	4.5	88.6	0	5.3
09X37-1-19-2	5.7	4.8	0.9	3.4	91.1	0	4.0
09X38-1-5-1	5.8	4.8	0.9	3.6	89.0	0	5.8
09X39-1-11-2	5.8	4.9	0.9	2.9	91.2	0	4.3
N13003olF	5.7	4.9	0.8	1.6	94.1	0	2.7
N13006ol	5.7	4.8	0.9	2.2	93.7	0	2.6
N13048+ol	5.8	4.8	0.9	3.3	90.8	0	4.3
N13049olJ	5.7	4.8	0.9	3.3	91.0	0	4.2
N13054ol	5.7	4.8	0.9	2.5	91.8	0	4.1
N14002olJ	5.7	4.8	0.9	3.3	92.4	0	2.7
N14004olJ	5.7	4.8	0.9	3.0	93.7	0	1.7
N14007ol	5.7	4.8	0.9	2.6	93.5	0	2.3
N14023ol	5.7	4.8	0.9	2.3	92.2	0	3.9
N14027olJ	5.6	4.7	0.9	2.5	89.8	0.1	6.0
N14035olSmT	5.7	4.8	0.9	4.0	89.0	0	5.4
N15017ol	5.7	4.8	0.9	3.7	92.1	0	2.5
N15018olJ	5.7	4.7	1.0	3.9	90.2	0	4.4
N15039ol	5.7	4.8	0.9	3.0	92.0	0	3.4
N15041ol	5.7	4.8	0.9	2.6	91.2	0	4.6
N15044olF	5.8	4.8	0.9	3.3	90.7	0	4.4
Mean	5.7	4.8	0.9	2.8	92	0	3.8
CV (%)	1	1	4	28	2	0	34
Fisher LSD	0.1	0.1	0.1	1.6	2.2	0	1.8

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 6. Laboratory sample blanching of Extra Large Kernels (ELK) from Martin County, NC, Dig 2, 2018 (19 October)

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.9	5.0	1.0	1.7	94.2	0.0	3.0
Sullivan	6.0	5.0	1.0	1.9	93.5	0.0	3.1
Wynne	5.9	4.9	1.0	1.7	93.3	0.0	3.5
Emery	6.0	5.0	1.0	1.1	95.8	0.0	1.6
Bailey II	5.9	4.9	1.1	2.1	92.3	0.0	4.1
08X09-1-2-1	5.9	4.9	1.0	3.0	90.6	0.0	4.9
08X09-3-14-1	5.9	4.9	1.0	4.3	87.4	0.0	6.7
09X37-1-19-2	6.0	5.0	1.0	4.5	88.3	0.0	5.6
09X38-1-5-1	5.9	4.9	1.0	4.2	90.0	0.1	4.2
09X39-1-11-2	5.8	4.9	1.0	2.1	92.0	0.0	4.4
N13003olF	5.9	4.9	1.0	2.6	92.6	0.0	3.2
N13006ol	5.9	5.0	1.0	1.5	93.8	0.0	3.1
N13048+ol	5.8	4.8	1.0	3.3	89.8	0.0	5.3
N13049olJ	5.9	4.8	1.1	2.2	91.3	0.0	5.0
N13054ol	5.8	4.8	1.0	1.6	92.0	0.0	4.9
N14002olJ	5.8	4.9	0.9	2.3	91.6	0.0	4.5
N14004olJ	5.9	4.9	1.0	2.5	91.7	0.0	4.3
N14007ol	5.8	4.9	1.0	2.5	91.9	0.0	4.1
N14023ol	5.8	4.8	1.0	2.9	89.3	0.0	5.8
N14027olJ	5.8	4.9	1.0	3.6	89.9	0.0	4.9
N14035olSmT	5.8	4.8	1.0	2.4	91.9	0.0	4.2
N15017ol	5.8	4.9	0.9	2.0	93.3	0.0	3.1
N15018olJ	5.8	4.9	1.0	2.1	94.2	0.0	2.2
N15039ol	5.8	4.9	1.0	4.0	88.8	0.0	5.6
N15041ol	5.8	4.8	1.0	3.7	89.7	0.0	5.1
N15044olF	5.8	4.9	1.0	3.2	91.3	0.0	3.9
Mean	5.8	4.9	1	2.6	91.5	0	4.2
CV (%)	1	1	4	34	2	0	27
Fisher LSD	0.2	0.1	0.1	1.4	2.2	0	1.7

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 7. Laboratory sample blanching of Extra Large Kernels (ELK). Averages of both digging dates from Martin County, NC, 2018.

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8	4.9	1.0	1.4	94.6	0.0	2.6
Sullivan	5.8	4.9	1.0	1.8	93.2	0.0	3.4
Wynne	5.8	4.8	1.0	1.9	93.1	0.0	3.4
Emery	5.8	4.9	0.9	1.6	95.3	0.0	1.6
Bailey II	5.8	4.9	1.0	2.3	92.3	0.0	3.8
08X09-1-2-1	5.8	4.8	1.0	2.7	90.0	0.0	5.8
08X09-3-14-1	5.8	4.9	0.9	4.4	88.0	0.0	6.0
09X37-1-19-2	5.8	4.9	1.0	3.9	89.7	0.0	4.8
09X38-1-5-1	5.8	4.8	1.0	3.9	89.5	0.1	5.0
09X39-1-11-2	5.8	4.9	0.9	2.5	91.6	0.0	4.3
N13003olF	5.8	4.9	0.9	2.1	93.3	0.0	2.9
N13006ol	5.8	4.9	1.0	1.8	93.8	0.0	2.8
N13048+ol	5.8	4.8	1.0	3.3	90.3	0.0	4.8
N13049olJ	5.8	4.8	1.0	2.7	91.1	0.0	4.6
N13054ol	5.7	4.8	0.9	2.0	91.9	0.0	4.5
N14002olJ	5.7	4.8	0.9	2.8	92.0	0.0	3.6
N14004olJ	5.8	4.8	1.0	2.7	92.7	0.0	3.0
N14007ol	5.7	4.8	0.9	2.5	92.7	0.0	3.2
N14023ol	5.7	4.8	0.9	2.6	90.7	0.0	4.8
N14027olJ	5.7	4.8	0.9	3.1	89.8	0.1	5.4
N14035olSmT	5.8	4.8	1.0	3.2	90.4	0.0	4.8
N15017ol	5.7	4.8	0.9	2.9	92.7	0.0	2.8
N15018olJ	5.8	4.8	1.0	3.0	92.2	0.0	3.3
N15039ol	5.8	4.8	1.0	3.5	90.4	0.0	4.5
N15041ol	5.8	4.8	1.0	3.2	90.4	0.0	4.8
N15044olF	5.8	4.8	1.0	3.2	91.0	0.0	4.1
Mean	5.8	4.8	0.9	2.7	91.6	0	4
CV (%)	1	1	5	25	2	0	26
Fisher LSD	0.2	0.1	0.1	1.1	1.8	0	1.5

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 8. Laboratory sample blanching of Extra Large Kernels (ELK). Averages from Tidewater AREC (Suffolk) VA and Martin County, NC, 2018.

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8	4.8	1.0	1.3	94.2	0.0	3.1
Sullivan	5.8	4.9	1.0	1.7	93.8	0.0	2.9
Wynne	5.8	4.9	1.0	1.8	93.0	0.0	3.6
Emery	5.8	4.9	1.0	1.4	95.0	0.0	2.0
Bailey II	5.8	4.8	1.0	2.2	92.5	0.0	3.7
08X09-1-2-1	5.8	4.9	1.0	2.3	91.3	0.0	4.7
08X09-3-14-1	5.8	4.8	0.9	3.7	89.1	0.0	5.5
09X37-1-19-2	5.9	4.9	1.0	2.9	91.3	0.0	4.1
09X38-1-5-1	5.8	4.8	1.0	3.1	90.3	0.0	4.9
09X39-1-11-2	5.8	4.9	1.0	2.4	92.4	0.0	3.5
N13003olF	5.8	4.9	1.0	1.7	94.0	0.0	2.7
N13006ol	5.8	4.9	1.0	1.9	93.5	0.0	3.0
N13048+ol	5.8	4.8	1.0	2.8	91.0	0.0	4.6
N13049olJ	5.8	4.8	1.0	2.7	91.2	0.0	4.4
N13054ol	5.7	4.8	1.0	2.5	91.8	0.0	4.1
N14002olJ	5.8	4.8	1.0	1.9	93.5	0.0	2.9
N14004olJ	5.8	4.8	1.0	2.1	92.8	0.0	3.5
N14007ol	5.8	4.8	1.0	1.8	93.6	0.0	3.0
N14023ol	5.7	4.8	1.0	2.5	91.7	0.0	4.1
N14027olJ	5.8	4.8	1.0	2.8	91.5	0.0	4.3
N14035olSmT	5.8	4.8	1.0	2.7	91.1	0.0	4.6
N15017ol	5.8	4.8	0.9	2.3	93.3	0.0	2.8
N15018olJ	5.8	4.8	1.0	2.1	93.0	0.0	3.4
N15039ol	5.7	4.8	1.0	2.7	92.0	0.0	3.7
N15041ol	5.8	4.8	0.9	3.2	90.2	0.0	5.0
N15044olF	5.8	4.8	0.9	2.9	91.8	0.0	3.6
Mean	5.8	4.8	1	2.4	92.3	0	3.7
CV (%)	1	1	4	23	1	0	22
Fisher LSD	0.14	0.09	0.09	0.90	1.63	0	1.16

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 9. Laboratory sample blanching of Extra Large Kernels (ELK). Averages from Tidewater AREC (Suffolk) VA, and Martin County, NC. Two-year averages (2017- 2018).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8	4.8	1.3	1.4	93.9	0	3.1
Sullivan	5.8	4.8	1.3	1.7	93.7	0	3.0
Wynne	5.7	4.9	1.3	1.7	93.3	0	3.4
Emery	5.8	4.8	1.3	1.2	94.9	0	2.3
Bailey II	5.7	4.8	1.4	1.7	93.2	0	3.4
08X09-1-2-1	5.8	4.8	1.3	2.3	91.4	0	4.6
08X09-3-14-1	5.7	4.8	1.3	3.0	90.0	0	5.3
09X37-1-19-2	5.8	4.8	1.3	2.4	92.0	0	3.9
09X38-1-5-1	5.8	4.8	1.3	2.7	90.9	0	4.8
09X39-1-11-2	5.8	4.9	1.3	2.1	92.1	0	4.1
N13003olF	5.8	4.8	1.3	1.8	93.4	0	3.2
N13006ol	5.8	4.8	1.6	1.5	93.8	0	2.8
N13048+ol	5.7	4.8	1.3	2.5	89.6	0	6.2
N14002olJ	5.8	4.8	1.3	1.8	93.4	0	3.1
N14004olJ	5.7	4.8	1.3	1.9	92.9	0	3.6
N14007ol	5.7	4.8	1.4	1.9	92.6	0	3.8
N14023ol	5.7	4.8	1.3	2.2	91.5	0	4.6
N14035olSmT	5.8	4.8	1.3	2.4	91.5	0	4.5
Mean	5.7	4.8	1.3	2	92.4	0	3.9
CV (%)	1	1	6	22	1	0	25
Fisher LSD	0.2	0.1	0.3	0.6	1.1	0	0.9

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 10. Laboratory sample blanching of Extra Large Kernels (ELK). Averages from Tidewater AREC (Suffolk) VA, and Martin County, NC. Three-year averages (2016- 2018).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.7	4.8	1.5	1.6	93.6	0	3.2
Sullivan	5.8	4.8	1.4	1.9	93.2	0	3.2
Wynne	5.7	4.8	1.4	1.9	92.8	0	3.5
Emery	5.8	4.8	1.4	1.3	94.4	0	2.7
Bailey II	5.7	4.8	1.5	1.7	93.0	0	3.5
08X09-3-14-1	5.7	4.8	1.4	3.0	89.5	0	5.6
09X38-1-5-1	5.7	4.8	1.4	2.5	90.7	0	5.1
09X39-1-11-2	5.7	4.8	1.5	2.3	91.6	0	4.3
N13003olF	5.8	4.8	1.6	1.5	93.6	0	3.0
N13006ol	5.8	4.8	1.6	1.7	93.1	0	3.3
N13048+ol	5.7	4.8	1.4	2.5	88.0	0	7.5
N14035olSmT	5.7	4.7	1.4	2.4	91.0	0	4.9
Mean	5.7	4.8	1.5	2.0	92	0	4.1
CV (%)	1	1	5	24	2	0	32
Fisher LSD	0.1	0.1	0.3	0.5	1	0	0.8

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 11. Laboratory sample blanching of Medium Kernels from Tidewater AREC (Suffolk) VA, Dig 1, 2018 (18 September).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8	4.9	0.9	3.2	84.7	0.8	9.9
Sullivan	5.8	4.9	0.9	3.9	84.5	0.9	9.1
Wynne	5.8	4.8	1.0	2.9	85.2	1.1	9.2
Emery	5.8	4.9	1.0	4.3	82.5	2.1	9.6
Bailey II	5.7	4.8	0.9	3.7	81.0	1.0	12.7
08X09-1-2-1	5.8	4.8	1.0	4.4	78.3	2.4	13.4
08X09-3-14-1	5.8	4.9	0.9	5.1	78.0	2.2	13.2
09X37-1-19-2	5.7	4.8	0.9	5.4	78.2	2.0	12.8
09X38-1-5-1	5.8	4.9	0.9	4.5	78.7	1.6	13.6
09X39-1-11-2	5.8	4.9	0.9	2.9	83.2	1.6	10.8
N13003olF	5.8	4.9	0.9	3.7	84.6	0.4	9.8
N13006ol	5.7	4.9	0.9	3.2	82.2	1.9	11.1
N13048+ol	5.7	4.8	0.9	4.7	80.7	1.2	12.0
N13049olJ	5.8	4.9	0.9	2.7	82.2	1.4	12.2
N13054ol	5.7	4.9	0.9	3.7	79.1	3.0	12.6
N14002olJ	5.7	4.9	0.9	3.3	81.2	1.7	12.2
N14004olJ	5.8	4.9	0.9	4.5	79.5	1.7	12.8
N14007ol	5.8	4.9	0.9	4.2	79.0	1.4	13.8
N14023ol	5.7	4.9	0.8	4.6	78.9	1.8	13.1
N14027olJ	5.7	4.8	0.9	3.7	77.7	2.4	14.8
N14035olSmT	5.7	4.9	0.9	5.1	79.3	1.4	12.8
N15017ol	5.7	4.8	0.9	4.4	78.5	2.3	13.3
N15018olJ	5.7	4.8	0.9	4.0	80.9	1.4	12.1
N15039ol	5.7	4.8	0.9	4.7	77.9	2.7	13.2
N15041ol	5.7	4.8	0.9	4.8	78.0	2.3	13.4
N15044olF	5.7	4.9	0.8	3.3	84.6	0.4	10.1
Mean	5.7	4.8	0.9	4.0	80.6	1.6	12.1
CV (%)	1	1	5	18	3	38	13
Fisher LSD	0.1	0.1	0.1	1.5	2.9	1.5	2.6

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 12. Laboratory sample blanching of Medium Kernels from Tidewater AREC (Suffolk) VA, Dig 2, 2018 (4 October).

Variety	% H2O before roasting	% H2O after roasting	%Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8	4.9	0.9	3.8	83.3	1.3	10.1
Sullivan	5.8	4.9	0.9	3.4	81.9	1.1	12.2
Wynne	5.8	4.9	0.9	2.8	84.3	1.1	10.4
Emery	5.7	4.9	0.9	3.3	84.2	1.3	9.6
Bailey II	5.8	4.8	1.0	3.0	84.2	1.5	9.8
08X09-1-2-1	5.7	4.9	0.8	6.2	78.1	1.9	12.3
08X09-3-14-1	5.8	4.9	0.9	5.5	78.8	1.8	12.4
09X37-1-19-2	5.7	4.9	0.8	5.4	80.4	1.6	11.0
09X38-1-5-1	5.7	4.8	0.9	4.0	79.7	2.2	12.5
09X39-1-11-2	5.7	4.9	0.8	4.7	81.0	1.8	10.9
N13003olF	5.7	4.9	0.8	3.2	83.4	1.1	10.8
N13006ol	5.7	4.9	0.8	2.8	82.0	1.8	11.9
N13048+ol	5.7	4.9	0.9	3.4	80.3	1.5	13.3
N13049olJ	5.7	4.8	0.7	3.4	81.1	1.6	12.5
N13054ol	5.8	4.9	0.9	4.2	80.1	1.4	12.8
N14002olJ	5.8	4.9	1.0	3.5	82.0	1.4	11.1
N14004olJ	5.8	4.8	1.0	3.3	81.6	1.3	12.2
N14007ol	5.7	4.9	0.9	4.4	79.8	1.9	12.4
N14023ol	5.7	4.8	0.9	4.2	78.9	2.0	13.4
N14027olJ	5.7	4.6	0.	4.4	81.6	1.4	11.0
N14035olSmT	5.7	4.8	1.0	3.9	79.2	1.9	13.5
N15017ol	5.7	4.8	0.9	3.8	76.8	2.3	15.1
N15018olJ	5.8	4.9	0.9	4.4	81.0	1.5	11.5
N15039ol	5.7	4.8	0.9	5.5	79.3	1.5	11.7
N15041ol	5.8	4.8	1.0	4.8	79.3	1.4	13.0
N15044olF	5.7	4.8	0.9	5.3	78.9	1.6	12.7
Mean	5.7	4.8	0.9	4.1	80.7	1.6	11.9
CV (%)	1	1	22	22	2	20	10
Fisher LSD ²	0.1	0.2	0.2	1.8	3.0	1.2	2.8

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 13. Laboratory sample blanching of Medium Kernels. Averages from both digging dates from Tidewater AREC (Suffolk) VA, 2018.

Variety	% H2O before roasting	% H2O after roasting	%Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8	4.9	0.9	3.5	84.0	1.0	10.0
Sullivan	5.8	4.9	0.9	3.6	83.2	1.0	10.6
Wynne	5.8	4.8	0.9	2.8	84.7	1.1	9.8
Emery	5.8	4.9	0.9	3.8	83.4	1.7	9.6
Bailey II	5.7	4.8	0.9	3.4	82.6	1.2	11.2
08X09-1-2-1	5.7	4.9	0.9	5.3	78.2	2.1	12.8
08X09-3-14-1	5.8	4.9	0.9	5.3	78.4	2.0	12.8
09X37-1-19-2	5.7	4.8	0.9	5.4	79.3	1.8	11.9
09X38-1-5-1	5.7	4.8	0.9	4.2	79.2	1.9	13.0
09X39-1-11-2	5.7	4.9	0.9	3.8	82.1	1.7	10.9
N13003olF	5.8	4.9	0.9	3.4	84.0	0.8	10.3
N13006ol	5.7	4.9	0.8	3.0	82.1	1.9	11.5
N13048+ol	5.7	4.8	0.9	4.0	80.5	1.3	12.6
N13049olJ	5.7	4.8	0.8	3.0	81.6	1.5	12.4
N13054ol	5.7	4.9	0.9	3.9	79.6	2.2	12.7
N14002olJ	5.8	4.9	0.9	3.4	81.6	1.5	11.7
N14004olJ	5.8	4.8	0.9	3.9	80.5	1.5	12.5
N14007ol	5.7	4.9	0.9	4.3	79.4	1.6	13.1
N14023ol	5.7	4.9	0.8	4.4	78.9	1.9	13.2
N14027olJ	5.7	4.7	0.9	4.0	79.6	1.9	12.9
N14035olSmT	5.7	4.8	0.9	4.5	79.2	1.6	13.1
N15017ol	5.7	4.8	0.9	4.1	77.6	2.3	14.2
N15018olJ	5.7	4.8	0.9	4.2	80.9	1.4	11.8
N15039ol	5.7	4.8	0.9	5.1	78.6	2.1	12.4
N15041ol	5.7	4.8	0.9	4.8	78.6	1.8	13.2
N15044olF	5.7	4.8	0.9	4.3	81.7	1.0	11.4
Mean	5.7	4.8	0.9	4	80.6	1.6	11.9
CV (%)	1	1	4	17	2	24	9
Fisher LSD ²	0.1	0.1	0.1	1.2	2.2	0.9	2.0

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 14. Laboratory sample blanching of Medium Kernels from Martin County, NC, Dig 1, 2018 (1 October).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.6	4.9	0.8	3.3	83.7	1.6	9.8
Sullivan	5.6	4.7	0.9	2.5	84.9	1.1	10.1
Wynne	5.6	4.8	0.9	2.4	84.1	1.8	10.1
Emery	5.6	4.8	0.8	4.0	83.7	1.5	9.2
Bailey II	5.6	4.7	0.9	3.4	83.1	1.9	10.1
08X09-1-2-1	5.7	4.8	0.9	3.4	79.7	2.8	12.6
08X09-3-14-1	5.7	4.8	0.9	3.9	80.9	1.8	11.9
09X37-1-19-2	5.6	4.6	1.0	4.0	81.0	1.6	11.9
09X38-1-5-1	5.6	4.8	0.9	3.6	78.1	3.1	13.7
09X39-1-11-2	5.7	4.8	0.9	5.1	79.6	2.4	11.3
N13003olF	5.6	4.8	0.9	3.7	81.9	1.5	11.3
N13006ol	5.7	4.8	0.9	3.0	83.9	1.1	10.5
N13048+ol	5.7	4.9	0.9	3.6	77.5	1.8	15.5
N13049olJ	5.6	4.8	0.8	3.5	78.9	2.6	13.4
N13054ol	5.6	4.7	0.9	5.3	80.8	1.4	10.9
N14002olJ	5.6	4.8	0.8	3.6	79.8	2.3	12.8
N14004olJ	5.6	4.8	0.8	3.8	79.7	2.1	12.8
N14007ol	5.6	4.8	0.9	3.5	81.5	1.8	11.7
N14023ol	5.6	4.8	0.9	3.4	80.5	2.6	12.0
N14027olJ	5.6	4.8	0.8	5.1	77.7	2.5	13.2
N14035olSmT	5.7	4.9	0.9	2.8	82.1	2.8	10.8
N15017ol	5.6	4.7	0.9	5.1	78.3	2.8	12.3
N15018olJ	5.7	4.8	0.9	5.2	78.4	1.6	13.2
N15039ol	5.7	4.8	0.9	4.7	78.6	2.3	12.8
N15041ol	5.7	4.8	0.9	4.4	77.8	2.1	14.2
N15044olF	5.6	4.8	0.9	5.0	77.9	2.1	13.4
Mean	5.6	4.8	0.9	3.9	80.5	2.0	12.0
CV (%)	1	1	5	21	3	26	12
Fisher LSD ²	0.1	0.2	0.1	2.3	3.9	1.8	3.1

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 15. Laboratory sample blanching of Medium Kernels from Martin County, NC, Dig 2, 2018 (19 October).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.7	4.8	0.9	3.5	85.0	0.8	9.2
Sullivan	5.7	4.8	0.9	3.5	82.8	1.6	10.5
Wynne	5.7	4.8	0.9	3.0	83.9	0.8	10.7
Emery	5.7	4.8	0.9	2.2	83.5	2.4	9.9
Bailey II	5.6	4.8	0.8	4.2	80.0	2.2	12.1
08X09-1-2-1	5.7	4.8	0.9	4.8	78.4	3.0	12.3
08X09-3-14-1	5.7	4.8	0.9	7.4	78.4	2.9	9.8
09X37-1-19-2	5.7	4.8	0.9	4.8	80.1	1.9	11.7
09X38-1-5-1	5.6	4.8	0.8	5.2	75.6	2.4	15.2
09X39-1-11-2	5.7	4.9	0.8	4.7	78.3	2.7	12.7
N13003olF	5.7	4.8	0.9	5.7	81.1	0.6	11.0
N13006ol	5.6	4.8	0.9	4.6	82.5	0.9	10.4
N13048+ol	5.6	4.8	0.9	4.2	79.3	2.1	12.8
N13049olJ	5.7	4.8	0.9	3.6	79.2	2.0	13.7
N13054ol	5.7	4.8	0.9	3.6	80.6	1.8	12.5
N14002olJ	5.7	4.8	0.9	3.8	80.7	2.3	11.7
N14004olJ	5.6	4.8	0.8	4.9	78.1	1.3	14.1
N14007ol	5.7	4.8	0.9	4.7	80.7	1.5	11.6
N14023ol	5.6	4.8	0.8	4.1	78.0	2.0	13.9
N14027olJ	5.7	4.8	0.9	3.7	79.0	1.8	14.1
N14035olSmT	5.6	4.7	0.9	4.6	81.7	1.9	10.2
N15017ol	5.7	4.8	0.9	4.9	78.5	2.4	12.7
N15018olJ	5.6	4.8	0.8	4.4	76.7	2.7	14.6
N15039ol	5.6	4.8	0.9	4.4	78.9	2.6	12.6
N15041ol	5.7	4.7	1.0	4.6	77.8	2.9	13.2
N15044olF	5.6	4.8	0.9	5.4	76.2	2.9	14.1
Mean	5.6	4.8	0.9	4.4	79.8	2.0	12.2
CV (%)	1	1	6	22	3	32	12
Fisher LSD²	0.1	0.2	0.1	2.4	3.5	1.0	2.3

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 16. Laboratory sample blanching of Medium Kernels. Averages from both digging dates from Martin County, NC, 2018.

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.6	4.8	0.9	3.4	84.3	1.2	9.5
Sullivan	5.6	4.7	0.9	3.0	83.8	1.3	10.3
Wynne	5.6	4.8	0.9	2.7	84.0	1.3	10.4
Emery	5.6	4.8	0.9	3.1	83.6	2.0	9.5
Bailey II	5.6	4.7	0.9	3.8	81.5	2.1	11.1
08X09-1-2-1	5.7	4.8	0.9	4.1	79.0	2.9	12.4
08X09-3-14-1	5.7	4.8	0.9	5.6	79.6	2.3	10.9
09X37-1-19-2	5.6	4.7	0.9	4.4	80.5	1.7	11.8
09X38-1-5-1	5.6	4.8	0.8	4.4	76.8	2.8	14.4
09X39-1-11-2	5.7	4.8	0.8	4.9	78.9	2.6	12.0
N13003olF	5.6	4.8	0.9	4.7	81.5	1.1	11.2
N13006ol	5.6	4.8	0.9	3.8	83.2	1.0	10.5
N13048+ol	5.7	4.8	0.9	3.9	78.4	2.0	14.1
N13049olJ	5.6	4.8	0.9	3.5	79.0	2.3	13.6
N13054ol	5.6	4.7	0.9	4.5	80.7	1.6	11.7
N14002olJ	5.6	4.8	0.9	3.7	80.2	2.3	12.2
N14004olJ	5.6	4.8	0.8	4.4	78.9	1.7	13.4
N14007ol	5.6	4.8	0.9	4.1	81.1	1.6	11.6
N14023ol	5.6	4.8	0.8	3.7	79.2	2.3	12.9
N14027olJ	5.6	4.8	0.8	4.4	78.3	2.1	13.6
N14035olSmT	5.7	4.8	0.9	3.7	81.9	2.3	10.5
N15017ol	5.6	4.7	0.9	5.0	78.4	2.6	12.5
N15018olJ	5.6	4.8	0.9	4.8	77.5	2.2	13.9
N15039ol	5.6	4.8	0.9	4.5	78.8	2.5	12.7
N15041ol	5.7	4.7	0.9	4.5	77.8	2.5	13.7
N15044olF	5.6	4.8	0.9	5.2	77.0	2.5	13.7
Mean	5.6	4.8	0.9	4.1	80.2	2.0	12.1
CV (%)	1	1	5	16	3	25	11
Fisher LSD ²	0.1	0.1	0.1	1.7	2.4	1.0	1.8

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 17. Laboratory sample blanching of Medium Kernels. Averages from Tidewater AREC (Suffolk) VA and Martin County, NC, 2018.

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.7	4.8	0.9	3.5	84.3	1.0	13.8
Sullivan	5.7	4.8	0.9	3.2	83.4	1.2	13.6
Wynne	5.7	4.8	0.9	2.8	84.4	1.1	13.5
Emery	5.7	4.8	0.9	3.2	83.7	1.7	13.3
Bailey II	5.7	4.8	0.9	3.7	82.6	1.8	13.2
08X09-1-2-1	5.7	4.8	0.9	4.4	78.8	2.3	13.2
08X09-3-14-1	5.7	4.8	0.9	5.5	78.8	2.3	13.1
09X37-1-19-2	5.7	4.8	0.9	4.8	80.0	1.7	13.0
09X38-1-5-1	5.7	4.8	0.9	4.4	77.7	2.4	12.8
09X39-1-11-2	5.7	4.8	0.8	4.5	79.7	2.2	12.7
N13003olF	5.7	4.8	0.9	4.1	82.6	1.0	12.6
N13006ol	5.7	4.8	0.9	3.2	83.7	1.1	12.6
N13048+ol	5.7	4.8	0.9	3.9	79.0	1.9	12.5
N13049olJ	5.7	4.8	0.8	3.5	80.5	1.9	12.4
N13054ol	5.7	4.8	0.9	4.2	80.1	1.7	11.9
N14002olJ	5.7	4.8	0.9	3.4	80.9	2.1	11.9
N14004olJ	5.7	4.8	0.9	4.0	80.2	1.5	11.9
N14007ol	5.7	4.8	0.9	4.3	79.8	1.7	11.8
N14023ol	5.6	4.8	0.8	4.0	79.1	2.0	11.8
N14027olJ	5.7	4.8	0.8	4.2	79.3	1.8	10.6
N14035olSmT	5.7	4.8	0.9	4.1	80.2	2.2	10.5
N15017ol	5.7	4.8	0.9	4.7	78.1	2.4	10.5
N15018olJ	5.7	4.8	0.9	4.5	78.8	1.8	10.4
N15039ol	5.6	4.8	0.9	4.6	79.3	2.0	10.1
N15041ol	5.7	4.8	0.9	4.7	78.2	2.3	9.7
N15044olF	5.6	4.8	0.9	5.1	77.9	2.0	9.6
Mean	5.7	4.8	0.9	4.1	80.4	1.8	12.0
CV (%)	1	0	4	15	2	22	10
Fisher LSD²	0.1	0.1	0.1	1.0	1.7	0.7	1.4

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 18. Laboratory sample blanching of Medium Kernels. Averages from Tidewater AREC (Suffolk) VA, and Martin County, NC. Two-year averages (2017-2018).

Variety	% H2O before roasting	% H2O after roasting	%Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.9	5.0	1.2	3.3	83.6	1.3	10.2
Sullivan	5.9	5.0	1.3	3.5	83.0	1.5	10.5
Wynne	5.9	5.0	1.3	3.0	83.2	1.3	10.8
Emery	5.9	5.0	1.2	3.3	83.6	1.9	9.5
Bailey II	5.9	5.0	1.3	3.3	83.2	1.7	10.3
08X09-1-2-1	5.9	5.0	1.2	4.0	77.8	2.1	14.5
08X09-3-14-1	5.9	5.0	1.3	4.6	77.9	2.2	13.7
09X37-1-19-2	5.9	5.0	1.3	4.3	80.1	1.7	12.3
09X38-1-5-1	5.9	5.0	1.2	4.1	77.2	2.6	14.5
09X39-1-11-2	5.9	5.0	1.2	3.9	79.9	2.3	12.3
N13003olF	5.9	5.0	1.2	3.9	82.9	1.2	10.5
N13006ol	5.9	5.0	1.3	3.3	83.4	1.5	10.1
N13048+ol	5.9	4.9	1.2	3.8	78.7	2.2	13.6
N14002olJ	5.9	5.0	1.2	3.3	82.0	2.0	11.1
N14004olJ	5.8	5.0	1.3	3.5	80.3	1.5	13.1
N14007ol	5.9	5.0	1.3	4.0	80.4	1.7	12.2
N14023ol	5.8	4.9	1.2	3.9	79.8	2.1	12.6
N14035olSmT	5.9	4.9	1.2	4.0	80.0	2.2	12.2
Mean	5.9	5.0	1.2	3.7	80.9	1.8	11.9
CV (%)	1	1	4	11	3	20	13
Fisher LSD ²	0.2	0.2	0.3	0.7	1.4	0.5	1.3

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Blanching Results

Table 19. Laboratory sample blanching of Medium Kernels. Averages from Tidewater AREC (Suffolk), VA and Martin County, NC. Three-year averages (2016-2018).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8	4.9	1.4	3.2	83.7	1.3	10.1
Sullivan	5.8	4.9	1.4	3.5	82.7	1.4	10.8
Wynne	5.8	4.9	1.4	3.1	82.2	1.5	11.6
Emery	5.8	4.9	1.3	3.2	82.8	2.0	10.3
Bailey II	5.8	4.9	1.4	3.3	82.3	1.8	10.9
08X09-3-14-1	5.8	4.9	1.4	4.5	78.7	2.1	13.1
09X38-1-5-1	5.8	4.9	1.4	3.7	77.5	2.5	14.6
09X39-1-11-2	5.8	4.9	1.3	4.0	80.2	2.2	12.1
N13003olF	5.8	4.9	1.3	3.7	83.0	1.4	10.3
N13006ol	5.8	4.9	1.4	3.4	82.5	1.5	10.9
N13048+ol	5.8	4.9	1.4	3.9	74.0	2.5	18.0
N14035olSmT	5.8	4.8	1.4	3.8	80.0	2.2	12.3
Mean	5.8	4.9	1.4	3.6	80.1	1.9	12.1
CV (%)	0	1	3	11	3	21	18
Fisher LSD ²	0.2	0.1	0.2	0.5	1.7	0.4	1.6

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 20. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Tidewater AREC (Suffolk), VA Dig 1, 2018¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.2	2.6	54.3	26.9	1.4	1.4
Sullivan	6.1	2.5	79.0	5.7	1.3	1.7
Wynne	7.0	2.7	73.3	10.4	1.3	1.6
Emery	5.9	2.8	79.9	4.9	1.4	1.6
Bailey II	5.7	2.6	81.1	4.0	1.3	1.7
08X09-1-2-1	5.9	2.4	79.6	4.0	1.3	2.1
08X09-3-14-1	5.6	2.5	81.2	3.0	1.3	2.1
09X37-1-19-2	6.1	2.7	77.7	6.2	1.4	1.8
09X38-1-5-1	6.2	2.8	80.7	3.3	1.4	1.7
09X39-1-11-2	5.8	3.4	80.5	2.9	1.6	1.7
N13003olF	5.7	2.8	81.1	3.3	1.4	1.8
N13006ol	5.8	2.7	80.6	3.5	1.4	1.9
N13048+ol	6.3	2.2	80.3	4.4	1.1	1.9
N13049olJ	6.0	2.3	81.3	3.8	1.2	1.8
N13054ol	6.2	2.3	80.5	4.3	1.2	1.9
N14002olJ	6.0	2.7	81.2	3.5	1.3	1.7
N14004olJ	6.2	2.9	78.6	5.7	1.4	1.6
N14007ol	6.9	2.4	72.7	11.1	1.3	1.7
N14023ol	6.0	2.3	81.5	3.9	1.1	1.8
N14027olJ	6.0	2.3	82.1	3.4	1.1	1.7
N14035olSmT	7.6	2.6	68.4	14.8	1.3	1.6
N15017ol	6.2	2.4	80.1	4.4	1.3	1.8
N15018olJ	5.5	2.7	82.3	3.0	1.3	1.6
N15039ol	5.5	2.6	82.2	3.1	1.3	1.7
N15041ol	6.1	2.3	81.5	3.6	1.2	1.8
N15044olF	6.1	2.3	81.7	3.5	1.2	1.8
Mean	6.2	2.6	79.0	5.8	1.3	1.7
CV (%)	8	10	4	58	9	8
Fisher LSD	1.1	0.2	7.9	6.7	0.1	0.2

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 20. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Tidewater AREC (Suffolk), VA Dig 1, 2018¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.8	1.5	94.3	2.0	17.5	1.5	5.6
Sullivan	2.3	1.4	79.1	14.9	13.6	0.4	5.0
Wynne	2.4	1.3	82.3	7.3	14.7	0.7	5.0
Emery	2.3	1.2	78.4	16.4	13.6	0.4	4.9
Bailey II	2.2	1.3	78.1	20.3	13.2	0.3	4.9
08X09-1-2-1	3.1	1.7	77.0	20.8	14.3	0.2	6.0
08X09-3-14-1	2.7	1.6	76.7	27.8	13.7	0.2	5.6
09X37-1-19-2	2.6	1.5	79.0	12.6	14.3	0.4	5.5
09X38-1-5-1	2.6	1.3	76.5	24.4	14.3	0.2	5.3
09X39-1-11-2	2.9	1.2	75.6	27.6	14.9	0.2	5.7
N13003olF	2.5	1.5	76.8	24.9	13.8	0.2	5.3
N13006ol	2.5	1.6	76.9	22.7	14.0	0.3	5.5
N13048+ol	2.3	1.5	78.2	18.1	13.4	0.3	4.9
N13049olJ	2.1	1.4	78.0	21.6	13.0	0.3	4.7
N13054ol	2.3	1.5	78.1	18.8	13.4	0.3	4.9
N14002olJ	2.3	1.3	77.2	23.4	13.6	0.3	4.9
N14004olJ	2.3	1.3	78.7	15.2	14.1	0.4	5.0
N14007ol	2.5	1.4	83.0	6.6	14.5	0.8	5.2
N14023ol	2.1	1.3	78.3	21.1	12.8	0.3	4.6
N14027olJ	2.0	1.3	78.0	24.0	12.7	0.3	4.5
N14035olSmT	2.4	1.3	85.6	13.0	15.3	0.9	5.1
N15017ol	2.3	1.4	78.0	18.4	13.6	0.3	5.0
N15018olJ	2.3	1.3	77.2	28.0	13.1	0.2	4.9
N15039ol	2.3	1.3	77.3	26.8	13.1	0.2	4.9
N15041ol	2.1	1.3	77.8	22.4	13.1	0.3	4.6
N15044olF	2.1	1.4	77.8	23.3	13.0	0.3	4.6
Mean	2.4	1.4	79.0	19.3	13.8	0.4	5.1
CV (%)	11	9	3	29	5	52	7
Fisher LSD	0.2	0.1	4.8	8.9	1.3	0.4	0.3

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 21. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Tidewater AREC (Suffolk), VA Dig 2, 2018¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.2	2.7	54.3	27.1	1.4	1.3
Sullivan	6.0	2.4	78.7	5.9	1.3	1.9
Wynne	6.9	2.6	73.5	10.7	1.3	1.5
Emery	5.8	2.7	80.6	4.5	1.3	1.6
Bailey II	5.7	2.6	81.0	4.5	1.3	1.7
08X09-1-2-1	5.7	2.6	80.9	3.3	1.3	2.0
08X09-3-14-1	5.6	2.8	80.7	3.6	1.4	2.0
09X37-1-19-2	6.1	2.6	77.2	7.1	1.3	1.7
09X38-1-5-1	6.1	2.8	81.1	3.6	1.3	1.6
09X39-1-11-2	5.7	3.8	80.1	3.3	1.7	1.5
N13003olF	5.8	2.5	80.9	3.8	1.3	1.9
N13006ol	5.6	2.8	81.3	3.4	1.3	1.8
N13048+ol	5.9	2.2	81.8	3.7	1.1	1.8
N13049olJ	5.9	2.2	82.0	3.8	1.1	1.7
N13054ol	5.9	2.3	82.0	3.3	1.2	1.8
N14002olJ	6.0	2.5	81.5	3.5	1.3	1.7
N14004olJ	5.9	3.0	81.3	3.4	1.4	1.5
N14007ol	7.3	2.5	69.1	14.4	1.3	1.6
N14023ol	5.8	2.3	82.6	3.3	1.1	1.7
N14027olJ	5.8	2.4	82.4	3.3	1.2	1.7
N14035olSmT	5.7	2.6	82.0	3.2	1.3	1.7
N15017ol	5.9	2.6	81.0	4.0	1.3	1.7
N15018olJ	5.8	2.6	81.3	4.2	1.3	1.6
N15039ol	5.5	2.5	82.9	3.0	1.2	1.6
N15041ol	5.8	2.2	82.6	3.3	1.1	1.7
N15044olF	6.1	2.1	80.3	5.2	1.1	1.8
Mean	6.0	2.6	79.4	5.5	1.3	1.7
CV (%)	6	13	4	56	10	8
Fisher LSD	0.5	0.2	3.1	2.7	0.1	0.1

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 21. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Tidewater AREC (Suffolk), VA Dig 2, 2018¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.6	1.3	94.8	2.0	17.2	1.6	5.3
Sullivan	2.4	1.5	79.3	13.4	13.6	0.43	5.1
Wynne	2.2	1.3	83	7.1	14.2	0.75	4.7
Emery	2.2	1.2	78.4	17.9	13.2	0.34	4.7
Bailey II	2.1	1.2	78.8	19.4	12.8	0.35	4.6
08X09-1-2-1	2.7	1.5	76.8	25.5	13.8	0.24	5.5
08X09-3-14-1	2.5	1.5	77.2	22.7	13.7	0.26	5.3
09X37-1-19-2	2.4	1.4	80.1	10.8	13.9	0.51	5.2
09X38-1-5-1	2.3	1.2	77.3	23.2	13.7	0.26	4.8
09X39-1-11-2	2.8	1.1	75.8	24.7	15.1	0.22	5.6
N13003olF	2.4	1.5	77.7	21.3	13.4	0.29	5.1
N13006ol	2.4	1.5	77.1	24.1	13.6	0.25	5.2
N13048+ol	2.1	1.4	78.2	22.4	12.7	0.29	4.6
N13049olJ	2.0	1.3	78.5	21.4	12.5	0.31	4.4
N13054ol	2.1	1.4	77.8	24.6	12.8	0.26	4.7
N14002olJ	2.2	1.3	77.5	23.5	13.3	0.26	4.8
N14004olJ	2.2	1.3	76.9	24.2	13.8	0.24	4.9
N14007ol	2.4	1.4	85.7	5.13	14.9	0.97	5.1
N14023ol	1.9	1.3	78.1	25.2	12.4	0.26	4.4
N14027olJ	2.0	1.3	77.9	25.2	12.6	0.26	4.4
N14035olSmT	2.2	1.4	77.4	25.3	13.1	0.25	4.9
N15017ol	2.2	1.4	77.9	21.0	13.3	0.3	4.9
N15018olJ	2.1	1.2	78.5	19.2	12.9	0.33	4.5
N15039ol	2.0	1.2	77.7	28.3	12.5	0.24	4.4
N15041ol	1.9	1.3	78.2	25.0	12.3	0.27	4.3
N15044olF	2.0	1.3	79.4	17.2	12.7	0.4	4.5
Mean	2.2	1.3	79.0	19.9	13.5	0.4	4.8
CV (%)	10	8	3	28	5	50	7
Fisher LSD	0.2	0.2	2.0	7.0	0.6	0.2	0.3

¹ Refer to page 3 for an explanation of the computations of these characters.² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 22. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Averages of all Digs from Tidewater AREC (Suffolk), VA, 2018¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.2	2.7	54.3	27.0	1.4	1.4
Sullivan	6.0	2.5	78.9	5.8	1.3	1.8
Wynne	7.0	2.6	73.4	10.6	1.3	1.5
Emery	5.9	2.8	80.3	4.7	1.3	1.6
Bailey II	5.7	2.6	81.1	4.2	1.3	1.7
08X09-1-2-1	5.8	2.5	80.3	3.6	1.3	2.0
08X09-3-14-1	5.6	2.6	81.0	3.3	1.3	2.0
09X37-1-19-2	6.1	2.6	77.5	6.7	1.3	1.8
09X38-1-5-1	6.1	2.8	80.9	3.5	1.4	1.6
09X39-1-11-2	5.8	3.6	80.3	3.1	1.6	1.6
N13003olF	5.8	2.7	81.0	3.6	1.3	1.8
N13006ol	5.7	2.8	80.9	3.5	1.4	1.8
N13048+ol	6.1	2.2	81.1	4.1	1.1	1.8
N13049olJ	5.9	2.3	81.6	3.8	1.1	1.8
N13054ol	6.0	2.3	81.3	3.8	1.2	1.8
N14002olJ	6.0	2.6	81.3	3.5	1.3	1.7
N14004olJ	6.0	3.0	80.0	4.5	1.4	1.6
N14007ol	7.1	2.4	70.9	12.8	1.3	1.6
N14023ol	5.9	2.3	82.0	3.6	1.1	1.7
N14027olJ	5.9	2.3	82.3	3.4	1.1	1.7
N14035olSmT	6.6	2.6	75.2	9.0	1.3	1.6
N15017ol	6.0	2.5	80.6	4.2	1.3	1.8
N15018olJ	5.6	2.7	81.8	3.6	1.3	1.6
N15039ol	5.5	2.6	82.6	3.0	1.3	1.7
N15041ol	5.9	2.3	82.1	3.5	1.1	1.7
N15044olF	6.1	2.2	81.0	4.3	1.1	1.8
Mean	6.1	2.6	79.0	6.0	1.3	1.7
CV (%)	6	11	3	51	9	7
Fisher LSD	0.6	0.2	4.1	3.5	0.1	0.1

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 22. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Average of all Digs from Tidewater AREC (Suffolk), VA, 2018¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.7	1.4	94.5	2.0	17.3	1.6	5.5
Sullivan	2.4	1.4	79.2	14.2	13.6	0.4	5.1
Wynne	2.3	1.3	82.7	7.2	14.5	0.7	4.9
Emery	2.3	1.2	78.4	17.1	13.4	0.4	4.8
Bailey II	2.2	1.3	78.4	19.9	13.0	0.3	4.7
08X09-1-2-1	2.9	1.6	76.9	23.1	14.1	0.3	5.7
08X09-3-14-1	2.6	1.6	77.0	25.3	13.7	0.2	5.5
09X37-1-19-2	2.5	1.5	79.6	11.7	14.1	0.5	5.3
09X38-1-5-1	2.4	1.2	76.9	23.8	14.0	0.3	5.0
09X39-1-11-2	2.9	1.2	75.7	26.2	15.0	0.2	5.6
N13003olF	2.4	1.5	77.3	23.1	13.6	0.3	5.2
N13006ol	2.4	1.5	77.0	23.4	13.8	0.3	5.3
N13048+ol	2.2	1.4	78.2	20.3	13.0	0.3	4.8
N13049olJ	2.1	1.4	78.3	21.5	12.8	0.3	4.6
N13054ol	2.2	1.4	77.9	21.7	13.1	0.3	4.8
N14002olJ	2.3	1.3	77.3	23.5	13.5	0.3	4.8
N14004olJ	2.3	1.3	77.8	19.7	14.0	0.3	5.0
N14007ol	2.5	1.4	84.4	5.9	14.7	0.9	5.1
N14023ol	2.0	1.3	78.2	23.2	12.6	0.3	4.5
N14027olJ	2.0	1.3	77.9	24.6	12.7	0.3	4.4
N14035olSmT	2.3	1.4	81.5	19.2	14.2	0.6	5.0
N15017ol	2.3	1.4	77.9	19.6	13.5	0.3	4.9
N15018olJ	2.2	1.2	77.9	23.6	13.0	0.3	4.7
N15039ol	2.2	1.2	77.5	27.6	12.8	0.2	4.7
N15041ol	2.0	1.3	78.0	23.7	12.7	0.3	4.5
N15044olF	2.0	1.4	78.6	20.3	12.9	0.3	4.5
Mean	2.3	1.4	79.0	19.7	13.7	0.4	5.0
CV (%)	10	9	2	26	5	44	7
Fisher LSD	0.2	0.1	2.5	5.8	0.7	0.2	0.3

¹ Refer to page 3 for an explanation of the computations of these characters.² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 23. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Martin County, NC Dig 1, 2018¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.0	2.7	56.4	25.5	1.4	1.3
Sullivan	5.7	2.6	81.6	3.4	1.3	1.8
Wynne	6.5	2.7	76.9	7.5	1.3	1.6
Emery	5.7	2.8	82.2	3.1	1.3	1.6
Bailey II	5.7	2.7	82.1	3.4	1.3	1.6
08X09-1-2-1	5.9	2.3	80.5	3.7	1.2	2.1
08X09-3-14-1	5.7	2.7	80.9	3.6	1.3	1.9
09X37-1-19-2	5.8	2.5	80.6	4.3	1.3	1.8
09X38-1-5-1	6.2	2.8	81.8	2.9	1.3	1.6
09X39-1-11-2	5.8	3.2	80.5	3.3	1.5	1.7
N13003olF	5.9	2.6	81.3	3.6	1.3	1.7
N13006ol	5.8	2.5	81.8	3.2	1.3	1.8
N13048+ol	6.0	2.3	82.3	3.3	1.2	1.7
N13049olJ	6.0	2.3	82.0	3.5	1.2	1.7
N13054ol	6.2	2.2	80.8	4.3	1.2	1.8
N14002olJ	6.2	2.7	80.6	4.1	1.3	1.6
N14004olJ	6.0	2.8	80.2	4.7	1.4	1.6
N14007ol	7.1	2.5	71.4	12.7	1.3	1.6
N14023ol	6.0	2.3	81.8	3.6	1.2	1.8
N14027olJ	6.0	2.4	81.7	3.7	1.2	1.7
N14035olSmT	6.0	2.6	80.9	3.9	1.3	1.7
N15017ol	6.1	2.4	81.4	3.6	1.2	1.8
N15018olJ	5.6	2.7	82.6	2.9	1.3	1.6
N15039ol	5.6	2.6	82.5	3.0	1.3	1.6
N15041ol	6.0	2.3	82.4	3.2	1.2	1.7
N15044olF	5.9	2.2	81.9	3.4	1.2	1.8
Mean	6.1	2.5	78.6	4.9	1.3	1.7
CV (%)	5	9	3	48	6	7
Fisher LSD	0.3	0.2	2.1	1.8	0.1	0.1

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 23. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Martin County, NC Dig 1, 2018¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.5	1.3	93.7	2.2	16.8	1.5	5.1
Sullivan	2.3	1.3	77.5	24.7	13.2	0.3	4.9
Wynne	2.2	1.2	80.4	10.2	14.0	0.5	4.8
Emery	2.1	1.2	77.3	26.6	13.1	0.2	4.7
Bailey II	2.1	1.2	77.7	24.4	12.9	0.3	4.6
08X09-1-2-1	2.8	1.5	77.3	21.5	13.7	0.3	5.5
08X09-3-14-1	2.5	1.4	77.3	25.3	13.6	0.3	5.2
09X37-1-19-2	2.4	1.4	78.2	18.5	13.3	0.3	5.0
09X38-1-5-1	2.2	1.1	76.6	28.4	13.7	0.2	4.7
09X39-1-11-2	2.8	1.3	76.2	24.7	14.5	0.2	5.6
N13003olF	2.3	1.3	77.6	23.1	13.3	0.3	4.9
N13006ol	2.2	1.4	77.3	25.6	13.2	0.2	4.9
N13048+ol	2.0	1.3	77.9	24.8	12.7	0.3	4.4
N13049olJ	2.0	1.3	77.9	24.0	12.8	0.3	4.4
N13054ol	2.1	1.3	78.4	19.5	13.0	0.3	4.6
N14002olJ	2.2	1.2	77.8	19.6	13.6	0.3	4.7
N14004olJ	2.2	1.2	78.3	17.1	13.5	0.4	4.8
N14007ol	2.3	1.2	84.5	5.9	14.4	0.9	4.8
N14023ol	2.1	1.3	78.0	22.8	12.8	0.3	4.5
N14027olJ	2.0	1.2	78.0	22.7	12.9	0.3	4.5
N14035olSmT	2.3	1.3	77.6	21.0	13.5	0.3	4.9
N15017ol	2.2	1.3	77.7	22.6	13.2	0.3	4.8
N15018olJ	2.1	1.2	77.4	28.2	12.9	0.2	4.6
N15039ol	2.2	1.2	77.4	27.5	12.9	0.2	4.7
N15041ol	2.0	1.2	77.8	25.6	12.7	0.3	4.4
N15044olF	2.1	1.3	77.9	23.9	12.8	0.3	4.6
Mean	2.2	1.3	78.6	21.6	13.4	0.4	4.8
CV (%)	9	7	2	23	4	44	6
Fisher LSD	0.1	0.1	1.3	7.6	0.4	0.1	0.2

¹ Refer to page 3 for an explanation of the computations of these characters.² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 24. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Martin County, NC Dig 2, 2018¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.4	2.7	54.6	27.1	1.4	1.4
Sullivan	5.7	2.6	81.3	3.5	1.3	1.8
Wynne	6.9	2.5	72.7	11.2	1.3	1.6
Emery	5.6	2.7	82.3	3.3	1.3	1.6
Bailey II	5.6	2.6	82.6	3.1	1.3	1.7
08X09-1-2-1	5.5	2.4	81.0	3.2	1.2	2.0
08X09-3-14-1	5.6	2.5	81.5	3.5	1.3	2.0
09X37-1-19-2	5.7	2.5	81.0	4.2	1.2	1.7
09X38-1-5-1	6.3	2.8	80.5	4.2	1.3	1.6
09X39-1-11-2	5.6	3.2	82.0	2.6	1.5	1.6
N13003olF	5.6	2.5	80.9	3.7	1.3	1.9
N13006ol	5.8	2.6	81.4	3.5	1.3	1.8
N13048+ol	5.8	2.1	82.9	3.2	1.1	1.8
N13049olJ	6.0	2.3	81.4	3.9	1.2	1.8
N13054ol	5.8	2.2	82.7	3.3	1.1	1.8
N14002olJ	6.0	2.7	81.8	3.2	1.3	1.6
N14004olJ	6.0	2.9	81.5	3.6	1.3	1.5
N14007ol	6.5	2.3	75.4	9.6	1.2	1.7
N14023ol	6.0	2.4	81.4	3.8	1.2	1.8
N14027olJ	6.0	2.3	81.4	4.3	1.1	1.6
N14035olSmT	5.6	2.5	81.3	3.3	1.2	1.7
N15017ol	6.0	2.3	80.9	3.6	1.2	1.9
N15018olJ	5.5	2.7	82.9	2.7	1.3	1.6
N15039ol	5.4	2.4	82.6	2.9	1.2	1.7
N15041ol	5.7	2.4	82.6	3.4	1.2	1.8
N15044olF	5.7	2.3	82.9	3.0	1.1	1.7
Mean	6.0	2.5	78.7	4.9	1.2	1.7
CV (%)	6	9	3	49	7	7
Fisher LSD	0.4	0.2	2.2	1.9	0.1	0.2

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 24. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Martin County, NC Dig 2, 2018¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.4	1.2	94.9	2.0	17.0	1.6	4.9
Sullivan	2.2	1.7	77.3	23.6	13.5	0.3	5.2
Wynne	2.2	1.6	83.3	6.7	14.5	0.8	5.0
Emery	2.1	1.1	77.9	24.9	12.7	0.3	4.4
Bailey II	2.0	1.1	77.7	26.6	12.6	0.3	4.4
08X09-1-2-1	2.5	2.1	76.8	24.9	13.8	0.2	5.8
08X09-3-14-1	2.3	1.3	77.7	23.6	13.0	0.3	4.9
09X37-1-19-2	2.3	1.3	78.4	20.5	13.0	0.3	4.9
09X38-1-5-1	2.2	1.1	77.7	21.7	13.7	0.3	4.6
09X39-1-11-2	2.6	1.0	76.2	31.7	13.9	0.2	5.1
N13003olF	2.3	1.8	77.5	23.1	13.5	0.3	5.4
N13006ol	2.2	1.5	77.5	24.7	13.3	0.3	5.0
N13048+ol	1.8	1.3	78.2	26.2	12.1	0.3	4.2
N13049olJ	2.0	1.4	78.2	21.4	12.9	0.3	4.6
N13054ol	2.0	1.0	78.4	24.7	12.1	0.3	4.1
N14002olJ	2.1	1.3	77.1	25.9	13.5	0.2	4.7
N14004olJ	2.0	1.2	77.4	23.0	13.4	0.3	4.6
N14007ol	2.1	1.2	82.9	7.9	13.3	0.7	4.5
N14023ol	2.1	1.3	78.0	22.7	13.0	0.3	4.6
N14027olJ	1.8	1.6	78.6	21.0	12.8	0.3	4.5
N14035olSmt	2.2	2.2	76.9	24.7	13.8	0.2	5.7
N15017ol	2.2	1.9	77.3	22.6	13.6	0.3	5.3
N15018olJ	2.1	1.2	77.2	31.2	12.8	0.2	4.6
N15039ol	2.0	1.6	77.5	28.2	12.7	0.2	4.8
N15041ol	1.9	1.1	78.3	24.7	12.3	0.3	4.2
N15044olF	1.9	1.3	78.0	27.5	12.3	0.3	4.3
Mean	2.1	1.4	78.7	22.5	13.3	.4	4.8
CV (%)	9	23	2	23	5	44	9
Fisher LSD	0.2	0.8	1.9	9.3	1.0	0.1	0.9

¹ Refer to page 3 for an explanation of the computations of these characters.² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 25. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Average of Digs from Martin County, NC, 2018¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.2	2.7	55.5	26.3	1.4	1.3
Sullivan	5.7	2.6	81.4	3.4	1.3	1.8
Wynne	6.7	2.6	74.8	9.4	1.3	1.6
Emery	5.6	2.7	82.3	3.2	1.3	1.6
Bailey II	5.6	2.6	82.3	3.2	1.3	1.7
08X09-1-2-1	5.7	2.4	80.7	3.5	1.2	2.0
08X09-3-14-1	5.7	2.6	81.2	3.5	1.3	2.0
09X37-1-19-2	5.7	2.5	80.8	4.3	1.3	1.7
09X38-1-5-1	6.3	2.8	81.2	3.5	1.3	1.6
09X39-1-11-2	5.7	3.2	81.2	2.9	1.5	1.6
N13003olF	5.7	2.5	81.1	3.7	1.3	1.8
N13006ol	5.8	2.6	81.6	3.3	1.3	1.8
N13048+ol	5.9	2.2	82.6	3.3	1.1	1.7
N13049olJ	6.0	2.3	81.7	3.7	1.2	1.8
N13054ol	6.0	2.2	81.8	3.8	1.1	1.8
N14002olJ	6.1	2.7	81.2	3.7	1.3	1.6
N14004olJ	6.0	2.8	80.8	4.1	1.3	1.6
N14007ol	6.8	2.4	73.4	11.1	1.2	1.6
N14023ol	6.0	2.3	81.6	3.7	1.2	1.8
N14027olJ	6.0	2.3	81.5	4.0	1.2	1.7
N14035olSmT	5.8	2.6	81.1	3.6	1.3	1.7
N15017ol	6.0	2.3	81.1	3.6	1.2	1.9
N15018olJ	5.5	2.7	82.8	2.8	1.3	1.6
N15039ol	5.5	2.5	82.6	3.0	1.3	1.7
N15041ol	5.8	2.3	82.5	3.3	1.2	1.8
N15044olF	5.8	2.3	82.4	3.2	1.1	1.8
Mean	6	2.5	78.6	4.9	1.3	1.7
CV (%)	5	9	3	47	7	7
Fisher LSD	0.3	0.1	1.7	1.4	0.1	0.1

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 25. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Average of Digs from Martin County, NC, 2018¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.4	1.2	94.3	2.1	16.9	1.56	5.0
Sullivan	2.2	1.5	77.4	24.1	13.3	0.26	5.0
Wynne	2.2	1.4	81.8	8.5	14.2	0.66	4.9
Emery	2.1	1.1	77.6	25.8	12.9	0.25	4.6
Bailey II	2.1	1.2	77.7	25.5	12.8	0.25	4.5
08X09-1-2-1	2.6	1.8	77.1	23.2	13.7	0.25	5.6
08X09-3-14-1	2.4	1.4	77.5	24.5	13.3	0.26	5.1
09X37-1-19-2	2.3	1.3	78.3	19.5	13.2	0.32	4.9
09X38-1-5-1	2.2	1.1	77.2	25.1	13.7	0.26	4.7
09X39-1-11-2	2.7	1.1	76.2	28.2	14.2	0.21	5.3
N13003olF	2.3	1.6	77.5	23.1	13.4	0.27	5.1
N13006ol	2.2	1.5	77.4	25.2	13.3	0.25	4.9
N13048+ol	1.9	1.3	78.1	25.5	12.4	0.26	4.3
N13049olJ	2.0	1.3	78.0	22.7	12.9	0.29	4.5
N13054ol	2.1	1.2	78.4	22.1	12.6	0.30	4.4
N14002olJ	2.2	1.3	77.4	22.8	13.5	0.27	4.7
N14004olJ	2.1	1.2	77.9	20.1	13.5	0.31	4.7
N14007ol	2.2	1.2	83.7	6.9	13.9	0.80	4.6
N14023ol	2.1	1.3	78.0	22.7	12.9	0.29	4.6
N14027olJ	1.9	1.4	78.3	21.8	12.8	0.31	4.5
N14035olSmT	2.3	1.8	77.3	22.9	13.7	0.26	5.3
N15017ol	2.2	1.6	77.5	22.6	13.4	0.27	5.1
N15018olJ	2.1	1.2	77.3	29.7	12.8	0.22	4.6
N15039ol	2.1	1.4	77.5	27.9	12.8	0.23	4.8
N15041ol	1.9	1.2	78.0	25.2	12.5	0.26	4.3
N15044olF	2.0	1.3	77.9	25.7	12.5	0.26	4.4
Mean	2.2	1.3	79.0	22.0	13.3	0.35	4.8
CV (%)	9	14	2	22	4	43	7
Fisher LSD	0.1	0.4	1.1	5.5	0.6	0.1	0.4

¹ Refer to page 3 for an explanation of the computations of these characters.² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 26. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Rocky Mount, NC, 2018¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	8.7	3.0	57.7	24.0	1.4	1.4
Sullivan	6.0	2.8	78.8	5.5	1.3	1.7
Wynne	6.8	3.2	75.0	8.8	1.4	1.5
Emery	6.3	3.0	78.1	5.9	1.3	1.7
Bailey II	6.0	3.0	79.5	5.1	1.3	1.7
08X09-1-2-1	5.9	2.9	80.4	4.0	1.3	1.9
08X09-3-14-1	5.9	3.1	79.2	5.0	1.4	1.8
09X37-1-19-2	6.2	2.8	77.7	6.6	1.3	1.7
09X38-1-5-1	6.8	3.0	77.7	6.4	1.3	1.5
09X39-1-11-2	6.1	3.5	78.6	4.8	1.5	1.6
N13003olF	6.0	2.9	79.9	3.9	1.3	1.7
N13006ol	6.0	2.7	81.0	3.5	1.3	1.9
N13048+ol	6.1	2.7	80.6	4.4	1.3	1.7
N13049olJ	6.2	2.6	80.1	4.9	1.2	1.7
N13054ol	6.2	2.6	80.0	4.8	1.3	1.8
N14002olJ	6.0	2.9	81.2	3.5	1.3	1.7
N14004olJ	6.2	2.8	80.0	4.4	1.3	1.7
N14007ol	6.9	2.7	75.3	8.9	1.3	1.6
N14023ol	6.1	2.5	80.4	4.6	1.2	1.8
N14027olJ	6.1	2.5	80.9	4.0	1.2	1.8
N14035olSmT	5.8	3.0	81.2	3.4	1.4	1.7
N15017ol	6.0	2.7	81.1	3.6	1.3	1.8
N15018olJ	6.2	2.9	76.7	7.6	1.4	1.6
N15039ol	5.8	2.9	81.4	3.7	1.3	1.7
N15041ol	6.4	2.7	78.1	6.2	1.3	1.7
N15044olF	6.0	2.6	80.8	4.2	1.2	1.8
Mean	6.3	2.9	78.5	5.8	1.3	1.7
CV (%)	5	8	2	30	5	6
Fisher LSD	0.7	0.3	4.9	4.2	0.1	0.2

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 26. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Rocky Mount, NC, 2018¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.3	1.5	92.3	2.5	16.9	1.4	5.2
Sullivan	2.3	1.3	78.8	14.6	13.9	0.4	5.0
Wynne	2.2	1.2	80.9	8.7	14.7	0.6	4.8
Emery	2.1	1.6	78.7	13.5	14.3	0.4	5.0
Bailey II	2.1	1.2	78.6	16.1	13.7	0.4	4.6
08X09-1-2-1	2.4	1.4	77.5	20.7	13.7	0.3	5.0
08X09-3-14-1	2.3	1.3	78.2	16.3	14.0	0.4	5.0
09X37-1-19-2	2.3	1.4	79.6	12.3	14.0	0.5	5.0
09X38-1-5-1	2.1	1.1	79.1	13.8	14.4	0.4	4.6
09X39-1-11-2	2.3	1.6	77.1	16.8	15.0	0.3	5.4
N13003olF	2.2	1.9	76.8	20.5	14.5	0.3	5.5
N13006ol	2.2	1.4	77.2	23.1	13.6	0.3	4.9
N13048+ol	2.0	1.3	78.2	19.5	13.3	0.3	4.5
N13049olJ	2.0	1.3	78.7	17.8	13.3	0.4	4.5
N13054ol	2.1	1.3	78.4	17.7	13.5	0.4	4.7
N14002olJ	2.2	1.2	77.3	22.9	13.6	0.3	4.7
N14004olJ	2.2	1.3	77.7	18.6	13.9	0.3	4.8
N14007ol	2.1	1.2	81.5	8.8	14.2	0.6	4.6
N14023ol	2.1	1.3	78.5	18.0	13.2	0.3	4.6
N14027olJ	2.1	1.4	77.9	20.6	13.3	0.3	4.7
N14035olSmT	2.2	1.3	77.1	24.1	13.7	0.2	4.9
N15017ol	2.2	1.3	77.4	22.3	13.5	0.3	4.8
N15018olJ	2.2	1.4	80.4	14.2	14.1	0.5	5.0
N15039ol	2.1	1.2	77.7	22.7	13.2	0.3	4.6
N15041ol	2.1	1.5	79.3	16.2	13.9	0.4	4.8
N15044olF	2.0	1.3	78.2	19.4	13.2	0.3	4.6
Mean	2.2	1.3	79.0	17.0	14.0	0.4	4.8
CV (%)	5	12	2	24	3	26	5
Fisher LSD	0.1	0.6	3.0	10.1	0.9	0.3	0.6

¹ Refer to page 3 for an explanation of the computations of these characters.² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 27. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Bladen County, NC, 2018¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.9	2.7	52.2	29.0	1.3	1.3
Sullivan	6.1	2.7	80.1	4.7	1.3	1.7
Wynne	7.0	2.7	75.0	9.0	1.3	1.6
Emery	6.2	2.8	80.1	4.6	1.3	1.6
Bailey II	6.0	2.5	81.6	3.7	1.2	1.7
08X09-1-2-1	6.1	2.4	81.7	2.9	1.2	1.9
08X09-3-14-1	6.2	2.5	79.4	5.1	1.2	1.9
09X37-1-19-2	6.0	2.8	80.3	4.2	1.4	1.7
09X38-1-5-1	6.4	3.0	80.6	3.7	1.4	1.6
09X39-1-11-2	6.0	3.1	81.3	3.0	1.4	1.6
N13003olF	5.9	2.6	81.7	3.2	1.3	1.8
N13006ol	6.1	2.5	81.6	3.4	1.2	1.8
N13048+ol	6.2	2.3	81.9	3.5	1.1	1.8
N13049olJ	6.5	2.3	79.4	5.5	1.2	1.8
N13054ol	6.5	2.4	79.9	5.2	1.2	1.7
N14002olJ	6.3	2.8	81.2	3.3	1.3	1.6
N14004olJ	6.5	2.9	78.6	5.6	1.3	1.6
N14007ol	7.5	2.5	70.4	13.3	1.3	1.6
N14023ol	6.4	2.3	80.6	4.5	1.1	1.8
N14027olJ	6.2	2.2	82.1	3.4	1.1	1.8
N14035olSmT	5.9	2.5	82.0	3.3	1.2	1.7
N15017ol	6.2	2.4	81.3	3.4	1.3	1.8
N15018olJ	5.8	2.7	82.2	3.2	1.3	1.5
N15039ol	5.9	2.5	81.7	3.6	1.2	1.7
N15041ol	6.2	2.3	82.0	3.5	1.1	1.7
N15044olF	6.4	2.2	81.5	3.9	1.1	1.8
Mean	6.6	2.6	79.3	5.5	1.3	1.7
CV (%)	6	9	3	49	8	6
Fisher LSD	0.4	0.2	2.5	2.2	0.1	0.1

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 27. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Bladen County, NC, 2018¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.3	1.2	96.2	1.8	17.5	1.7	4.9
Sullivan	2.2	1.3	78.2	17.2	13.6	0.3	4.8
Wynne	2.2	1.2	81.3	8.9	14.4	0.6	4.7
Emery	2.2	1.2	78.1	17.7	13.7	0.3	4.7
Bailey II	2.1	1.2	77.9	22.3	13	0.3	4.5
08X09-1-2-1	2.4	1.3	76.8	28.1	13.5	0.2	5.0
08X09-3-14-1	2.3	1.4	78.7	15.6	13.6	0.4	4.9
09X37-1-19-2	2.4	1.3	77.6	19.2	13.8	0.3	5.1
09X38-1-5-1	2.3	1.1	77.0	21.9	14.1	0.3	4.7
09X39-1-11-2	2.5	1.1	76.4	27.2	14.1	0.2	5.0
N13003olF	2.3	1.3	77.2	25.6	13.3	0.2	4.9
N13006ol	2.1	1.3	77.5	24.1	13.2	0.3	4.6
N13048+ol	2.0	1.3	78.0	23.2	12.8	0.3	4.4
N13049olJ	2.0	1.3	79.2	16.1	13.3	0.4	4.5
N13054ol	2.0	1.2	79.1	17.5	13.2	0.4	4.4
N14002olJ	2.2	1.2	77.0	24.5	13.8	0.2	4.7
N14004olJ	2.2	1.3	79.0	14.1	14.2	0.4	4.8
N14007ol	2.2	1.2	85.0	5.4	14.7	0.9	4.7
N14023ol	2.0	1.3	78.5	17.9	13.2	0.3	4.4
N14027olJ	1.9	1.2	78.0	24.0	12.7	0.3	4.3
N14035olSmT	2.1	1.3	77.6	24.9	13.0	0.3	4.7
N15017ol	2.3	1.3	77.3	23.7	13.4	0.3	4.8
N15018olJ	2.1	1.1	77.6	25.7	13.0	0.2	4.5
N15039ol	2.1	1.2	77.9	23.1	13.0	0.3	4.5
N15041ol	1.9	1.2	77.9	23.6	12.8	0.3	4.3
N15044olF	2.0	1.2	78.2	21.0	12.8	0.3	4.2
Mean	2.2	1.2	78.9	19.8	13.6	0.4	4.7
CV (%)	7	6	2	27	4	43	5
Fisher LSD	0.1	0.1	1.6	6.8	0.5	0.1	0.2

¹ Refer to page 3 for an explanation of the computations of these characters.² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 28. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Blackville, SC, 2018¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	5.9	2.5	81.2	3.7	1.3	1.8
Sullivan	7.7	2.5	68.3	15.0	1.3	1.6
Wynne	6.1	2.5	80.9	4.0	1.2	1.8
Emery	5.9	2.7	80.9	4.0	1.3	1.8
Bailey II	6.0	2.5	81.2	3.8	1.3	1.8
08X09-1-2-1	6.0	2.6	81.1	3.8	1.3	1.8
08X09-3-14-1	5.8	2.9	81.7	3.2	1.4	1.6
09X37-1-19-2	6.0	2.6	80.5	4.7	1.3	1.7
09X38-1-5-1	5.9	2.8	80.6	3.8	1.4	1.8
09X39-1-11-2	6.4	2.4	78.0	6.5	1.2	1.8
N13003olF	5.8	2.5	81.7	3.4	1.3	1.8
N13006ol	6.0	2.5	82.0	3.1	1.3	1.8
N13048+ol	6.7	2.5	75.0	9.5	1.3	1.6
N13049olJ	7.7	2.6	68.4	14.8	1.3	1.6
N13054ol	6.8	2.6	75.3	8.8	1.3	1.7
N14002olJ	6.6	2.5	75.8	8.2	1.3	1.9
N14004olJ	6.0	2.6	81.2	3.8	1.3	1.8
N14007ol	6.0	2.8	79.9	4.3	1.4	1.8
N14023ol	5.8	2.5	81.3	3.7	1.3	1.8
N14027olJ	6.0	2.8	80.8	3.9	1.4	1.7
N14035olSmT	6.4	2.6	77.6	6.7	1.3	1.8
N15017ol	7.5	2.7	68.6	14.6	1.3	1.6
N15018olJ	5.8	2.6	81.7	3.3	1.3	1.7
N15039ol	5.8	2.7	80.5	3.9	1.4	1.9
N15041ol	6.1	2.6	80.5	4.4	1.3	1.7
N15044olF	7.5	2.7	69.0	14.2	1.3	1.6
Mean	6.3	2.6	78.2	6.3	1.3	1.7
CV (%)	10	5	6	63	4	5
Fisher LSD	0.6	0.3	4.2	3.5	0.1	0.2

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 28. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Blackville, SC, 2018¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.3	1.3	94.1	2.1	17.4	1.5	5.3
Sullivan	2.3	1.2	93.0	2.3	17.0	1.5	5.1
Wynne	2.2	1.2	77.6	20.9	13.6	0.3	4.8
Emery	2.3	1.2	77.7	21.9	13.4	0.3	4.8
Bailey II	2.3	1.2	78.0	20.2	13.3	0.3	5.0
08X09-1-2-1	2.2	1.2	78.0	17.6	13.7	0.3	5.2
08X09-3-14-1	2.3	1.1	77.3	21.3	13.8	0.3	5.3
09X37-1-19-2	2.2	1.1	77.7	22.8	13.1	0.3	4.9
09X38-1-5-1	2.5	1.2	77.5	20.9	14.0	0.3	4.9
09X39-1-11-2	2.3	1.3	76.7	26.2	13.9	0.2	5.0
N13003olF	2.3	1.3	77.5	21.2	13.5	0.3	5.0
N13006ol	2.2	1.2	78.0	19.6	13.6	0.3	5.0
N13048+ol	2.2	1.2	78.3	20.8	12.9	0.3	4.4
N13049olJ	2.4	1.3	79.4	16.0	13.7	0.4	4.8
N13054ol	2.3	1.2	80.4	11.0	13.8	0.5	4.8
N14002olJ	2.5	1.3	78.0	19.3	13.7	0.3	4.9
N14004olJ	2.2	1.2	78.0	18.2	13.8	0.3	4.9
N14007ol	2.4	1.3	85.2	5.2	14.7	0.9	4.9
N14023ol	2.2	1.3	77.6	23.8	13.1	0.3	4.6
N14027olJ	2.3	1.2	80.8	15.5	13.6	0.5	4.6
N14035olSmT	2.4	1.3	77.8	21.5	13.2	0.3	4.8
N15017ol	2.4	1.3	77.9	20.7	13.3	0.3	4.8
N15018olJ	2.2	1.2	77.5	26.3	13.0	0.2	4.5
N15039ol	2.4	1.4	77.3	27.7	13.0	0.2	4.6
N15041ol	2.2	1.3	78.0	23.4	12.9	0.3	4.5
N15044olF	2.4	1.3	78.1	20.2	13.2	0.3	4.7
Mean	2.3	1.2	79.5	18.7	13.8	0.4	4.9
CV (%)	4	6	4	30	6	70	4
Fisher LSD	0.2	0.1	2.5	10.4	0.9	0.2	0.3

¹ Refer to page 3 for an explanation of the computations of these characters.² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 29. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated averaged across all locations, 2018.¹

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.3	2.7	54.9	26.6	1.4	1.3
Sullivan	6.4	2.6	76.6	7.6	1.3	1.7
Wynne	6.7	2.8	75.3	8.8	1.3	1.6
Emery	5.9	2.8	80.6	4.3	1.3	1.6
Bailey II	5.8	2.7	81.3	4.0	1.3	1.7
08X09-1-2-1	5.9	2.5	80.5	3.7	1.2	2
08X09-3-14-1	5.8	2.7	80.5	3.9	1.3	2
09X37-1-19-2	5.9	2.6	79.4	5.2	1.3	1.8
09X38-1-5-1	6.3	2.9	80.4	4.0	1.4	1.6
09X39-1-11-2	5.8	3.3	80.6	3.3	1.5	1.6
N13003olF	5.8	2.7	80.9	3.6	1.3	1.8
N13006ol	5.9	2.6	81.1	3.5	1.3	1.8
N13048+ol	6.0	2.3	81.6	3.8	1.2	1.8
N13049olJ	6.1	2.4	80.7	4.5	1.2	1.7
N13054ol	6.2	2.3	80.5	4.6	1.2	1.8
N14002olJ	6.1	2.7	81.1	3.7	1.3	1.7
N14004olJ	6.1	2.9	80.0	4.6	1.4	1.6
N14007ol	7.1	2.5	72.0	12.0	1.3	1.6
N14023ol	6.0	2.4	81.4	3.9	1.2	1.8
N14027olJ	6.1	2.4	81.1	4.2	1.2	1.7
N14035olSmT	6.0	2.6	79.6	5.1	1.3	1.7
N15017ol	6.0	2.5	81.0	3.8	1.3	1.8
N15018olJ	5.7	2.7	81.5	3.8	1.3	1.6
N15039ol	5.6	2.6	82.3	3.2	1.3	1.7
N15041ol	6.0	2.4	81.6	3.8	1.2	1.7
N15044olF	6.0	2.3	81.5	3.9	1.2	1.8
Mean	6.2	2.6	79.1	5.6	1.3	1.7
CV(%)	5	9	3	42	6	6
Fisher LSD	0.3	0.1	2.1	1.7	0.1	0.1

¹ Refer to page 3 for an explanation of the computations of these characters.² Minimum significant difference at P=0.05, based on the FISHER LSD test.³ Lower iodine value indicates longer shelf life.⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 29. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated averaged across all locations, 2018¹. (cont.)

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.5	1.3	94.3	2.1	17.2	1.5	5.2
Sullivan	2.3	1.4	80.4	15.8	14.0	0.5	5.0
Wynne	2.2	1.3	81.3	10.0	14.3	0.6	4.8
Emery	2.2	1.2	78.1	19.8	13.4	0.3	4.8
Bailey II	2.1	1.2	78.1	21.5	13.0	0.3	4.7
08X09-1-2-1	2.6	1.5	77.2	22.7	13.8	0.3	5.4
08X09-3-14-1	2.4	1.4	77.6	21.8	13.6	0.3	5.2
09X37-1-19-2	2.4	1.4	78.7	16.7	13.6	0.4	5.1
09X38-1-5-1	2.3	1.2	77.4	22.0	14.0	0.3	4.8
09X39-1-11-2	2.6	1.2	76.3	25.6	14.5	0.2	5.3
N13003olF	2.3	1.5	77.3	22.8	13.6	0.3	5.2
N13006ol	2.3	1.4	77.3	23.4	13.5	0.3	5.0
N13048+ol	2.0	1.3	78.1	22.1	12.8	0.3	4.5
N13049olJ	2.1	1.3	78.6	19.7	13.1	0.3	4.6
N13054ol	2.1	1.3	78.7	19.1	13.1	0.4	4.6
N14002olJ	2.2	1.2	77.4	22.7	13.6	0.3	4.8
N14004olJ	2.2	1.3	78.0	18.6	13.8	0.3	4.8
N14007ol	2.3	1.3	84.0	6.4	14.4	0.8	4.8
N14023ol	2.0	1.3	78.1	21.6	12.9	0.3	4.5
N14027olJ	2.0	1.3	78.4	21.8	12.9	0.3	4.5
N14035olSmT	2.3	1.4	78.6	22.1	13.7	0.3	5.0
N15017ol	2.2	1.4	77.6	21.6	13.4	0.3	4.9
N15018olJ	2.1	1.2	78.0	24.7	13.1	0.3	4.7
N15039ol	2.1	1.3	77.6	26.3	12.9	0.2	4.7
N15041ol	2.0	1.3	78.2	23.0	12.9	0.3	4.5
N15044olF	2.0	1.3	78.2	21.8	12.9	0.3	4.5
Mean	2.2	1.3	78.9	19.8	13.6	0.4	4.8
CV (%)	8	7	2	21	4	36	5
Fisher LSD	0.1	0.1	1.3	3.6	0.4	0.1	0.2

¹ Refer to page 3 for an explanation of the computations of these characters.² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 30. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Two-year averages across all locations, (2017 – 2018)¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.3	2.5	53.8	27.6	1.3	1.4
Sullivan	6.1	2.5	78.3	6.2	1.3	1.8
Wynne	6.5	2.6	76.5	7.8	1.3	1.7
Emery	5.8	2.6	80.6	4.4	1.3	1.7
Bailey II	6.1	2.5	77.9	7.0	1.2	1.7
08X09-1-2-1	5.8	2.3	80.0	4.3	1.2	2.1
08X09-3-14-1	5.7	2.5	79.6	4.8	1.3	2.0
09X37-1-19-2	5.8	2.5	79.6	5.2	1.3	1.8
09X38-1-5-1	6.2	2.7	80.3	4.3	1.3	1.7
09X39-1-11-2	5.7	3.1	80.7	3.3	1.5	1.7
N13003olF	5.8	2.5	80.8	4.0	1.3	1.8
N13006ol	5.9	2.5	79.9	4.8	1.3	1.8
N13048+ol	6.0	2.2	81.3	4.1	1.1	1.8
N14002olJ	6.0	2.6	80.7	4.1	1.3	1.7
N14004olJ	6.0	2.7	80.2	4.5	1.3	1.7
N14007ol	7.3	2.4	69.2	14.5	1.2	1.6
N14023ol	5.9	2.2	81.5	4.0	1.1	1.8
N14035olSmT	5.9	2.5	80.3	4.5	1.2	1.8
Mean	6.2	2.5	77.8	6.7	1.3	1.7
CV(%)	6	8	4	47	7	7
Fisher LSD	0.26	0.13	1.80	1.56	0.04	0.07

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 30. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Two-year averages across all locations, (2017 – 2018)¹. (cont.)

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.6	1.4	95.2	2.1	17.2	1.6	5.4
Sullivan	2.4	1.5	79.6	16.7	13.7	0.4	5.1
Wynne	2.4	1.3	80.7	11.4	14.0	0.6	5.0
Emery	2.2	1.3	78.3	19.3	13.3	0.3	4.8
Bailey II	2.2	1.3	80.4	15.4	13.4	0.5	4.8
08X09-1-2-1	2.7	1.6	77.9	20.0	13.6	0.3	5.5
08X09-3-14-1	2.5	1.5	78.3	20.9	13.6	0.3	5.3
09X37-1-19-2	2.4	1.4	78.9	16.5	13.4	0.4	5.1
09X38-1-5-1	2.4	1.2	77.7	20.5	13.8	0.3	4.9
09X39-1-11-2	2.7	1.3	76.6	24.8	14.2	0.2	5.5
N13003olF	2.4	1.5	77.8	21.2	13.4	0.3	5.2
N13006ol	2.4	1.5	78.5	21.0	13.5	0.3	5.1
N13048+ol	2.1	1.4	78.4	20.7	12.8	0.3	4.6
N14002olJ	2.3	1.3	77.8	21.0	13.5	0.3	4.9
N14004olJ	2.3	1.3	78.1	18.7	13.6	0.3	4.9
N14007ol	2.4	1.3	85.9	5.2	14.7	1.0	5.0
N14023ol	2.1	1.4	78.4	21.2	12.7	0.3	4.6
N14035olSmT	2.4	1.5	78.2	21.4	13.5	0.3	5.1
Mean	2.4	1.4	79.8	17.6	13.8	0.5	5.0
CV (%)	7	8	3	24	3	48	5
Fisher LSD	0.10	0.09	1.17	2.63	0.34	0.09	0.16

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

Fatty Acid Results

Table 31. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Three-year averages across all locations, (2016 – 2018)¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.3	2.5	54.3	27.1	1.3	1.4
Sullivan	6.0	2.5	78.8	5.7	1.3	1.8
Wynne	6.4	2.6	77.0	7.3	1.3	1.6
Emery	6.0	2.7	79.3	5.4	1.3	1.6
Bailey II	6.4	2.5	76.0	8.5	1.2	1.6
08X09-3-14-1	5.7	2.6	79.7	4.5	1.3	2.0
09X38-1-5-1	6.4	2.8	79.4	4.8	1.3	1.6
09X39-1-11-2	5.9	3.1	80.0	4.0	1.5	1.6
N13003olF	5.8	2.4	80.7	4.0	1.3	1.9
N13006ol	5.9	2.4	80.2	4.5	1.2	1.8
N13048+ol	6.1	2.2	80.8	4.4	1.1	1.8
N14035olSmT	6.1	2.5	79.2	5.3	1.3	1.8
Mean	6.4	2.6	77.1	7.2	1.3	1.7
CV (%)	4	9	2	25	7	8
Fisher LSD	0.27	0.10	1.84	1.59	0.03	0.07

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 31. Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, % Total Polysaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Three-year averages across all locations, (2016 – 2018)¹. (cont.)

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value	O/L ratio	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.7	1.4	94.7	2.4	17.2	1.6	5.4
Sullivan	2.4	1.5	79.1	17.0	13.7	0.4	5.2
Wynne	2.4	1.3	80.2	12.1	14.0	0.5	5.0
Emery	2.3	1.3	78.9	18.1	13.6	0.4	4.9
Bailey II	2.3	1.3	81.4	12.4	13.8	0.6	4.9
08X09-3-14-1	2.6	1.5	77.9	21.4	13.8	0.3	5.4
09X38-1-5-1	2.5	1.2	77.8	18.6	14.2	0.3	5.0
09X39-1-11-2	2.8	1.3	76.9	23.9	14.4	0.3	5.5
N13003olF	2.4	1.5	77.7	21.0	13.5	0.3	5.2
N13006ol	2.4	1.5	78.3	20.9	13.4	0.3	5.1
N13048+ol	2.2	1.4	78.6	19.7	13.0	0.3	4.7
N14035olSmT	2.5	1.5	78.7	19.5	13.7	0.4	5.2
Mean	2.4	1.4	80.0	17.2	14.0	0.5	5.1
CV (%)	6	8	2	19	3	26	4
Fisher LSD	0.08	0.07	1.17	2.35	0.34	0.09	0.13

¹ Refer to page 3 for an explanation of the computations of these characters.

² Minimum significant difference at P=0.05, based on the FISHER LSD test.