

2019

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 2019

II. Quality Data

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Introduction

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 6 Virginia-type cultivars that currently are on the market and 22 advanced breeding lines tested in the Peanut Variety and Quality Evaluation (PVQE) small plots in 2019. The small PVQE plots with 28 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 2019. A detailed description of the plant material, test locations, weather conditions, and cultural practices is included in the PVQE 2019 Results. I. Agronomic and Grade Data, at <https://www.pubs.ext.vt.edu/SPES/SPES-93/SPES-93.html>.

2019 SMALL PLOT TESTS

Blanching evaluations were determined by a laboratory sample blancher of two, 250 g peanut samples from two dig dates 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 analyses 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 2019.

Genotype number	Variety/line	Parentage
1	Bailey	NC 12C*2 / N96076L
2	Sullivan	Bailey / X03034 (F01)
3	Wynne	N03079FT / X03034 (F01)
4	Emery	N03079FT*2 / Brantley
5	Bailey II	Bailey / XO7016 (BC2F1 – 04:F01)
6	08X09-1-2-1	
7	Walton	2000x10-1-B2-3-2-2/97x48-HO3-7-B2-2-b3-B
8	09X38-1-5-1	
9	09X39-1-11-2	
10	11X33-1-4-3	
11	N13049oIJ	N03079oIFT // X03034 (F1), N03079FT / N02059ol (Per), X03155 (ol ol, BC1F1-04-01-S-04-S-01: F09) /3/ N05044FCSm
12	N13054ol	N03079oIFT // X03034 (F1), N03079FT / N02059ol (Per), X03155 (ol ol, BC1F1-04-01-S-04-S-01: F09) /3/ N05049J
13	N14002oIJ	N03079FT // X05024 (F01), N03079FT / N02064ol
14	N14004oIJ	Bailey // X05027 (F01), Bailey / N02060ol (Per) Phillips / N99121CSm, X00044 (F2-02-S-04:-S04: F08, 04 DPT 030) /3/ X050036 (F01), Phillips / N99121CSm, X00044 (F2-02-S-04-S-04: F08, DPT (030) // N02064ol
15	N14023ol	N01015T / N00098ol (Gre), XO2083 (F2-01-S-01-S-05 : F07) // Sugg
16	N14027oIJ	Bailey /4/ X07019 (BC2F1-05: F01), Bailey // X05028 (F01), Bailey / N02064ol, X05250 (BC1F1-06-02: F03 ol ol) /3/ Bailey
17	N15017ol	Bailey /4/ X07018 (BC2F1-07: F01), Bailey // X05028 (F01), Bailey / N02064ol, X05250 (BC1F1-06-01: F03 ol ol) /3/ Bailey
18	N15039ol	N03079FT*2 / N02054ol (11), X03153 (ol ol, BC1F1-03-01-S-04-S-02: F09) // N05042F
19	N15041ol	N03079FT*2 / N02059ol (Per), X03155 (ol ol, BC1F1-04-01-S-04-S-01: F09) // N05044FCSm
20	N15044oIF	N03079FT*2 / N02059ol (Per), X03155 (ol ol, BC1F1-04-01-S-04-S-01: F09) // N05044FCSm
21	N16005	Bailey*2 / Brantley, X03157 (ol ol, BC1F1-04-01-S-04-S-05: F09) // GP-NC WS 16 (SPT 06-06)
22	N16011	N08082oIJCT /3/ X09008 (F01), N08082oIJCT // SPT 07-01, NC-V 11 / GP-NC WS 11
23	N16028	N08083oICT // X09031 (F01), N08083oICT / CRSP 702
24	N16030	N08083oICT // X09031 (F01), N08083oICT / CRSP 702
25	N16032	N08070oIJC /3/ X11005 (F1), N08070oIJC // X08054 (F1-03-01: F04), N08059oIFCT / GP-NC WS 16 (SPT 06-06)
26	N16034	N08070oIJC /3/ X11010 (F1), N08070oIJC // X08055 (F1-04-04: F04), N08059oIFCT / GP-NC WS 17 (SPT 06-07)
27	N16035	Wynne /3/ X11015 (F1), Wynne // X08054 (F1-03-01: F04), N08059oIFCT / GP-NC WS 16 (SPT 06-06)
28	N16055	N09049oIC /3/ X11034 (F1), N09049oIC // X08054 (F1-02-02: F04), N08059oIFCT / GP-NC WS 16 (SPT 06-06)

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 2019 PVQE locations and digging dates in Tables 20 through 28. Table 29 shows the content of the fatty acids averaged across all locations in 2019. Two- and three-year averages are included in Tables 30 and 31. Finally, fatty acid composition of 14 cultivars and breeding lines exposed to soil water deficit stress is reported in Table 32.

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's LSD test and the minimum significant difference was included in the tables. These values were used to compare the varieties.

Blanching Results

Table 2. Laboratory sample blanching of Extra-Large Kernels (ELK) from Tidewater AREC (Suffolk, VA), Dig 1, 2019 (17 September).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	6.0 a ¹	4.9 a	1.1 ab	1.8 d-g	93.6 a-e	0.0	3.1 c-i
Sullivan	5.9 a	4.8 a	1.1 ab	1.7 e-g	94.2 a-c	0.0	2.5 f-i
Wynne	5.9 a	4.8 a	1.1 ab	1.9 c-g	94.0 a-d	0.0	2.6 f-i
Emery	5.9 a	4.8 a	1.1 ab	1.3 g	95.2 ab	0.0	2 g-i
Bailey II	6.0 a	4.9 a	1.1 ab	1.3 g	95.4 a	0.0	1.7 hi
08X09-1-2-1	5.9 a	4.9 a	1.1 ab	3.0 a-e	90.3 f-h	0.0	5.1 a-d
Walton	5.9 a	4.8 a	1.1 ab	3.1 a-d	91.4 c-h	0.0	4.0 b-g
09X38-1-5-1	5.9 a	4.9 a	1.1 ab	2.5 a-g	92.2 b-g	0.0	3.8 b-i
09X39-1-11-2	5.9 a	4.8 a	1.1 ab	3.2 ab	90.4 f-h	0.0	4.8 a-e
11X33-1-4-3	6.0 a	4.9 a	1.1 ab	3.2 a-c	89.0 h	0.0	6.3 a
N13049oIJ	5.9 a	4.9 a	1.1 ab	2.6 a-f	90.6 e-h	0.0	5.3 a-c
N13054oI	5.9 a	4.8 a	1.1 ab	2.5 a-g	91.7 c-h	0.0	4.3 a-f
N14002oIJ	5.9 a	4.8 a	1.1 ab	2.5 a-g	92.1 b-g	0.0	3.8 b-i
N14004oIJ	5.9 a	4.8 a	1.1 ab	3.3 a	90.6 e-h	0.0	4.6 a-f
N14023oI	6.0 a	4.9 a	1.1 ab	2.6 a-f	91.1 d-h	0.0	4.8 a-e
N14027oIJ	6.0 a	4.9 a	1.1 ab	1.9 b-g	93.1 a-f	0.0	3.4 c-i
N15017oI	6.0 a	4.9 a	1.1 ab	2.5 a-g	93.0 a-f	0.0	2.9 d-i
N15039oI	5.9 a	4.9 a	1.1 ab	2.7 a-f	93.0 a-f	0.0	2.7 e-i
N15041oI	6.0 a	4.9 a	1.1 ab	2.1 a-g	92.5 a-g	0.0	3.9 b-h
N15044oIF	6.0 a	4.9 a	1.1 ab	2.5 a-g	92.7 a-f	0.0	3.2 c-i
N16005	6.0 a	4.9 a	1.1 ab	2.9 a-e	92.8 a-f	0.0	2.8 e-i
N16011	5.9 a	4.8 a	1.1 ab	1.5 fg	95.3 a	0.0	1.6 i
N16028	6.0 a	4.9 a	1.1 ab	1.9 c-g	93.1 a-f	0.0	3.5 c-i
N16030	5.9 a	4.9 a	1.1 ab	3.2 ab	89.5 gh	0.0	5.7 ab
N16032	5.9 a	4.8 a	1.1 ab	2.3 a-g	92.6 a-g	0.0	3.6 b-i
N16034	5.9 a	4.8 a	1.2 a	2.6 a-g	91.9 c-h	0.0	4 b-g
N16035	5.9 a	4.9 a	1.1 ab	2.5 a-g	92 c-h	0.0	3.9 b-h
N16055	5.9 a	4.9 a	1.0 b	3 a-e	92.1 b-g	0.0	3.4 c-i
Mean	5.9	4.8	1.1	2.4	92.3	0.0	3.7
LSD	0.3	0.3	0.1	1.3	3.1	-	2.2

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

Blanching Results

Table 3. Laboratory sample blanching of Extra-Large Kernels (ELK) from Tidewater AREC (Suffolk, VA), Dig 2, 2019 (5 October).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8 a ¹	4.9 a	0.9 b	3.3 a-d	93.1 a-c	0.0	2.0 h-j
Sullivan	5.8 a	4.8 a	1.0 ab	3.7 ab	91.2 b-e	0.0	3.5 f-j
Wynne	5.8 a	4.8 a	1.0 ab	1.8 d-f	91.4 b-e	0.0	5.2 c-i
Emery	5.7 a	4.8 a	0.9 b	1.3 f	95.4 a	0.0	1.7 ij
Bailey II	5.8 a	4.8 a	1.0 ab	2.0 c-f	94.9 ab	0.0	1.5 j
08X09-1-2-1	5.8 a	4.8 a	1.0 ab	4.4 a	84.0 h	0.0	10.0 a
Walton	5.7 a	4.8 a	1.0 ab	3.9 ab	86.1 gh	0.0	8.4 a-c
09X38-1-5-1	5.8 a	4.8 a	1.0 ab	3.4 a-d	88.5 d-g	0.0	6.6 a-f
09X39-1-11-2	5.7 a	4.8 a	0.9 b	3.9 ab	90.2 c-f	0.0	4.3 d-j
11X33-1-4-3	5.8 a	4.8 a	1.0 ab	3.1 a-d	88.7 d-g	0.0	6.6 a-f
N13049oIJ	5.7 a	4.8 a	0.9 b	3.6 a-c	85.5 gh	0.0	9.3 ab
N13054oI	5.8 a	4.8 a	1.0 ab	3.4 a-c	90.9 c-e	0.0	4.1 e-j
N14002oIJ	5.7 a	4.8 a	0.9 b	3.2 a-d	88.5 d-g	0.0	6.7 a-f
N14004oIJ	5.8 a	4.8 a	1.0 ab	3 a-e	90.3 c-f	0.0	5.1 c-i
N14023oI	5.7 a	4.8 a	1.0 ab	2.6 b-f	89.4 c-g	0.0	6.4 b-f
N14027oIJ	5.7 a	4.7 a	1.0 ab	3.0 a-e	88.2 d-g	0.0	7.2 a-e
N15017oI	5.7 a	4.8 a	1.0 ab	2.7 b-f	93.0 a-c	0.0	2.7 g-j
N15039oI	5.7 a	4.7 a	1.0 ab	3.4 a-d	90.1 c-f	0.0	4.9 c-j
N15041oI	5.8 a	4.7 a	1.1 a	3.7 ab	89.3 c-g	0.0	5.4 c-h
N15044oIF	5.7 a	4.7 a	1.0 ab	3.7 ab	86.9 f-h	0.0	7.8 a-d
N16005	5.8 a	4.8 a	1.0 ab	2.8 b-f	91.1 b-e	0.0	4.5 d-j
N16011	5.8 a	4.9 a	1.0 ab	2.5 b-f	91.9 a-d	0.0	4.0 e-j
N16028	5.7 a	4.7 a	1.0 ab	2.4 b-f	90.9 c-e	0.0	5.7 c-g
N16030	5.8 a	4.8 a	1.0 ab	1.5 ef	91.9 a-d	0.0	5.0 c-j
N16032	5.8 a	4.9 a	0.9 b	3.7 ab	87.9 e-h	0.0	6.7 a-f
N16034	5.8 a	4.9 a	0.9 b	3.1 a-e	88.2 d-g	0.0	7.1 a-e
N16035	5.8 a	4.9 a	0.9 b	3.2 a-d	88.1 d-g	0.0	7.0 a-f
N16055	5.8 a	4.8 a	1.0 ab	3.2 a-d	88.9 d-g	0.0	6.3 b-f
Mean	5.7	4.8	1.0	3.0	90.0	0.0	5.5
LSD	0.2	0.2	0.1	1.6	3.9	-	3.6

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

Blanching Results

Table 4. Laboratory sample blanching of Extra-Large Kernels (ELK). Averages of both digging dates from Tidewater AREC (Suffolk, VA), 2019.

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.9 a ¹	4.9 a	1.0 a	2.5 a-g	93.3 a-d	0.0	2.5 gh
Sullivan	5.8 a	4.8 a	1.0 a	2.7 a-g	92.7 a-e	0.0	3.0 e-h
Wynne	5.8 a	4.8 a	1.0 a	1.8 f-h	92.7 a-e	0.0	3.9 c-h
Emery	5.8 a	4.8 a	1.0 a	1.3 h	95.3 a	0.0	1.9 h
Bailey II	5.9 a	4.8 a	1.0 a	1.6 gh	95.1 ab	0.0	1.6 h
08X09-1-2-1	5.8 a	4.8 a	1.0 a	3.7 a	87.2 h	0.0	7.6 a
Walton	5.8 a	4.8 a	1.0 a	3.5 a-c	88.7 f-h	0.0	6.2 a-d
09X38-1-5-1	5.8 a	4.8 a	1.0 a	2.9 a-f	90.3 c-h	0.0	5.2 a-g
09X39-1-11-2	5.8 a	4.8 a	1.0 a	3.5 ab	90.3 c-h	0.0	4.5 c-g
11X33-1-4-3	5.9 a	4.9 a	1.0 a	3.1 a-e	88.8 f-h	0.0	6.4 a-c
N13049oIJ	5.8 a	4.8 a	1.0 a	3.1 a-e	88.0 gh	0.0	7.3 ab
N13054oI	5.8 a	4.8 a	1.0 a	2.9 a-f	91.3 c-g	0.0	4.2 c-h
N14002oIJ	5.8 a	4.8 a	1.0 a	2.9 a-f	90.3 c-h	0.0	5.2 a-f
N14004oIJ	5.9 a	4.8 a	1.1 a	3.2 a-d	90.4 c-h	0.0	4.8 b-g
N14023oI	5.9 a	4.8 a	1.0 a	2.6 a-g	90.2 d-h	0.0	5.6 a-e
N14027oIJ	5.9 a	4.8 a	1.1 a	2.4 b-g	90.7 c-g	0.0	5.3 a-f
N15017oI	5.8 a	4.8 a	1.0 a	2.6 a-g	93 a-e	0.0	2.8 f-h
N15039oI	5.8 a	4.8 a	1.0 a	3.0 a-e	91.6 c-f	0.0	3.8 c-h
N15041oI	5.9 a	4.8 a	1.1 a	2.9 a-f	90.9 c-g	0.0	4.6 b-g
N15044oIF	5.8 a	4.8 a	1.0 a	3.1 a-e	89.8 e-h	0.0	5.5 a-e
N16005	5.9 a	4.9 a	1.0 a	2.8 a-f	91.9 b-f	0.0	3.7 d-h
N16011	5.9 a	4.8 a	1.0 a	2 e-h	93.6 a-c	0.0	2.8 f-h
N16028	5.8 a	4.8 a	1.0 a	2.1 d-h	92.0 a-f	0.0	4.6 c-g
N16030	5.8 a	4.8 a	1.0 a	2.4 c-h	90.7 c-g	0.0	5.4 a-f
N16032	5.8 a	4.8 a	1.0 a	3.0 a-e	90.2 d-h	0.0	5.2 a-g
N16034	5.8 a	4.8 a	1.0 a	2.8 a-f	90 d-h	0.0	5.5 a-e
N16035	5.8 a	4.9 a	1.0 a	2.9 a-f	90.1 d-h	0.0	5.5 a-f
N16055	5.8 a	4.8 a	1.0 a	3.1 a-e	90.5 c-g	0.0	4.8 b-g
Mean	5.8	4.8	1.0	2.7	91.1	0.0	4.6
LSD	0.2	0.2	0.1	1.1	3.3	-	2.7

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

Blanching Results

Table 5. Laboratory sample blanching of Extra-Large Kernels (ELK) from Martin County, NC, Dig 1, 2019 (25 September).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.7 ab ¹	4.7 b-d	1.0 ab	3.1 c-h	91.6 a-d	0.0	3.4 d-g
Sullivan	5.7 ab	4.7 cd	1.0 ab	3.9 a-e	90.6 a-e	0.0	3.9 c-g
Wynne	5.7 ab	4.7 cd	1.0 ab	3.4 a-g	91.7 a-d	0.0	3.3 e-g
Emery	5.7 ab	4.7 cd	1.1 a	1.5 i	95.6 a	0.0	1.4 g
Bailey II	5.7 ab	4.7 b-d	1.0 a-c	2.5 g-i	88.5 c-e	0.0	7.4 a-e
08X09-1-2-1	5.7 ab	4.7 cd	0.9 bc	3.8 a-f	86.9 de	0.0	7.7 a-e
Walton	5.6 b	4.7 b-d	0.9 bc	4.5 a	85.6 e	0.0	8.3 a-d
09X38-1-5-1	5.7 ab	4.7 cd	1.0 ab	4.4 ab	86.7 de	0.0	7.4 a-e
09X39-1-11-2	5.6 b	4.7 cd	1.0 a-c	4.0 a-e	87.3 de	0.0	7.1 a-f
11X33-1-4-3	5.7 ab	4.7 b-d	1.0 a-c	3.2 b-g	87.1 de	0.0	8.1 a-e
N13049oIJ	5.6 b	4.6 d	1.0 ab	2.9 d-h	85.1 e	0.0	10.3 a
N13054oI	5.6 b	4.7 b-d	0.9 bc	4.1 a-d	88.7 c-e	0.0	5.6 a-g
N14002oIJ	5.7 ab	4.7 b-d	1.0 ab	2.6 f-i	87.3 de	0.0	8.5 a-c
N14004oIJ	5.6 b	4.7 cd	1.0 a-c	3.8 a-f	88.2 c-e	0.0	6.5 a-f
N14023oI	5.7 ab	4.7 b-d	1.0 a-c	4.0 a-e	90.4 a-e	0.0	4.0 c-g
N14027oIJ	5.7 ab	4.7 b-d	1.0 a-c	3.7 a-g	88.1 c-e	0.0	5.6 a-g
N15017oI	5.7 ab	4.7 cd	1.1 a	3.1 c-h	90.6 a-e	0.0	4.7 b-g
N15039oI	5.6 b	4.7 cd	1.0 a-c	3.2 b-g	90.3 a-e	0.0	4.9 b-g
N15041oI	5.6 b	4.7 b-d	0.9 bc	3.3 a-g	86.1 e	0.0	9.0 ab
N15044oIF	5.7 ab	4.7 cd	1.0 ab	2.9 d-h	89.5 b-e	0.0	6.0 a-g
N16005	5.7 ab	4.8 a-c	1.0 a-c	1.5 i	94.6 ab	0.0	2.3 fg
N16011	5.7 ab	4.7 b-d	1.0 a-c	4.3 a-c	87.4 c-e	0.0	6.7 a-f
N16028	5.6 b	4.7 b-d	0.9 bc	3.1 c-h	90.4 a-e	0.0	4.9 b-g
N16030	5.6 b	4.7 b-d	0.9 bc	3.8 a-f	88.6 c-e	0.0	5.9 a-g
N16032	5.6 b	4.7 b-d	0.9 bc	3.2 b-g	89.7 b-e	0.0	5.5 a-g
N16034	5.6 b	4.7 b-d	0.9 bc	3.8 a-f	90.6 a-e	0.0	4.0 b-g
N16035	5.8 a	4.8 ab	1.0 a-c	2.8 e-h	89 c-e	0.0	6.6 a-f
N16055	5.7 ab	4.9 a	0.9 c	1.9 hi	92.9 a-c	0.0	3.6 c-g
Mean	5.6	4.7	1.0	3.3	89.2	0.0	5.8
LSD	0.1	0.1	0.1	1.2	5.5	-	5.0

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

Blanching Results

Table 6. Laboratory sample blanching of Extra-Large Kernels (ELK) from Martin County, NC, Dig 2, 2019 (3 October).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8 ab ¹	4.7 ab	1.1 a-c	8.2 b-d	87.6 a-f	0.2 ab	3.2 e-g
Sullivan	5.8 a-c	4.8 a	1.0 a-c	6.8 b-g	85.5 c-h	0.0 b	6.8 b-g
Wynne	5.8 ab	4.8 a	1.0 a-c	3.5 e-g	86.1 b-g	0.0 b	9.9 a-e
Emery	5.6 b-d	4.8 a	0.9 bc	2.3 g	92.6 a	0.3 ab	4.5 d-g
Bailey II	5.7 a-d	4.8 a	0.9 a-c	3.7 d-g	90.3 a-c	0.4 ab	4.8 d-g
08X09-1-2-1	5.7 a-d	4.8 a	0.9 a-c	5.5 b-g	87.0 a-f	0.6 a	5.4 c-g
Walton	5.8 a-c	4.8 a	1.0 a-c	13.7 a	78.9 i	0.0 b	6.4 c-g
09X38-1-5-1	5.7 a-d	4.7 ab	1.0 a-c	13.2 a	83.0 e-i	0.5 ab	2.5 fg
09X39-1-11-2	5.6 b-d	4.8 a	0.8 c	7.7 b-f	86.2 b-g	0.3 ab	5.2 c-g
11X33-1-4-3	5.7 a-d	4.7 ab	0.9 a-c	9.9 ab	86.5 a-g	0.0 b	2.9 fg
N13049oIJ	5.6 cd	4.7 ab	0.9 bc	5.8 b-g	82.7 e-i	0.0 b	10.5 a-d
N13054oI	5.7 a-d	4.7 ab	1.0 a-c	5.9 b-g	80.6 g-i	0.0 b	13.1 ab
N14002oIJ	5.6 cd	4.7 a-c	0.9 a-c	7.3 b-f	87.2 a-f	0.0 b	5.0 d-g
N14004oIJ	5.6 b-d	4.7 a-c	1.0 a-c	7.7 b-f	86.7 a-g	0.0 b	5.1 d-g
N14023oI	5.6 cd	4.6 a-c	1.0 a-c	7.9 b-f	79.3 hi	0.2 ab	11.8 a-c
N14027oIJ	5.6 b-d	4.6 a-c	1.0 a-c	4.5 d-g	78.4 i	0.0 b	16.5 a
N15017oI	5.6 b-d	4.6 a-c	1.1 a-c	6.9 b-g	91.9 ab	0.0 b	0.7 g
N15039oI	5.7 a-d	4.6 a-c	1.1 a-c	8.1 b-e	88.9 a-e	0.0 b	2.5 fg
N15041oI	5.6 b-d	4.5 bc	1.2 a-c	9.6 a-c	81.6 f-i	0.0 b	8.0 b-f
N15044oIF	5.6 b-d	4.4 c	1.2 ab	5.5 b-g	81.6 f-i	0.0 b	11.9 a-c
N16005	5.6 cd	4.6 a-c	1.0 a-c	8.2 b-e	87.4 a-f	0.0 b	3.7 e-g
N16011	5.9 a	4.6 a-c	1.3 a	3.8 d-g	90 a-d	0.4 ab	5.2 c-g
N16028	5.6 b-d	4.7 a-c	1.0 a-c	4.9 d-g	89.7 a-d	0.0 b	5.1 d-g
N16030	5.6 cd	4.7 a-c	0.9 a-c	4.8 d-g	89.9 a-d	0.0 b	4.6 d-g
N16032	5.5 d	4.6 a-c	0.9 a-c	5.9 b-g	88.4 a-e	0.0 b	4.9 d-g
N16034	5.5 d	4.6 a-c	1.0 a-c	7.8 b-f	83.7 d-i	0.0 b	7.4 b-g
N16035	5.5 d	4.6 a-c	0.9 a-c	3.3 fg	91.6 a-c	0.2 ab	4.4 d-g
N16055	5.7 a-d	4.7 ab	1.0 a-c	5.0 c-g	92.2 ab	0.0 b	2.3 fg
Mean	5.6	4.7	1.0	6.7	86.2	0.1	6.2
LSD¹	0.2	0.3	0.4	4.7	6.3	0.5	6.7

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

Blanching Results

Table 7. Laboratory sample blanching of Extra-Large Kernels (ELK). Averages of both digging dates from Martin County, NC, 2019.

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8 a ¹	4.7 a-c	1.1 ab	5.7 a-d	89.6 a-e	0.1 ab	3.3 de
Sullivan	5.7 a-c	4.7 a-c	1.0 ab	5.3 a-d	88 b-h	0.0 b	5.4 c-e
Wynne	5.7 ab	4.7 a-c	1.0 ab	3.4 cd	88.9 b-g	0.0 b	6.6 a-e
Emery	5.7 a-d	4.7 a-c	1.0 ab	1.9 d	94.1 a	0.2 ab	2.9 e
Bailey II	5.7 a-d	4.8 ab	0.9 ab	3.1 cd	89.4 a-e	0.2 ab	6.1 b-e
08X09-1-2-1	5.7 a-d	4.7 a-c	0.9 b	4.6 cd	86.9 c-i	0.3 a	6.5 a-e
Walton	5.7 a-d	4.7 a-c	1.0 ab	9.1 a	82.2 i	0.0 b	7.3 a-e
09X38-1-5-1	5.7 a-d	4.7 a-d	1.0 ab	8.8 ab	84.8 e-i	0.2 ab	4.9 c-e
09X39-1-11-2	5.6 b-d	4.7 a-c	0.9 b	5.8 a-c	86.7 c-i	0.1 ab	6.1 b-e
11X33-1-4-3	5.7 a-d	4.7 a-c	0.9 ab	6.5 a-c	86.8 c-i	0.0 b	5.5 c-e
N13049oIJ	5.6 cd	4.7 a-d	0.9 ab	4.4 cd	83.9 f-i	0.0 b	10.4 ab
N13054oI	5.7 a-d	4.7 a-c	1.0 ab	5.0 b-d	84.6 e-i	0.0 b	9.3 a-c
N14002oIJ	5.6 a-d	4.7 a-d	1.0 ab	5.0 b-d	87.2 c-i	0.0 b	6.8 a-e
N14004oIJ	5.6 b-d	4.7 a-d	1.0 ab	5.7 a-d	87.4 b-h	0.0 b	5.8 b-e
N14023oI	5.6 b-d	4.7 a-d	1.0 ab	5.9 a-c	84.8 e-i	0.1 ab	7.9 a-d
N14027oIJ	5.6 a-d	4.7 a-d	1.0 ab	4.1 cd	83.2 hi	0.0 b	11.0 a
N15017oI	5.7 a-d	4.6 b-d	1.1 ab	5.0 b-d	91.3 a-c	0.0 b	2.7 e
N15039oI	5.6 a-d	4.6 b-d	1.0 ab	5.6 a-d	89.6 a-e	0.0 b	3.7 de
N15041oI	5.6 b-d	4.6 cd	1.0 ab	6.5 a-c	83.8 g-i	0.0 b	8.5 a-c
N15044oIF	5.6 a-d	4.5 d	1.1 a	4.2 cd	85.5 d-i	0.0 b	8.9 a-c
N16005	5.6 a-d	4.7 a-d	1.0 ab	4.8 cd	91.0 a-c	0.0 b	3.0 e
N16011	5.8 a	4.7 a-d	1.1 a	4.0 cd	88.7 b-g	0.2 ab	5.9 b-e
N16028	5.6 b-d	4.7 a-d	0.9 ab	4.0 cd	90 a-d	0.0 b	5.0 c-e
N16030	5.6 cd	4.7 a-d	0.9 b	4.3 cd	89.2 a-e	0 b	5.3 c-e
N16032	5.6 d	4.7 a-d	0.9 b	4.5 cd	89 a-f	0.0 b	5.2 c-e
N16034	5.6 d	4.6 a-d	0.9 ab	5.8 a-d	87.2 c-i	0.0 b	5.7 b-e
N16035	5.6 a-d	4.7 a-c	0.9 ab	3.0 cd	90.3 a-d	0.1 ab	5.5 c-e
N16055	5.7 a-d	4.8 a	0.9 b	3.4 cd	92.5 ab	0.0 b	2.9 e
Mean	5.6	4.7	1.0	5.0	87.7	0.1	6.0
LSD	0.1	0.2	0.2	3.9	5.1	0.3	4.7

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

Blanching Results

Table 8. Laboratory sample blanching of Extra-Large Kernels (ELK). Averages from Tidewater AREC (Suffolk, VA) and Martin County, NC, 2019.

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8 a ¹	4.8 ab	1.0 a-c	4.1 a-d	91.5 a-d	0.1 ab	2.9 h-j
Sullivan	5.8 a	4.8 ab	1.0 a-c	4 a-d	90.4 b-h	0.0 b	4.2 e-j
Wynne	5.8 a	4.8 ab	1.0 a-c	2.6 c-e	90.8 b-g	0.0 b	5.2 c-i
Emery	5.7 a	4.8 ab	1.0 a-c	1.6 e	94.7 a	0.1 ab	2.4 j
Bailey II	5.8 a	4.8 ab	1.0 a-c	2.4 de	92.3 ab	0.1 ab	3.8 f-j
08X09-1-2-1	5.8 a	4.8 ab	1.0 bc	4.1 a-d	87.0 hi	0.1 a	7.0 a-d
Walton	5.7 a	4.7 ab	1.0 a-c	6.3 a	85.5 i	0.0 b	6.7 a-e
09X38-1-5-1	5.7 a	4.7 ab	1.0 a-c	5.8 ab	87.6 f-i	0.1 ab	5.0 c-j
09X39-1-11-2	5.7 a	4.8 ab	0.9 c	4.7 a-c	88.5 c-i	0.1 ab	5.3 c-i
11X33-1-4-3	5.8 a	4.8 ab	1.0 a-c	4.8 a-c	87.8 e-i	0.0 b	5.9 b-g
N13049oIJ	5.7 a	4.7 ab	1.0 bc	3.7 b-e	86.0 i	0.0 b	8.8 a
N13054oI	5.7 a	4.8 ab	1.0 a-c	3.9 b-d	88.0 d-i	0.0 b	6.8 a-e
N14002oIJ	5.7 a	4.7 ab	1.0 a-c	3.9 b-d	88.8 b-i	0.0 b	6 b-g
N14004oIJ	5.7 a	4.7 ab	1.0 a-c	4.4 a-d	88.9 b-i	0.0 b	5.3 c-i
N14023oI	5.7 a	4.7 ab	1.0 a-c	4.3 a-d	87.5 f-i	0.1 ab	6.7 a-e
N14027oIJ	5.7 a	4.7 ab	1.0 a-c	3.3 c-e	86.9 hi	0.0 b	8.2 ab
N15017oI	5.7 a	4.7 ab	1.0 a-c	3.8 b-e	92.1 ab	0.0 b	2.8 ij
N15039oI	5.7 a	4.7 ab	1.0 a-c	4.3 a-d	90.6 b-g	0.0 b	3.7 g-j
N15041oI	5.7 a	4.7 ab	1.1 ab	4.7 a-d	87.3 g-i	0.0 b	6.6 a-f
N15044oIF	5.7 a	4.7 b	1.1 a	3.7 b-e	87.7 e-i	0.0 b	7.2 a-c
N16005	5.7 a	4.8 ab	1.1 a-c	3.8 b-e	91.5 a-d	0.0 b	3.3 g-j
N16011	5.8 a	4.7 ab	1.1 a	3.0 c-e	91.1 b-e	0.1 ab	4.4 d-j
N16028	5.7 a	4.7 ab	1.0 a-c	3.1 c-e	91.0 b-f	0.0 b	4.8 c-j
N16030	5.7 a	4.8 ab	1.0 bc	3.3 c-e	90 b-h	0.0 b	5.3 c-i
N16032	5.7 a	4.7 ab	1.0 bc	3.8 b-e	89.6 b-h	0.0 b	5.2 c-i
N16034	5.7 a	4.7 ab	1.0 a-c	4.3 a-d	88.6 c-i	0.0 b	5.6 b-h
N16035	5.7 a	4.8 ab	1.0 bc	2.9 c-e	90.2 b-h	0.0 ab	5.5 b-i
N16055	5.7 a	4.8 a	0.9 c	3.2 c-e	91.5 a-c	0.0 b	3.9 f-j
Mean	5.7	4.7	1.0	3.8	89.4	0.03	5.3
LSD	0.2	0.1	0.1	2.3	3.5	0.1	2.8

¹ Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's 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 (2018- 2019).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8 a ¹	4.8 ab	1.0 a	2.7 c-e	92.8 ab	0.0 a	3.0 fg
Sullivan	5.8 a	4.8 ab	1.0 a	2.9 c-e	92.1 bc	0.0 a	3.5 e-g
Wynne	5.8 a	4.8 ab	1.0 a	2.2 de	91.9 b-d	0.0 a	4.4 c-f
Emery	5.8 a	4.8 a	1.0 a	1.5 e	94.8 a	0.0 a	2.2 g
Bailey II	5.8 a	4.8 ab	1.0 a	2.3 de	92.4 b	0.0 a	3.7 d-g
08X09-1-2-1	5.8 a	4.8 ab	1.0 a	3.2 b-d	89.2 e-g	0.1 a	5.9 a-c
Walton	5.8 a	4.8 ab	1.0 a	5.0 a	87.3 g	0.0 a	6.1 a-c
09X38-1-5-1	5.8 a	4.8 ab	1.0 a	4.5 ab	88.9 e-g	0.1 a	5 a-e
09X39-1-11-2	5.8 a	4.8 ab	0.9 a	3.5 b-d	90.5 b-f	0.0 a	4.4 c-f
N13049oIJ	5.7 a	4.8 ab	1.0 a	3.2 b-d	88.6 fg	0.0 a	6.6 a
N13054ol	5.7 a	4.8 ab	1.0 a	3.2 b-d	89.9 c-f	0.0 a	5.4 a-d
N14002oIJ	5.7 a	4.8 ab	1.0 a	2.9 cd	91.1 b-e	0.0 a	4.5 b-f
N14004oIJ	5.8 a	4.8 ab	1.0 a	3.3 b-d	90.8 b-f	0.0 a	4.4 c-f
N14023ol	5.7 a	4.8 ab	1.0 a	3.4 b-d	89.6 d-g	0.03 a	5.4 a-d
N14027oIJ	5.8 a	4.8 ab	1.0 a	3.0 cd	89.2 e-g	0.01 a	6.2 ab
N15017ol	5.7 a	4.8 ab	1.0 a	3.0 cd	92.7 ab	0.0 a	2.8 fg
N15039ol	5.7 a	4.7 b	1.0 a	3.5 b-d	91.3 b-e	0.0 a	3.7 d-g
N15041ol	5.7 a	4.8 ab	1.0 a	3.9 a-c	88.7 fg	0.0 a	5.8 a-c
N15044oIF	5.7 a	4.7 ab	1.0 a	3.3 b-d	89.7 c-f	0.0 a	5.4 a-d
Mean	5.8	4.8	1.0	3.2	90.6	0.02	4.7
LSD	0.1	0.1	0.1	1.4	2.4	0.1	1.8

¹ Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's 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 (2017- 2019).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8 a ¹	4.8 a	1.2 a	2.3 cd	93.1 b	0.0 a	3.0 fg
Sullivan	5.8 a	4.8 a	1.2 a	2.5 c	92.6 b	0.0 a	3.4 e-g
Wynne	5.7 a	4.8 a	1.2 a	2 cd	92.4 bc	0.0 a	4.0 c-f
Emery	5.8 a	4.8 a	1.2 a	1.3 d	94.8 a	0.0 a	2.3 g
Bailey II	5.7 a	4.8 a	1.2 a	1.9 cd	92.9 b	0.0 a	3.5 d-f
08X09-1-2-1	5.8 a	4.8 a	1.2 a	2.9 bc	90 d-f	0.1 a	5.4 ab
Walton	5.7 a	4.8 a	1.2 a	4.1 a	88.5 f	0.0 a	5.8 a
09X38-1-5-1	5.8 a	4.8 a	1.2 a	3.7 ab	89.8 ef	0.1 a	4.9 a-c
09X39-1-11-2	5.8 a	4.8 a	1.2 a	3 a-c	90.9 c-e	0.0 a	4.5 b-d
N14002oIJ	5.8 a	4.8 a	1.2 a	2.5 c	91.8 bc	0.0 a	4.1 c-f
N14004oIJ	5.7 a	4.8 a	1.2 a	2.7 bc	91.5 b-d	0.0 a	4.2 c-e
N14023ol	5.7 a	4.8 a	1.2 a	2.9 bc	90.1 de	0.0 a	5.3 ab
Mean	5.7	4.8	1.2	2.7	91.5	0.02	4.2
LSD	0.1	0.1	0.2	1.1	1.6	0.1	1.1

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

Blanching Results

Table 11. Laboratory sample blanching of Medium Kernels from Tidewater AREC (Suffolk, VA), Dig 1, 2019 (17 September).

Variety	% H ₂ O before roasting	% H ₂ O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	1.7 e ¹	1.7 e	1.7 e	1.7 e	86 a-c	1.6 e-g	9 e-h
Sullivan	1.9 de	1.9 de	1.9 de	1.9 de	86 ab	1.4 fg	9 f-h
Wynne	2.4 b-e	2.4 b-e	2.4 b-e	2.4 b-e	86 ab	1.5 e-g	8 gh
Emery	3.4 a-e	3.4 a-e	3.4 a-e	3.4 a-e	80 d-g	2.4 a-f	13 a-e
Bailey II	3.1 a-e	3.1 a-e	3.1 a-e	3.1 a-e	88 a	1.0 g	7 h
08X09-1-2-1	4.2 a	4.2 a	4.2 a	4.2 a	78 fg	2.2 a-f	14 a-c
Walton	2.8 a-e	2.8 a-e	2.8 a-e	2.8 a-e	84 a-d	2.0 b-g	10 e-h
09X38-1-5-1	3.8 a-c	3.8 a-c	3.8 a-c	3.8 a-c	75 g	3.1 a	17 a
09X39-1-11-2	2.9 a-e	2.9 a-e	2.9 a-e	2.9 a-e	81 c-f	2.1 a-f	13 b-e
11X33-1-4-3	2.8 a-e	2.8 a-e	2.8 a-e	2.8 a-e	81 c-f	2.0 b-g	13 b-e
N13049oIJ	2.9 a-e	2.9 a-e	2.9 a-e	2.9 a-e	81 c-f	2.1 a-f	13 b-e
N13054oI	2.9 a-e	2.9 a-e	2.9 a-e	2.9 a-e	83 a-e	1.7 d-g	10 c-h
N14002oIJ	4.1 ab	4.1 ab	4.1 ab	4.1 ab	82 b-f	2.1 a-f	10 d-h
N14004oIJ	2.3 c-e	2.3 c-e	2.3 c-e	2.3 c-e	82 b-f	1.4 fg	13 b-f
N14023oI	3.2 a-e	3.2 a-e	3.2 a-e	3.2 a-e	81 c-f	2.0 b-g	13 b-f
N14027oIJ	3.7 a-c	3.7 a-c	3.7 a-c	3.7 a-c	78 e-g	2.5 a-e	14 a-c
N15017oI	3.3 a-e	3.3 a-e	3.3 a-e	3.3 a-e	81 b-f	2.1 a-f	12 b-g
N15039oI	3.4 a-e	3.4 a-e	3.4 a-e	3.4 a-e	83 a-f	2.3 a-f	10 c-h
N15041oI	3.8 a-c	3.8 a-c	3.8 a-c	3.8 a-c	81 c-f	1.8 c-g	12 b-g
N15044oIF	4.1 ab	4.1 ab	4.1 ab	4.1 ab	79 d-g	2.3 a-f	13 b-f
N16005	4.2 a	4.2 a	4.2 a	4.2 a	79 d-g	2.8 a-c	12 b-g
N16011	4.3 a	4.3 a	4.3 a	4.3 a	78 fg	2.9 ab	14 a-d
N16028	3.4 a-e	3.4 a-e	3.4 a-e	3.4 a-e	79 d-g	2.9 ab	13 b-e
N16030	4.5 a	4.5 a	4.5 a	4.5 a	79 d-g	3.0 ab	12 b-g
N16032	4.1 ab	4.1 ab	4.1 ab	4.1 ab	78 fg	2.0 b-g	14 ab
N16034	3.7 a-c	3.7 a-c	3.7 a-c	3.7 a-c	80 d-f	2.7 a-d	12 b-g
N16035	3.2 a-e	3.2 a-e	3.2 a-e	3.2 a-e	80 d-f	2.5 a-e	13 b-f
N16055	3.6 a-d	3.6 a-d	3.6 a-d	3.6 a-d	80 c-f	2.2 a-f	12 b-g
Mean	5.9	4.9	1.0	3.3	81	2.1	12
LSD¹	0.3	0.2	0.1	1.7	5	1.0	4

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

Blanching Results

Table 12. Laboratory sample blanching of Medium Kernels from Tidewater AREC (Suffolk, VA), Dig 2, 2019 (5 October).

Variety	% H ₂ O before roasting	% H ₂ O after roasting	%Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.7 ab ¹	4.6 b	1.0 ab	3.0 c-h	81 ab	1.9 f-h	13 e-h
Sullivan	5.7 ab	4.8 a	0.9 ab	3.2 b-g	79 b-e	2.9 a-g	13 c-g
Wynne	5.7 ab	4.7 ab	0.9 ab	3.3 a-g	79 b-e	2.3 c-h	13 b-g
Emery	5.7 ab	4.7 ab	1.0 ab	1.9 h	81 ab	2.3 c-h	13 c-g
Bailey II	5.7 ab	4.7 ab	1.0 ab	2.5 f-h	84 a	2.1 d-h	10 h
08X09-1-2-1	5.7 ab	4.8 a	0.9 ab	2.8 d-h	76 e-h	2.9 a-g	16 a-c
Walton	5.7 ab	4.8 a	0.9 ab	4.4 ab	74 h	3.8 a	17 a-c
09X38-1-5-1	5.7 ab	4.8 a	0.9 ab	4 a-d	74 gh	3.1 a-c	17 a
09X39-1-11-2	5.6 ab	4.7 ab	0.9 ab	4.1 a-c	75 f-h	3.4 ab	16 a-d
11X33-1-4-3	5.6 b	4.6 b	1.0 ab	3.0 c-h	77 c-h	2.9 a-g	15 a-f
N13049oIJ	5.7 ab	4.7 ab	1.0 ab	3.6 a-f	76 e-h	2.4 b-h	16 a-c
N13054oI	5.7 ab	4.8 a	0.9 ab	3.4 a-g	77 d-h	2.4 b-h	16 a-e
N14002oIJ	5.6 ab	4.7 ab	0.9 ab	3.2 b-g	81 bc	2.6 b-h	12 gh
N14004oIJ	5.7 ab	4.8 a	0.9 ab	3.0 c-h	81 bc	2 e-h	13 d-g
N14023oI	5.6 ab	4.8 a	0.9 b	3.9 a-e	76 e-h	2.7 b-h	16 a-e
N14027oIJ	5.7 a	4.7 ab	1.0 a	3.8 a-e	77 e-h	2.1 c-h	16 a-e
N15017oI	5.6 ab	4.7 ab	0.9 ab	4 a-d	78 b-f	2.4 b-h	14 a-g
N15039oI	5.7 ab	4.7 ab	1.0 ab	3.8 a-e	78 b-f	2.6 b-h	14 a-g
N15041oI	5.7 ab	4.7 ab	1.0 ab	2.7 e-h	78 b-e	1.9 gh	15 a-f
N15044oIF	5.7 a	4.8 a	1.0 ab	3.6 a-f	76 e-h	1.8 h	17 ab
N16005	5.7 a	4.7 ab	1.0 a	4.5 a	77 e-h	3 a-d	14 a-g
N16011	5.6 ab	4.7 ab	0.9 ab	2.2 gh	79 b-e	3.8 a	14 a-g
N16028	5.7 ab	4.7 ab	1.0 ab	3.9 a-e	77 d-h	2.9 a-f	15 a-g
N16030	5.6 ab	4.7 ab	1.0 ab	3.9 a-e	76 e-h	3 a-e	15 a-e
N16032	5.6 ab	4.7 ab	0.9 ab	4.1 a-c	77 d-h	3 a-d	14 a-g
N16034	5.7 ab	4.8 a	0.9 ab	3.9 a-e	78 b-g	2.8 a-g	14 a-g
N16035	5.7 ab	4.8 a	0.9 ab	3.7 a-f	76 e-h	2.9 a-g	15 a-f
N16055	5.6 ab	4.7 ab	0.9 ab	3.8 a-e	80 b-d	2.4 b-h	12 f-h
Mean	5.6	4.7	0.9	3.5	78	2.6	14.4
LSD¹	0.1	0.1	0.1	1.2	3	1	3

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

Blanching Results

Table 13. Laboratory sample blanching of Medium Kernels. Averages from both digging dates from Tidewater AREC (Suffolk, VA), 2019.

Variety	% H ₂ O before roasting	% H ₂ O after roasting	%Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8 a ¹	4.7 a	1.0 a	2.4 f	83 ab	1.8 g-i	11 ef
Sullivan	5.8 a	4.8 a	1.0 a	2.5 ef	83 a-c	2.1 c-i	11 d-f
Wynne	5.8 a	4.8 a	1.0 a	2.8 c-f	83 a-c	1.9 f-i	11 ef
Emery	5.8 a	4.8 a	1.0 a	2.6 d-f	80 b-e	2.3 b-i	13 b-e
Bailey II	5.8 a	4.8 a	1.0 a	2.8 c-f	86 a	1.5 i	8 f
08X09-1-2-1	5.8 a	4.9 a	0.9 a	3.5 a-e	77 ef	2.5 a-g	15 ab
Walton	5.8 a	4.8 a	1.0 a	3.6 a-e	79 c-e	2.9 a-d	13 b-e
09X38-1-5-1	5.8 a	4.8 a	1.0 a	3.9 a-c	75 f	3.1 ab	17 a
09X39-1-11-2	5.8 a	4.8 a	1.0 a	3.5 a-e	78 d-f	2.7 a-f	14 a-c
11X33-1-4-3	5.8 a	4.8 a	1.0 a	2.9 c-f	79 c-e	2.4 b-h	14 a-e
N13049oIJ	5.8 a	4.8 a	1.0 a	3.3 a-f	78 d-f	2.2 c-i	15 a-c
N13054oI	5.8 a	4.8 a	1.0 a	3.1 b-f	80 b-e	2 d-i	13 b-e
N14002oIJ	5.8 a	4.8 a	0.9 a	3.6 a-e	81 b-d	2.4 b-i	11 ef
N14004oIJ	5.8 a	4.8 a	1.0 a	2.6 d-f	81 b-d	1.7 hi	13 b-e
N14023oI	5.8 a	4.8 a	1.0 a	3.5 a-e	78 d-f	2.3 b-i	14 a-d
N14027oIJ	5.8 a	4.8 a	1.0 a	3.7 a-d	77 d-f	2.3 b-i	15 a-c
N15017oI	5.8 a	4.8 a	1.0 a	3.7 a-d	80 b-e	2.3 b-i	13 b-e
N15039oI	5.8 a	4.8 a	1.0 a	3.6 a-e	80 b-e	2.4 b-h	12 b-e
N15041oI	5.8 a	4.8 a	1.0 a	3.2 a-f	80 b-e	1.8 g-i	14 a-e
N15044oIF	5.8 a	4.8 a	1.0 a	3.8 a-c	78 d-f	2.0 e-i	15 a-c
N16005	5.8 a	4.8 a	1.0 a	4.3 a	78 d-f	2.9 a-c	13 b-e
N16011	5.8 a	4.8 a	1.0 a	3.2 a-f	78 d-f	3.3 a	14 b-e
N16028	5.8 a	4.8 a	1.0 a	3.7 a-d	78 d-f	2.9 a-c	14 a-e
N16030	5.7 a	4.8 a	0.9 a	4.2 ab	77 d-f	3.0 a-c	14 a-e
N16032	5.8 a	4.8 a	1.0 a	4.1 ab	77 d-f	2.5 a-h	14 a-c
N16034	5.8 a	4.8 a	1.0 a	3.8 a-c	79 c-e	2.7 a-e	13 b-e
N16035	5.8 a	4.8 a	1.0 a	3.5 a-f	78 d-f	2.7 a-f	14 a-e
N16055	5.7 a	4.8 a	0.9 a	3.7 a-d	80 b-e	2.3 b-i	12 c-e
Mean	5.8	4.8	1.0	3.3	79	2.4	13
LSD¹	0.2	0.2	0.1	1.1	4	0.8	3

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

Blanching Results

Table 14. Laboratory sample blanching of Medium Kernels from Martin County, NC, Dig 1, 2019 (25 September).

Variety	% H ₂ O before roasting	% H ₂ O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.9 a ¹	4.9 ab	1.0 a	3.2 a-d	89 a	0.7 de	5 f
Sullivan	5.9 a	4.9 ab	1.0 a	3.1 a-d	89 ab	1.3 c-e	5 f
Wynne	5.9 a	4.9 ab	1.0 a	2.4 b-d	88 a-d	1.2 c-e	7 ef
Emery	5.9 a	4.9 ab	1.0 a	1.5 d	85 a-f	2.1 b-e	9 c-e
Bailey II	5.9 a	4.9 ab	1.0 a	2.1 cd	89 a-c	0.8 de	7 ef
08X09-1-2-1	5.9 a	4.9 ab	1.0 a	3.9 a-d	80 fg	2.4 a-d	12 a-c
Walton	5.8 a	4.8 ab	1.0 a	5.0 a	82 e-g	2.2 b-e	9 c-e
09X38-1-5-1	5.9 a	4.9 ab	1.0 a	5.1 a	74 h	4.0 a	15 a
09X39-1-11-2	5.9 a	5.0 a	0.9 a	4.1 a-c	83 c-g	3.4 ab	7 d-f
11X33-1-4-3	5.9 a	4.9 ab	1.0 a	4.4 a-c	80 fg	2.8 a-c	11 b-d
N13049oIJ	5.9 a	4.9 ab	1.1 a	4.0 a-c	81 fg	1.6 c-e	12 a-c
N13054oI	5.8 a	4.9 ab	1.0 a	3.3 a-d	82 e-g	1.1 c-e	12 a-c
N14002oIJ	5.9 a	4.9 ab	1.0 a	3.6 a-d	84 b-g	1.8 b-e	10 b-e
N14004oIJ	5.9 a	4.9 ab	1.1 a	3.7 a-d	81 fg	1.4 c-e	12 a-c
N14023oI	5.8 a	4.8 ab	1.0 a	3.6 a-d	81 fg	2.2 b-e	12 bc
N14027oIJ	5.9 a	4.9 ab	1.0 a	3.0 a-d	83 d-g	0.6 e	12 a-c
N15017oI	5.8 a	4.9 ab	0.9 a	3.2 a-d	82 e-g	2.1 b-e	11 b-d
N15039oI	5.9 a	5.0 a	0.9 a	3.6 a-d	87 a-e	1.7 b-e	6 ef
N15041oI	5.8 a	4.8 ab	1.0 a	3.0 a-d	84 a-g	1.7 b-e	10 b-e
N15044oIF	5.9 a	4.9 ab	1.0 a	3.5 a-d	82 e-g	2.4 a-d	11 bc
N16005	5.8 a	4.9 ab	1.0 a	4.7 ab	81 fg	1.9 b-e	11 bc
N16011	5.8 a	4.9 ab	1.0 a	4.1 a-c	82 e-g	2.2 b-e	10 b-e
N16028	5.9 a	5.0 a	0.9 a	4.1 a-c	81 e-g	1.2 c-e	12 bc
N16030	5.9 a	5.0 a	0.9 a	4.4 a-c	82 e-g	2.1 b-e	10 b-e
N16032	5.8 a	4.9 ab	1.0 a	4.5 a-c	79 gh	1.7 b-e	13 ab
N16034	5.8 a	4.8 b	1.1 a	4.2 a-c	80 fg	1.7 b-e	13 a-c
N16035	5.9 a	4.9 ab	1.0 a	3.8 a-d	81 e-g	2.3 a-e	11 b-d
N16055	5.8 a	4.8 ab	1.0 a	4.6 ab	80 fg	2 b-e	12 bc
Mean	5.8	4.9	1.0	3.7	83	1.9	10
LSD¹	0.2	0.2	0.2	2.5	56	1.7	4

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

Blanching Results

Table 15. Laboratory sample blanching of Medium Kernels from Martin County, NC, Dig 2, 2019 (3 October).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	6.2 a ¹	5.0 bc	1.2 a	3.0 a-c	85 a	1.9 d-g	8 e
Sullivan	6.2 a	5.1 a	1.1 ab	3.3 a-c	84 ab	1.5 g	10 de
Wynne	6.1 ab	5.0 bc	1.1 ab	3.1 a-c	81 a-e	1.8 e-g	13 a-e
Emery	6.1 ab	5.1 ab	1.1 ab	2.9 a-c	83 a-d	1.9 d-g	10 c-e
Bailey II	6.1 ab	5.0 bc	1.1 ab	2.1 c	84 a-c	1.6 fg	11 b-e
08X09-1-2-1	6.2 a	5.1 ab	1.1 ab	3.6 a-c	78 ef	3.2 ab	14 a-d
Walton	6.1 ab	5.0 c	1.2 a	4.1 a	78 ef	2.7 a-e	14 a-d
09X38-1-5-1	6.1 ab	5.1 ab	1.1 ab	3.8 ab	78 d-f	2.6 a-f	14 a-d
09X39-1-11-2	6.1 ab	5.0 bc	1.1 ab	3.8 ab	78 ef	2.3 b-g	14 a-d
11X33-1-4-3	6.1 ab	5.0 bc	1.1 ab	4.2 a	80 b-e	2.5 b-g	12 b-e
N13049oIJ	6.1 ab	5.0 bc	1.1 ab	3.2 a-c	74.0 f	3.5 a	17.0 a
N13054oI	6.0 b	5.0 bc	1 b	4.1 ab	78 ef	2.0 c-g	15 a-d
N14002oIJ	6.1 ab	5.1 ab	1.1 ab	3.1 a-c	81 a-e	1.9 d-g	12 a-e
N14004oIJ	6.1 ab	5.0 c	1.1 ab	3.1 a-c	79 b-f	2.4 b-g	14 a-d
N14023oI	6.0 b	5.0 c	1.1 ab	3.4 a-c	80 a-e	2.6 a-e	13 a-e
N14027oIJ	6.0 b	5.0 bc	1 b	4.3 a	78 ef	2.4 b-g	14 a-d
N15017oI	6.0 b	5.0 bc	1 b	3.3 a-c	81 a-e	2.6 a-f	12 b-e
N15039oI	6.0 b	5.0 bc	1 b	3.9 ab	80 b-e	2.5 b-g	12 b-e
N15041oI	6.1 ab	5.0 bc	1.1 ab	2.5 bc	78 ef	2.7 a-e	16 ab
N15044oIF	6.1 ab	5.0 bc	1.1 ab	4.1 ab	77 ef	2.5 b-f	15 a-c
N16005	6.0 b	5.0 bc	1 b	2.9 a-c	80 a-e	2.7 a-e	13 a-e
N16011	6.1 ab	5.1 ab	1.1 ab	3.4 a-c	79 c-f	2.5 b-g	14 a-d
N16028	6.1 ab	5.0 bc	1.1 ab	3.3 a-c	79 b-f	2.3 b-g	14 a-d
N16030	6.0 b	5.0 bc	1 b	3.8 ab	77 ef	2.7 a-e	14 a-d
N16032	6.1 ab	5.0 bc	1.1 ab	4.2 a	77 ef	2.8 a-d	14 a-d
N16034	6.1 ab	5.0 bc	1.1 ab	3.9 ab	78 ef	2.8 a-d	14 a-d
N16035	6.1 ab	5.0 c	1.1 ab	3.8 ab	77 ef	3.0 a-c	15 a-c
N16055	6.1 ab	5.0 bc	1.1 ab	3.7 a-c	78 ef	2.8 a-d	14 a-d
Mean	6.1	5.0	1.1	3.5	79	2.4	13
LSD²	0.1	0.1	0.1	1.6	5	1.0	5

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

Blanching Results

Table 16. Laboratory sample blanching of Medium Kernels. Averages from both digging dates from Martin County, NC, 2019.

Variety	% H ₂ O before roasting	% H ₂ O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	6.0 a ¹	5.0 a	1.1 a	3.1 c-f	87 a	1.3 fg	7 f
Sullivan	6.0 a	5.0 a	1.0 ab	3.2 b-f	87 ab	1.4 e-g	7 ef
Wynne	6.0 a	4.9 a	1.0 ab	2.7 d-f	84 a-c	1.5 e-g	10 b-f
Emery	6.0 a	5.0 a	1.0 ab	2.2 ef	84 a-d	2.0 b-g	10 b-f
Bailey II	6.0 a	4.9 a	1.1 ab	2.1 f	86 ab	1.2 g	9 d-f
08X09-1-2-1	6.0 a	5.0 a	1.1 ab	3.7 a-d	79 e-h	2.8 ab	13 a-c
Walton	6.0 a	4.9 a	1.1 a	4.5 a	80 d-h	2.4 a-e	11 a-d
09X38-1-5-1	6.0 a	5.0 a	1.0 ab	4.4 ab	76 h	3.3 a	15 a
09X39-1-11-2	6.0 a	5.0 a	1.0 ab	3.9 a-d	81 c-h	2.8 ab	11 a-e
11X33-1-4-3	6.0 a	5.0 a	1.1 ab	4.3 a-c	80 c-h	2.6 a-c	11 a-d
N13049oIJ	6.0 a	4.9 a	1.1 ab	3.6 a-d	78 gh	2.6 a-d	15 a
N13054oI	5.9 a	4.9 a	1.0 ab	3.7 a-d	80 c-h	1.6 c-g	13 a-c
N14002oIJ	6.0 a	5.0 a	1.0 ab	3.3 a-f	82 b-f	1.9 b-g	11 a-d
N14004oIJ	6.0 a	4.9 a	1.1 a	3.4 a-f	80 c-h	1.9 b-g	13 a-c
N14023oI	5.9 a	4.9 a	1.0 ab	3.5 a-e	81 c-h	2.4 a-e	12 a-d
N14027oIJ	5.9 a	4.9 a	1.0 ab	3.7 a-d	80 c-h	1.5 d-g	13 a-c
N15017oI	5.9 a	4.9 a	1.0 b	3.2 b-f	82 c-g	2.3 a-f	11 a-d
N15039oI	5.9 a	5.0 a	1.0 b	3.8 a-d	83 a-e	2.1 b-g	9 c-f
N15041oI	5.9 a	4.9 a	1.0 ab	2.7 d-f	81 c-g	2.2 a-g	13 a-d
N15044oIF	6.0 a	5.0 a	1.0 ab	3.8 a-d	79 e-h	2.4 a-e	13 a-c
N16005	5.9 a	4.9 a	1.0 ab	3.8 a-d	80 c-h	2.3 a-g	12 a-d
N16011	6.0 a	5.0 a	1.0 ab	3.8 a-d	80 c-h	2.3 a-f	12 a-d
N16028	6.0 a	5.0 a	1.0 ab	3.7 a-d	80 c-h	1.8 b-g	13 a-c
N16030	5.9 a	5.0 a	1.0 b	4.1 a-c	80 d-h	2.4 a-f	12 a-d
N16032	5.9 a	4.9 a	1.0 ab	4.3 a-c	78 f-h	2.3 a-g	14 ab
N16034	5.9 a	4.9 a	1.1 ab	4.0 a-d	79 e-h	2.2 a-g	13 ab
N16035	6 a	4.9 a	1.0 ab	3.8 a-d	79 e-h	2.6 a-c	13 a-c
N16055	5.9 a	4.9 a	1.0 ab	4.2 a-c	79 e-h	2.4 a-e	13 a-c
Mean	6.0	4.9	1.0	3.6	81	2.1	12
LSD¹	0.2	0.1	0.1	1.3	5	1.1	4

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

Blanching Results

Table 17. Laboratory sample blanching of Medium Kernels. Averages from Tidewater AREC (Suffolk, VA) and Martin County, NC, 2019.

Variety	% H ₂ O before roasting	% H ₂ O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.9 a ¹	4.8 a	1.0 a	2.7 ef	85 ab	1.5 hi	9 i
Sullivan	5.9 a	4.9 a	1.0 a-c	2.8 c-f	85 a-c	1.8 f-i	9 hi
Wynne	5.9 a	4.9 a	1.0 a-c	2.8 d-f	84 a-d	1.7 g-i	10 g-i
Emery	5.9 a	4.9 a	1.0 a-c	2.4 f	82 b-e	2.1 b-h	11 d-h
Bailey II	5.9 a	4.9 a	1.0 a	2.4 f	86 a	1.4 i	9 i
08X09-1-2-1	5.9 a	4.9 a	1.0 a-c	3.6 a-d	78 hi	2.7 a-d	14 a-c
Walton	5.9 a	4.9 a	1.0 a-c	4.1 a	79 e-h	2.6 a-d	12 b-g
09X38-1-5-1	5.9 a	4.9 a	1.0 a-c	4.2 a	75 i	3.2 a	16 a
09X39-1-11-2	5.9 a	4.9 a	1.0 a-c	3.7 ab	79 f-h	2.8 a-c	13 b-g
11X33-1-4-3	5.9 a	4.9 a	1.0 ab	3.6 a-d	80 e-h	2.5 a-e	13 b-g
N13049oIJ	5.9 a	4.9 a	1.0 a-c	3.4 a-e	78 hi	2.4 b-f	15 ab
N13054oI	5.8 a	4.9 a	1.0 a-c	3.4 a-e	80 e-h	1.8 f-i	13 b-f
N14002oIJ	5.9 a	4.9 a	1.0 a-c	3.5 a-e	82 c-f	2.1 c-h	11 e-i
N14004oIJ	5.9 a	4.9 a	1.0 a-c	3.0 b-f	81 d-h	1.8 f-i	13 b-f
N14023oI	5.8 a	4.8 a	1.0 a-c	3.5 a-e	79 e-h	2.4 b-f	13 a-f
N14027oIJ	5.9 a	4.9 a	1.0 a-c	3.7 ab	79 gh	1.9 e-i	14 a-c
N15017oI	5.8 a	4.9 a	1.0 a-c	3.4 a-e	81 d-h	2.3 b-g	12 c-g
N15039oI	5.8 a	4.9 a	1.0 bc	3.7 ab	82 c-g	2.2 b-g	11 f-i
N15041oI	5.8 a	4.8 a	1.0 a-c	3 b-f	80 e-h	2.0 d-i	13 b-f
N15044oIF	5.9 a	4.9 a	1.0 a-c	3.8 ab	79 h	2.2 b-g	14 a-d
N16005	5.8 a	4.9 a	1.0 a-c	4.0 a	79 f-h	2.6 a-d	12 b-g
N16011	5.9 a	4.9 a	1.0 a-c	3.5 a-e	79 e-h	2.8 ab	13 b-g
N16028	5.9 a	4.9 a	1.0 a-c	3.7 a-c	79 f-h	2.3 b-g	13 a-f
N16030	5.8 a	4.9 a	0.9 c	4.1 a	79 gh	2.7 a-d	13 b-g
N16032	5.8 a	4.9 a	1.0 a-c	4.2 a	78 hi	2.4 b-f	14 a-d
N16034	5.9 a	4.9 a	1.0 a-c	3.9 a	79 f-h	2.5 b-e	13 b-f
N16035	5.9 a	4.9 a	1.0 a-c	3.6 a-c	79 h	2.7 a-d	13 a-e
N16055	5.8 a	4.8 a	1.0 a-c	3.9 a	80 e-h	2.3 b-f	12 b-g
Mean	5.8	4.9	1.0	3.5	80	2.3	12
LSD¹	1.8	0.1	0.1	0.8	3	0.7	3

¹ Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's 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 (2018- 2019).

Variety	% H ₂ O before roasting	% H ₂ O after roasting	%Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.8 a ¹	4.8 a	1.0 ab	3.1 e-g	85 a	1.3 h	9 f
Sullivan	5.8 a	4.8 a	1.0 ab	3.0 fg	84 a	1.5 f-h	10 f
Wynne	5.8 a	4.8 a	0.9 ab	2.8 g	84 a	1.4 gh	10 ef
Emery	5.8 a	4.8 a	0.9 ab	2.8 g	83 ab	1.9 c-f	10 ef
Bailey II	5.8 a	4.8 a	1.0 a	3.0 fg	84 a	1.6 f-h	9 f
08X09-1-2-1	5.8 a	4.9 a	0.9 ab	4 b-d	78 ef	2.5 ab	13 a-c
Walton	5.8 a	4.8 a	1.0 ab	4.8 a	79 d-f	2.4 ab	12 cd
09X38-1-5-1	5.8 a	4.9 a	0.9 ab	4.3 ab	77 g	2.8 a	15 a
09X39-1-11-2	5.8 a	4.9 a	0.9 ab	4.1 a-d	79 d-f	2.5 ab	12 b-d
N13049oIJ	5.8 a	4.8 a	0.9 ab	3.4 d-g	79 d-f	2.1 b-d	14 a-c
N13054ol	5.8 a	4.8 a	0.9 ab	3.8 b-e	80 c-e	1.7 d-h	13 b-d
N14002oIJ	5.8 a	4.9 a	0.9 ab	3.4 c-g	81 bc	2.1 b-e	11 de
N14004oIJ	5.8 a	4.8 a	0.9 ab	3.5 c-g	80 cd	1.6 e-h	13 b-d
N14023ol	5.7 a	4.8 a	0.9 b	3.7 b-f	79 d-f	2.2 b-d	13 bc
N14027oIJ	5.8 a	4.8 a	0.9 ab	3.9 b-d	79 d-f	1.9 c-g	13 a-c
N15017ol	5.7 a	4.8 a	0.9 ab	4.0 b-d	79 d-f	2.3 a-c	13 b-d
N15039ol	5.7 a	4.8 a	0.9 b	4.1 a-c	81 cd	2.1 b-e	12 de
N15041ol	5.8 a	4.8 a	1.0 ab	3.8 b-d	79 d-f	2.1 b-d	13 bc
N15044oIF	5.7 a	4.8 a	0.9 ab	4.4 ab	78 fg	2.1 b-e	14 ab
Mean	5.8	4.8	0.9	3.7	81	2.0	12
LSD¹	0.1	0.1	0.1	0.7	1.9	0.5	1.5

¹ Means sharing the same letter(s) are not statistically different, at P=0.05 based on the Fisher's 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 (2017 - 2019).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey	5.9 a ¹	4.9 a	1.2 a	3.1 f	84 a	1.3 f	10 e
Sullivan	5.9 a	5 a	1.2 a	3.3 ef	84 a	1.6 f	10 de
Wynne	5.9 a	4.9 a	1.2 a	2.9 f	83 ab	1.4 f	11 de
Emery	5.9 a	4.9 a	1.1 a	3.0 f	83 ab	2.0 c-e	10 de
Bailey II	5.9 a	4.9 a	1.2 a	3.0 f	84 a	1.6 ef	10 e
08X09-1-2-1	5.9 a	4.9 a	1.1 a	3.9 a-c	78 ef	2.3 bc	14 ab
Walton	5.9 a	4.9 a	1.2 a	4.4 a	78 de	2.4 bc	13 bc
09X38-1-5-1	5.9 a	4.9 a	1.2 a	4.1 ab	77 f	2.8 a	15 a
09X39-1-11-2	5.9 a	5 a	1.1 a	3.9 a-d	80 cd	2.4 ab	12 c
N14002oIJ	5.9 a	4.9 a	1.1 a	3.3 c-f	82 b	2.0 cd	11 d
N14004oIJ	5.8 a	4.9 a	1.2 a	3.3 d-f	80 c	1.6 d-f	13 c
N14023oI	5.8 a	4.9 a	1.1 a	3.8 b-e	80 cd	2.2 bc	13 c
Mean	5.9	4.9	1.2	3.5	81	2.0	12
LSD¹	0.1	0.1	0.2	0.6	1.5	0.4	1.0

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

Fatty Acid Results

Table 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, 2019¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	8.5 a ²	2.6 b-i	57.6 g	23.9 a	1.3 b-g	1.4 d-f
Sullivan	6.1 e-i	2.7 b-h	74.9 de	8.3 c-e	1.3 c-i	1.8 a-c
Wynne	6.0 e-i	2.8 b-e	78.2 a-d	4.8 e-i	1.4 a-c	1.9 a-c
Emery	5.5 i	2.8 bc	80.6 a-c	3.8 hi	1.3 b-g	1.7 a-e
Bailey II	7.1 bc	2.8 b-d	67.7 f	15.0 b	1.4 a-f	1.6 c-f
08X09-1-2-1	6.2 d-h	2.4 f-j	75.8 c-e	7.3 c-h	1.2 e-i	2.0 ab
Walton	5.6 hi	2.8 bc	78.8 a-d	4.6 e-i	1.4 a-d	2.0 a
09X38-1-5-1	6.1 e-i	2.7 b-g	78.7 a-d	5.3 d-i	1.3 b-g	1.7 a-f
09X39-1-11-2	5.7 g-i	3.2 a	79.2 a-d	4.0 g-i	1.6 a	1.8 a-e
11X33-1-4-3	5.9 e-i	2.9 ab	78.3 a-d	4.9 e-i	1.4 a-c	1.7 b-f
N13049oIJ	5.6 g-i	2.4 f-j	81.1 ab	3.6 hi	1.2 g-i	1.9 a-c
N13054oI	5.9 e-i	2.4 g-j	79.0 a-d	5.3 d-i	1.2 g-i	1.9 a-c
N14002oIJ	7.4 b	2.7 b-f	67.6 f	15.7 b	1.3 c-i	1.4 ef
N14004oIJ	6.4 de	2.8 b-d	74.3 de	9.1 cd	1.4 a-e	1.7 a-e
N14023oI	5.7 f-i	2.4 f-j	81.5 a	3.5 i	1.2 i	1.7 a-f
N14027oIJ	6.0 e-i	2.4 f-j	78.5 a-d	5.9 d-i	1.2 f-i	1.8 a-c
N15017oI	6.2 d-g	2.5 d-j	75.8 c-e	8.0 c-f	1.3 c-i	1.9 a-c
N15039oI	5.8 f-i	2.7 b-h	78.4 a-d	6.1 d-i	1.3 c-i	1.7 a-f
N15041oI	6.7 cd	2.4 h-j	73.1 e	10.4 c	1.3 d-i	1.8 a-c
N15044oIF	6.3 d-f	2.3 ij	76.5 b-e	7.7 c-g	1.2 i	1.8 a-d
N16005	6.8 b-d	3.2 a	72.3 ef	10.6 c	1.5 ab	1.4 f
N16011	5.7 g-i	2.4 f-j	78.1 a-d	6 d-i	1.2 f-i	2.0 a-c
N16028	5.9 e-i	2.5 c-i	78.8 a-d	5.1 e-i	1.3 c-i	1.9 a-c
N16030	5.7 g-i	2.5 e-j	80.4 a-c	3.4 i	1.3 b-h	2.0 ab
N16032	6.1 e-i	2.4 f-j	78.1 a-d	6.3 d-i	1.2 i	1.7 a-e
N16034	5.8 e-i	2.4 f-j	79 a-d	5.3 e-i	1.3 e-i	2.0 a-c
N16035	5.7 f-i	2.6 c-i	80 a-c	4.9 e-i	1.3 e-i	1.7 a-f
N16055	5.7 f-i	2.2 j	80.3 a-c	4.3 f-i	1.2 hi	2.0 ab
Mean	6.2	2.6	76.5	7.3	1.3	1.3
LSD²	0.6	0.3	4.9	3.8	0.2	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's LSD test.

Fatty Acid Results

Table 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, 2019¹, (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	3.0 ab ²	1.6 a-c	92.1 a	2.4 k	17.1 a	1.4 a	6.0 a-d
Sullivan	2.5 d-h	2.4 a	80.3 c-f	9.3 f-k	15 b-e	0.6 c-f	6.2 ab
Wynne	3.2 a	1.6 a-c	77.2 g-i	16.2 a-g	15 b-e	0.3 f-i	6.2 ab
Emery	2.5 d-h	1.6 a-c	77.3 g-i	21.1 a-d	13.8 e-g	0.3 hi	5.5 a-d
Bailey II	2.7 c-g	1.6 a-c	85.6 b	4.5 i-k	15.6 bc	1.0 b	5.7 a-d
08X09-1-2-1	3.3 a	1.8 a-c	79.5 d-g	11.8 e-j	14.8 b-f	0.5 c-h	6.3 a
Walton	3.0 ab	1.7 a-c	77.3 g-i	17.7 a-f	14.6 b-g	0.3 g-i	6.2 a-c
09X38-1-5-1	2.8 b-d	1.3 c	78.3 f-i	14.9 a-h	14.2 c-g	0.4 f-i	5.5 a-d
09X39-1-11-2	3.2 a	1.5 bc	76.3 i	21.1 a-d	15.1 b-e	0.3 hi	6.2 ab
11X33-1-4-3	2.8 bc	2.0 a-c	77.2 g-i	16.4 a-g	15.1 b-e	0.3 f-i	6.3 ab
N13049olJ	2.4 gh	1.8 a-c	77.5 g-i	22.2 a-c	13.4 fg	0.3 hi	5.4 a-d
N13054ol	2.5 c-h	1.7 a-c	78.6 e-i	17 a-g	13.8 e-g	0.4 e-i	5.5 a-d
N14002olJ	2.6 c-g	1.3 c	86.4 b	4.3 jk	15.3 b-d	1.0 b	5.3 b-d
N14004olJ	2.7 c-g	1.5 bc	81.0 c-e	8.3 g-k	14.8 b-f	0.6 c-e	5.6 a-d
N14023ol	2.3 h	1.7 a-c	77.5 g-i	23.4 ab	13.3 g	0.3 hi	5.2 cd
N14027olJ	2.5 f-h	1.6 a-c	79.2 d-h	14.2 c-h	13.7 e-g	0.4 e-i	5.3 b-d
N15017ol	2.8 b-f	1.5 bc	80.6 c-f	13.5 c-i	14.3 c-g	0.5 c-g	5.5 a-d
N15039ol	2.6 c-g	1.4 bc	79.3 d-g	12.9 d-j	13.8 e-g	0.4 d-i	5.4 a-d
N15041ol	2.6 c-g	1.7 a-c	82.3 c	7.1 h-k	14.7 b-g	0.7 c	5.6 a-d
N15044olF	2.6 c-g	1.6 a-c	80.5 c-f	10.0 e-k	14.1 d-g	0.5 c-g	5.4 a-d
N16005	2.6 c-h	1.8 a-c	81.6 cd	7.0 h-k	15.8 ab	0.7 cd	5.8 a-d
N16011	2.7 c-g	1.9 a-c	79.1 d-h	13.1 d-j	13.9 d-g	0.4 e-i	5.8 a-d
N16028	2.8 b-e	1.6 a-c	78.1 f-i	15.5 a-h	14.2 d-g	0.4 f-i	5.7 a-d
N16030	2.6 c-h	2.2 ab	76.5 hi	23.8 a	14.3 c-g	0.2 i	6.1 a-d
N16032	2.6 c-h	1.6 a-c	79.5 d-g	14.4 b-h	13.8 e-g	0.4 d-i	5.4 a-d
N16034	2.7 c-g	1.6 a-c	78.6 e-i	17.2 a-g	13.8 e-g	0.4 f-i	5.6 a-d
N16035	2.4 gh	1.4 bc	78.6 e-i	17.1 a-g	13.4 fg	0.4 f-i	5.1 d
N16055	2.5 e-h	1.8 a-c	78 f-i	18.9 a-e	13.4 fg	0.3 g-i	5.5 a-d
Mean	2.7	1.7	79.8	14.1	14.4	0.5	5.7
LSD²	0.3	0.8	2.7	9.1	1.5	0.2	1.0

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's 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 Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Tidewater AREC (Suffolk, VA), Dig 2, 2019¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	8.9 a ²	2.6 c-f	54.5 h	26.8 a	1.4 b-e	1.4 l
Sullivan	5.9 f-h	2.4 f-j	76.7 a-e	7.5 d-h	1.2 g-k	1.9 c-g
Wynne	5.9 f-h	2.5 d-i	78.6 a-d	5.7 e-h	1.3 f-i	1.8 f-j
Emery	5.6 gh	2.7 bc	80.2 ab	4.3 gh	1.4 b-f	1.7 g-j
Bailey II	7.2 b	2.5 d-h	67.9 g	15.4 b	1.3 e-h	1.6 k
08X09-1-2-1	6.0 e-h	2.4 e-j	76.1 b-e	7.4 d-h	1.3 f-j	2.0 bc
Walton	5.5 h	2.7 b-d	78.4 a-d	5.0 f-h	1.4 a-d	2.2 a
09X38-1-5-1	6.5 c-e	2.4 e-j	74.0 d-f	9.5 c-e	1.3 d-g	1.8 e-j
09X39-1-11-2	6.0 e-h	3.0 a	77.1 a-e	6.3 e-h	1.5 a	1.6 jk
11X33-1-4-3	6.1 e-g	2.9 ab	77.8 a-e	5.7 e-h	1.4 a-c	1.7 i-k
N13049oIJ	5.9 f-h	2.3 i-m	79.9 a-c	4.7 gh	1.2 j-n	2.0 cd
N13054ol	5.7 gh	2.1 lm	79.1 a-c	5.1 f-h	1.2 k-n	2.1 ab
N14002oIJ	7.0 bc	2.8 bc	70.1 fg	12.9 bc	1.3 d-g	1.5 k
N14004oIJ	6.1 e-g	2.7 b-d	76.9 a-e	7.0 d-h	1.3 c-f	1.7 h-j
N14023ol	5.6 gh	2.2 j-m	81.2 a	3.9 h	1.1 l-n	1.9 c-f
N14027oIJ	5.9 f-h	2.3 h-m	79.5 a-c	5.5 e-h	1.1 mn	1.8 e-j
N15017ol	6.1 e-g	2.4 f-k	76.8 a-e	7.2 d-h	1.3 d-g	1.9 c-g
N15039ol	5.7 gh	2.6 c-f	80.4 ab	4.9 f-h	1.2 h-m	1.6 jk
N15041ol	6.4 d-f	2.3 h-m	75.2 c-e	8.9 c-f	1.2 k-n	1.9 c-g
N15044oIF	6.3 d-f	2.2 j-m	75.9 b-e	8.3 d-g	1.2 j-n	1.8 d-h
N16005	6.8 b-d	3.0 a	73.1 ef	10.5 cd	1.4 ab	1.3 l
N16011	5.5 h	2.3 g-l	79.8 a-c	5.1 f-h	1.2 i-n	1.9 c-e
N16028	5.7 gh	2.5 c-g	80.4 ab	4.1 h	1.3 e-h	1.8 e-j
N16030	5.8 f-h	2.4 g-k	80.3 ab	4.2 gh	1.2 g-l	1.9 c-g
N16032	5.7 gh	2.4 f-k	79.7 a-c	5.0 f-h	1.2 j-n	1.8 e-i
N16034	5.8 f-h	2.2 k-m	79.1 a-c	5.7 e-h	1.1 mn	1.9 c-h
N16035	5.7 gh	2.7 b-e	78.5 a-d	5.7 e-h	1.3 b-f	1.8 e-j
N16055	6.1 e-g	2.1 m	79.2 a-c	5.7 e-h	1.1 n	1.9 c-g
Mean	6.1	2.5	76.7	7.4	1.3	1.8
LSD²	0.6	0.2	4.9	4.1	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's LSD test.

Fatty Acid Results

Table 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, 2019¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.9 a-c ²	1.5 cd	94.4 a	2.1 j	17.3 a	1.5 a	5.8 a-c
Sullivan	2.8 b-f	1.6 a-d	80.4 d-h	10.4 d-i	14 e-i	0.5 d-g	5.6 b-d
Wynne	2.7 c-g	1.6 b-d	78.8 e-h	14.2 a-f	14 e-i	0.4 e-g	5.6 b-d
Emery	2.7 c-h	1.4 de	77.8 h	18.9 a-c	13.8 f-j	0.3 g	5.5 c-f
Bailey II	2.8 c-g	1.4 d	86.2 b	4.7 ij	15.2 bc	1.0 b	5.5 c-f
08X09-1-2-1	3.2 a	1.7 a-c	79.8 d-h	11.8 d-h	14.6 b-f	0.5 d-g	6.1 ab
Walton	3.1 ab	1.8 ab	77.9 h	15.9 a-e	14.4 c-g	0.3 fg	6.2 a
09X38-1-5-1	3.0 a-c	1.4 d	81.5 c-e	8.9 e-j	14.7 b-e	0.6 c-e	5.7 b-d
09X39-1-11-2	3.0 a-c	1.4 d	78.6 e-h	12.3 c-h	14.9 b-d	0.4 e-g	5.9 a-c
11X33-1-4-3	3.0 a-c	1.5 d	78.1 h	15.7 a-e	14.8 b-e	0.4 fg	5.8 a-c
N13049oIJ	2.5 f-i	1.6 b-d	78.4 gh	17.1 a-d	13.5 h-j	0.4 fg	5.3 d-g
N13054oI	2.9 a-e	1.8 a	78.5 f-h	15.6 a-e	13.7 f-j	0.4 fg	5.8 a-c
N14002oIJ	2.9 a-d	1.5 d	83.8 bc	5.5 h-j	15.4 b	0.8 bc	5.7 b-d
N14004oIJ	2.7 c-h	1.5 cd	79.6 d-h	11.3 d-i	14.4 c-g	0.5 d-g	5.6 cd
N14023oI	2.5 f-i	1.5 b-d	78.1 h	20.7 a	13.0 j	0.3 g	5.2 d-g
N14027oIJ	2.4 hi	1.5 d	79.3 d-h	14.5 a-f	13.2 ij	0.4 e-g	5.0 e-g
N15017oI	2.7 c-g	1.5 cd	80.0 d-h	11 d-i	14.1 d-h	0.5 d-g	5.6 c-e
N15039oI	2.3 i	1.2 f	79 e-h	16.6 a-d	13.1 j	0.4 fg	4.7 g
N15041oI	2.7 c-h	1.6 b-d	81.5 c-f	8.6 f-j	14.1 d-h	0.6 c-e	5.5 c-f
N15044oIF	2.6 d-i	1.6 b-d	81.1 c-g	10.7 d-i	14 e-i	0.6 d-f	5.4 c-f
N16005	2.5 f-i	1.2 ef	82.2 cd	7.0 g-j	15 bc	0.7 cd	5.2 d-g
N16011	2.7 c-h	1.6 b-d	78.9 e-h	15.8 a-e	13.3 h-j	0.4 fg	5.4 c-f
N16028	2.8 c-g	1.5 d	77.6 h	20.1 ab	13.7 f-j	0.3 g	5.5 c-e
N16030	2.7 c-h	1.5 d	77.9 h	19.2 a-c	13.6 g-j	0.3 g	5.4 c-f
N16032	2.6 d-i	1.6 b-d	78.6 e-h	16.3 a-d	13.5 h-j	0.4 fg	5.3 c-f
N16034	2.6 e-i	1.6 b-d	79.4 d-h	14.6 a-f	13.3 h-j	0.4 e-g	5.3 d-f
N16035	2.7 c-g	1.5 d	78.9 e-h	13.7 b-g	14 e-i	0.4 e-g	5.6 cd
N16055	2.4 g-i	1.4 d	79.5 d-h	14.3 a-f	13.2 h-j	0.4 e-g	5.0 fg
Mean	2.7	1.5	80.2	13.1	14.1	0.5	5.5
LSD²	0.3	0.2	3.0	7.0	0.9	0.2	0.5

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's 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 Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Averages of all Digs from Tidewater AREC (Suffolk, VA), 2019¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	8.7 a ²	2.6 d-h	56.1 j	25.3 a	1.4 c-f	1.4 k
Sullivan	6.0 f-k	2.5 f-i	75.8 fg	7.9 d-f	1.3 f-j	1.8 b-h
Wynne	6.0 f-l	2.6 d-g	78.4 a-f	5.3 g-i	1.4 c-f	1.8 c-h
Emery	5.5 m	2.8 cd	80.4 ab	4.1 i	1.3 c-g	1.7 f-i
Bailey II	7.2 bc	2.7 d-f	67.8 i	15.2 b	1.3 d-g	1.6 ij
08X09-1-2-1	6.1 f-j	2.4 i-k	75.9 e-g	7.4 d-h	1.3 g-k	2 ab
Walton	5.5 m	2.8 c-e	78.6 a-f	4.8 i	1.4 b-d	2.1 a
09X38-1-5-1	6.3 e-g	2.6 e-i	76.4 c-g	7.4 d-h	1.3 d-g	1.7 e-i
09X39-1-11-2	5.8 i-m	3.1 a	78.2 b-f	5.1 g-i	1.5 a	1.7 hi
11X33-1-4-3	6.0 f-k	2.9 bc	78.1 b-f	5.3 g-i	1.4 a-c	1.7 hi
N13049oIJ	5.8 j-m	2.3 j-l	80.5 ab	4.2 i	1.2 j-l	1.9 b-f
N13054ol	5.8 i-m	2.2 kl	79.1 a-d	5.2 g-i	1.2 kl	2 a-c
N14002oIJ	7.2 b	2.7 c-f	68.8 i	14.3 b	1.3 d-g	1.5 jk
N14004oIJ	6.3 e-h	2.8 c-e	75.6 f-h	8 de	1.4 b-e	1.7 f-i
N14023ol	5.6 k-m	2.3 j-l	81.4 a	3.7 i	1.2 l	1.8 d-h
N14027oIJ	5.9 g-l	2.4 i-k	79.0 a-d	5.7 e-i	1.2 kl	1.8 d-h
N15017ol	6.2 e-i	2.5 g-j	76.3 c-g	7.6 d-g	1.3 e-h	1.9 b-g
N15039ol	5.7 j-m	2.6 d-g	79.4 a-c	5.5 f-i	1.3 g-k	1.7 hi
N15041ol	6.5 de	2.3 j-l	74.2 gh	9.6 cd	1.2 h-l	1.8 c-h
N15044oIF	6.3 ef	2.3 j-l	76.2 d-g	8.0 d-f	1.2 kl	1.8 d-h
N16005	6.8 cd	3.1 ab	72.7 h	10.6 c	1.5 ab	1.4 k
N16011	5.6 lm	2.4 i-k	78.9 a-e	5.5 f-i	1.2 h-l	1.9 a-d
N16028	5.8 i-m	2.5 f-i	79.6 ab	4.6 i	1.3 e-h	1.8 b-h
N16030	5.7 j-m	2.4 h-k	80.4 ab	3.8 i	1.3 e-i	1.9 a-d
N16032	5.9 h-m	2.4 i-k	78.9 a-e	5.6 e-i	1.2 kl	1.8 d-h
N16034	5.8 i-m	2.3 j-l	79 a-d	5.5 f-i	1.2 i-l	1.9 b-e
N16035	5.7 j-m	2.6 d-h	79.3 a-c	5.3 g-i	1.3 e-h	1.7 g-i
N16055	5.9 h-l	2.2 l	79.7 ab	5.0 hi	1.1 l	1.9 a-d
Mean	6.1	2.5	76.6	7.3	1.3	1.8
LSD²	0.4	0.2	3.1	2.5	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's LSD test.

Fatty Acid Results

Table 22. Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Average of all Digs from Tidewater AREC (Suffolk, VA), 2019¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	3.0 a-c ²	1.6 b-e	93.2 a	2.2 m	17.2 a	1.5 a	5.9 a-d
Sullivan	2.7 f-h	2.0 a	80.3 c-e	9.8 h-k	14.5 c-f	0.5 c-f	5.9 a-d
Wynne	3.0 b-d	1.6 b-e	78 f-h	15.2 c-g	14.5 c-f	0.4 h-j	5.9 a-d
Emery	2.6 f-h	1.5 b-e	77.6 gh	20.0 a-c	13.8 f-j	0.3 j	5.5 c-g
Bailey II	2.7 e-g	1.5 b-e	85.9 b	4.6 lm	15.4 b	1.0 b	5.6 c-g
08X09-1-2-1	3.2 a	1.8 a-c	79.6 d-f	11.8 f-j	14.7 b-d	0.5 e-i	6.2 a
Walton	3.1 ab	1.7 a-d	77.6 gh	16.8 b-f	14.5 c-f	0.3 j	6.2 ab
09X38-1-5-1	2.9 b-e	1.4 de	79.9 de	11.9 f-j	14.5 c-f	0.5 e-h	5.6 c-g
09X39-1-11-2	3.1 ab	1.5 b-e	77.5 gh	16.7 b-f	15.0 bc	0.3 ij	6.0 a-c
11X33-1-4-3	2.9 b-e	1.7 a-d	77.6 gh	16.1 c-f	15.0 bc	0.4 h-j	6.0 a-c
N13049oIJ	2.5 hi	1.7 a-e	78 f-h	19.7 a-d	13.4 h-j	0.3 j	5.3 e-g
N13054ol	2.7 e-g	1.8 ab	78.6 e-h	16.3 b-f	13.7 f-j	0.4 h-j	5.7 b-f
N14002oIJ	2.8 c-f	1.4 c-e	85.1 b	4.9 k-m	15.4 b	0.9 b	5.5 d-g
N14004oIJ	2.7 e-g	1.5 b-e	80.3 c-e	9.8 h-k	14.6 b-e	0.5 c-f	5.6 c-g
N14023ol	2.4 i	1.6 a-e	77.8 f-h	22.1 a	13.1 j	0.3 j	5.2 fg
N14027oIJ	2.4 hi	1.5 b-e	79.3 d-g	14.3 e-h	13.5 h-j	0.4 e-j	5.1 fg
N15017ol	2.8 d-g	1.5 b-e	80.3 c-e	12.2 f-i	14.2 d-h	0.5 d-g	5.5 c-g
N15039ol	2.5 hi	1.3 e	79.1 d-g	14.8 d-h	13.4 h-j	0.4 f-j	5.1 g
N15041ol	2.7 f-h	1.6 a-e	81.9 c	7.8 i-l	14.4 c-g	0.7 cd	5.5 c-g
N15044oIF	2.6 f-h	1.6 a-e	80.8 cd	10.4 g-j	14 d-i	0.6 c-e	5.4 d-g
N16005	2.5 g-i	1.5 b-e	81.9 c	7.0 j-m	15.4 b	0.7 c	5.5 c-g
N16011	2.7 f-h	1.8 a-d	79 d-h	14.5 d-h	13.6 h-j	0.4 f-j	5.6 c-f
N16028	2.8 c-f	1.5 b-e	77.9 f-h	17.8 a-e	13.9 d-i	0.3 j	5.6 c-f
N16030	2.6 f-h	1.8 ab	77.2 h	21.5 ab	13.9 e-j	0.3 j	5.7 a-e
N16032	2.6 f-i	1.6 b-e	79.1 d-h	15.4 c-g	13.6 g-j	0.4 f-j	5.3 e-g
N16034	2.6 f-h	1.6 a-e	79 d-h	15.9 c-f	13.5 h-j	0.4 f-j	5.4 d-g
N16035	2.6 f-i	1.5 b-e	78.7 e-h	15.4 c-g	13.7 f-j	0.4 g-j	5.4 e-g
N16055	2.5 hi	1.6 a-e	78.7 e-h	16.6 b-f	13.3 ij	0.4 h-j	5.3 e-g
Mean	2.7	1.6	80.0	13.6	14.3	0.5	5.6
LSD²	0.2	0.4	1.9	5.2	0.8	0.2	0.5

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's 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 Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Martin County, NC Dig 1, 2019¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	8.6 a ²	2.7 c-e	59.4 j	22.7 a	1.2 b	1.3 kl
Sullivan	5.9 fg	2.6 d-g	78.2 c-h	6.4 c-i	1.2 bc	1.7 b-g
Wynne	6.4 b-e	2.7 cd	75.6 g-i	8.8 b-e	1.2 bc	1.5 h-k
Emery	5.7 f-i	2.8 cd	80.1 a-f	4.8 f-i	1.2 bc	1.6 g-j
Bailey II	6.7 b	2.6 c-f	72.7 i	11.1 b	1.2 b	1.6 e-j
08X09-1-2-1	6.1 c-f	2.3 h-k	77.7 d-h	6.3 d-i	1.1 e-h	1.9 a
Walton	5.4 i	2.7 c-e	81.3 a-d	3.3 i	1.2 b	1.9 a-c
09X38-1-5-1	6.2 c-f	2.7 c-e	78.3 b-g	6.3 d-i	1.2 b-d	1.6 f-j
09X39-1-11-2	6.1 d-g	3.2 a	77.7 d-h	5.9 e-i	1.4 a	1.6 f-j
11X33-1-4-3	6.1 c-g	3.1 a	80.2 a-f	4.0 g-i	1.4 a	1.4 jk
N13049oIJ	5.9 f-h	2.3 i-k	80.8 a-e	4.5 g-i	1.1 f-h	1.8 a-f
N13054ol	5.7 g-i	2.2 jk	81.8 a-c	3.5 i	1.1 gh	1.9 ab
N14002oIJ	6.5 b-d	2.6 c-f	75.5 g-i	8.4 b-e	1.2 b-f	1.5 i-k
N14004oIJ	6.1 c-g	2.8 bc	78.0 d-h	6.3 d-i	1.3 b	1.6 f-j
N14023ol	5.9 fg	2.3 i-k	80.5 a-f	4.7 g-i	1.1 gh	1.7 b-h
N14027oIJ	5.8 f-i	2.2 k	82.0 ab	3.6 hi	1.1 h	1.7 b-h
N15017ol	6.1 c-g	2.4 g-k	77.6 e-h	7.0 c-g	1.2 b-g	1.8 a-d
N15039ol	5.4 hi	2.7 c-e	82.1 a	3.3 i	1.2 bc	1.7 d-i
N15041ol	6.6 bc	2.4 g-k	75.6 g-i	9.3 b-d	1.1 gh	1.5 g-j
N15044oIF	6.4 b-e	2.3 i-k	76.9 f-h	7.9 b-f	1.1 gh	1.6 d-i
N16005	6.7 b	3.0 ab	74.6 hi	9.6 bc	1.4 a	1.2 l
N16011	5.4 i	2.5 e-i	82.0 a	3.5 i	1.2 c-g	1.7 b-g
N16028	6.0 d-g	2.7 c-e	80.1 a-f	4.9 f-i	1.2 b-e	1.5 g-j
N16030	6.0 e-g	2.5 d-h	80.3 a-f	4.5 g-i	1.2 b-e	1.7 d-h
N16032	6.5 b-d	2.3 i-k	75.6 g-i	9.2 b-d	1.1 f-h	1.6 d-j
N16034	5.7 f-i	2.4 g-k	82.1 a	3.4 i	1.1 f-h	1.7 c-h
N16035	5.7 f-i	2.4 f-j	82.2 a	3.6 i	1.1 e-h	1.5 h-k
N16055	6.2 c-f	2.3 i-k	78.1 d-h	6.8 c-h	1.1 d-h	1.8 a-e
Mean	6.1	2.6	78.1	6.6	1.2	1.6
LSD²	0.5	0.2	3.7	3.2	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's LSD test.

Fatty Acid Results

Table 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, 2019¹, (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.7 a-d ²	1.3 b-f	91.5 a	2.6 i	16.5 a	1.4 a	5.3 a-c
Sullivan	2.5 c-h	1.4 a-d	79.7 d-j	12.2 c-h	13.6 d-g	0.5 d-i	5.2 a-c
Wynne	2.5 c-h	1.3 c-f	81.5 b-f	8.8 g-i	14.1 c-e	0.6 b-f	5.0 b-f
Emery	2.5 c-h	1.3 c-f	78.5 g-l	17.1 a-e	13.5 e-i	0.4 h-k	5.0 b-f
Bailey II	2.6 b-f	1.3 b-f	83.1 b	6.5 hi	14.6 bc	0.8 b	5.2 a-c
08X09-1-2-1	3.0 a	1.4 a-c	79.3 e-l	16.2 b-g	14 c-e	0.4 f-k	5.5 a
Walton	2.8 a-c	1.5 ab	77.1 kl	24.8 a	13.6 e-h	0.2 k	5.5 a
09X38-1-5-1	2.5 c-h	1.3 c-f	79.5 e-k	12.5 c-h	13.8 c-f	0.5 e-j	5.0 b-f
09X39-1-11-2	3.0 a	1.3 c-f	78.2 h-l	13.4 c-h	14.9 b	0.4 g-k	5.7 a
11X33-1-4-3	2.6 a-e	1.2 d-f	77.0 l	22.1 ab	14.4 b-d	0.3 i-k	5.2 a-c
N13049oIJ	2.3 e-h	1.4 a-e	78.6 g-l	18.4 a-c	13.0 g-i	0.3 h-k	4.8 c-f
N13054oI	2.3 e-h	1.4 a-d	78 h-l	23.4 ab	12.7 i	0.3 i-k	4.8 c-f
N14002oIJ	2.9 ab	1.4 a-f	80.7 b-g	9 f-i	14.6 bc	0.6 b-g	5.5 ab
N14004oIJ	2.4 d-h	1.6 a	79.3 f-l	13.2 c-h	14.1 b-e	0.4 e-k	5.2 a-e
N14023oI	2.4 d-h	1.5 a-c	78.7 g-l	17.4 a-d	13.1 f-i	0.4 h-k	4.9 c-f
N14027oIJ	2.3 f-h	1.3 b-f	78.2 h-l	22.5 ab	12.7 i	0.3 i-k	4.7 d-f
N15017oI	2.6 c-g	1.4 a-c	80.2 c-i	11.2 c-h	13.6 d-g	0.5 c-h	5.2 a-d
N15039oI	2.3 e-h	1.3 c-f	77.7 j-l	24.8 a	12.9 g-i	0.3 jk	4.8 c-f
N15041oI	2.3 f-h	1.3 c-f	82.3 bc	8.5 g-i	13.6 e-h	0.7 bc	4.7 ef
N15044oIF	2.4 d-h	1.4 a-f	81.2 b-f	9.7 d-i	13.5 e-h	0.6 b-g	4.8 c-f
N16005	2.4 d-h	1.2 ef	81.7 b-e	7.8 hi	14.6 bc	0.7 b-e	5.0 b-f
N16011	2.4 d-h	1.4 a-f	77.9 h-l	24.2 ab	12.8 hi	0.3 i-k	4.9 c-f
N16028	2.4 d-h	1.2 ef	78.6 g-l	16.9 a-f	13.5 e-i	0.4 h-k	4.8 c-f
N16030	2.5 c-h	1.3 c-f	78.1 h-l	18.5 a-c	13.5 e-h	0.3 h-k	5.0 b-f
N16032	2.3 e-h	1.4 a-d	82.2 b-d	9.3 e-i	13.6 d-g	0.7 b-d	4.9 c-f
N16034	2.2 gh	1.3 b-f	77.9 i-l	23.9 ab	12.8 hi	0.3 i-k	4.7 d-f
N16035	2.2 h	1.2 f	78.1 h-l	22.8 ab	12.7 i	0.3 i-k	4.5 f
N16055	2.3 e-h	1.4 a-f	80.3 c-h	11.6 c-h	13.3 e-i	0.5 c-h	4.8 c-f
Mean	2.5	1.3	80.0	15.3	13.7	0.5	5.0
LSD²	0.3	0.2	2.4	8.0	0.8	0.2	0.5

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's 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 Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Martin County, NC Dig 2, 2019¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.2 a ²	2.8 c-f	53.8 i	27.5 a	1.3 b-d	1.3 p
Sullivan	5.7 g-j	2.5 g-i	80.7 a-d	4.6 f-j	1.2 h-k	1.6 g-m
Wynne	6.0 d-i	2.7 fg	77.8 b-g	6.9 c-g	1.2 f-i	1.5 l-o
Emery	5.5 ij	2.9 b-d	80.6 a-d	4.3 g-j	1.3 b-f	1.6 i-o
Bailey II	6.8 b	2.7 d-f	71.2 h	12.7 b	1.2 e-h	1.5 no
08X09-1-2-1	6.1 d-h	2.3 j-l	77.6 c-g	6.5 c-i	1.1 k-m	2.0 ab
Walton	5.3 j	2.5 g-i	81.5 ab	2.9 j	1.2 f-i	2.0 a
09X38-1-5-1	6.1 d-h	2.8 b-f	79.8 a-f	4.5 f-j	1.3 b-e	1.6 k-o
09X39-1-11-2	5.8 e-i	3.1 a	79.0 a-f	5.1 e-j	1.4 a	1.6 i-o
11X33-1-4-3	6.1 d-h	2.9 b-e	80.7 a-d	3.8 g-j	1.3 c-g	1.5 o
N13049oIJ	5.8 e-j	2.3 kl	81.7 ab	4.1 g-j	1.1 n	1.7 e-k
N13054oI	5.8 f-j	2.4 i-l	80.8 a-c	4.1 g-j	1.1 k-m	1.9 b-d
N14002oIJ	6.7 bc	2.7 d-f	74.4 gh	9.7 bc	1.3 d-g	1.5 m-o
N14004oIJ	6.4 b-d	3.0 a-c	75.9 fg	8.0 c-e	1.3 a-c	1.6 h-n
N14023oI	5.7 g-j	2.5 h-j	81.6 ab	3.6 h-j	1.2 j-m	1.8 d-h
N14027oIJ	6.1 d-g	2.4 i-l	79.4 a-f	5.7 d-j	1.1 l-n	1.6 g-m
N15017oI	5.7 f-j	2.4 i-k	80.8 a-d	4.3 g-j	1.2 h-k	1.8 c-e
N15039oI	5.7 g-j	2.7 d-f	80.6 a-d	4.6 f-j	1.2 f-i	1.6 j-o
N15041oI	6.3 c-e	2.3 j-l	76.9 d-g	7.9 c-f	1.1 k-m	1.7 e-k
N15044oIF	6.2 c-f	2.4 i-l	78.1 a-g	6.9 c-h	1.1 mn	1.7 f-l
N16005	6.7 bc	3.0 ab	75.9 fg	8.3 c-e	1.3 ab	1.3 p
N16011	5.6 h-j	2.4 i-l	79.9 a-e	5.2 e-j	1.2 i-l	1.8 c-f
N16028	5.6 g-j	2.7 e-g	81.2 a-c	3.5 ij	1.3 d-g	1.8 c-g
N16030	5.8 e-i	2.5 ij	81.3 a-c	3.6 h-j	1.2 i-l	1.7 e-i
N16032	6.4 b-d	2.4 i-k	76.1 e-g	8.6 cd	1.1 k-m	1.7 f-m
N16034	6 d-i	2.5 ij	78.4 a-f	6.6 c-i	1.2 j-m	1.7 e-j
N16035	5.7 g-j	2.7 f-h	81.8 a	3.4 ij	1.2 g-j	1.6 k-o
N16055	5.9 d-i	2.2 l	79.4 a-f	5.5 d-j	1.1 k-m	1.9 a-c
Mean	6.1	2.6	78.1	6.5	1.2	1.7
LSD²	0.5	0.2	3.9	3.3	0.01	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's LSD test.

Fatty Acid Results

Table 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, 2019¹, (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.8 ab ²	1.3 c-f	94.9 a	2.0 k	17.4 a	1.6 a	5.4 a-d
Sullivan	2.4 c-g	1.4 c-f	78.6 e-j	18.1 b-g	13.1 ij	0.3 f-j	4.9 e-h
Wynne	2.4 c-g	1.4 b-e	80.1 c-h	11.2 g-j	13.7 d-i	0.5 c-g	5.0 d-g
Emery	2.5 c-f	1.3 c-f	78.1 g-j	18.8 b-f	13.5 f-i	0.3 g-j	5.1 c-g
Bailey II	2.5 b-f	1.4 c-f	84.3 b	5.6 jk	14.7 b	0.9 b	5.1 b-g
08X09-1-2-1	2.8 a	1.5 ab	79.6 c-i	12.3 f-j	13.9 c-h	0.5 c-i	5.5 ab
Walton	2.8 a	1.6 a	76.8 j	27.7 a	13.5 f-i	0.2 j	5.7 a
09X38-1-5-1	2.6 a-c	1.2 fg	77.7 h-j	18 b-g	14.1 b-f	0.3 g-j	5.2 b-f
09X39-1-11-2	2.8 a	1.3 ef	78.0 g-j	15.9 c-h	14.3 b-e	0.4 f-j	5.5 a-c
11X33-1-4-3	2.6 a-d	1.2 f	77.1 ij	23.0 a-c	14 b-g	0.3 ij	5.1 c-g
N13049oIJ	2.2 g	1.3 d-f	78.6 e-j	20.2 b-d	12.6 j	0.3 g-j	4.5 h
N13054oI	2.5 b-f	1.5 a-c	78 g-j	20.0 b-e	13.2 h-j	0.3 g-j	5.1 b-g
N14002oIJ	2.4 c-g	1.3 c-f	82.0 bc	8.5 i-k	14.4 b-d	0.7 bc	5.0 e-g
N14004oIJ	2.4 c-g	1.4 c-f	80.4 c-g	11.1 g-j	14.5 bc	0.5 c-f	5.1 b-g
N14023oI	2.4 d-g	1.4 b-e	77.7 h-j	22.8 a-c	13.1 ij	0.3 h-j	4.9 e-g
N14027oIJ	2.3 e-g	1.4 c-f	79.4 d-i	14.3 d-i	13.3 hi	0.4 d-j	4.8 f-h
N15017oI	2.5 c-f	1.4 b-e	78.2 g-j	19.1 b-f	13.2 ij	0.3 g-j	5.0 d-g
N15039oI	2.4 c-g	1.3 d-f	78.5 f-j	17.8 b-g	13.3 h-j	0.3 f-j	4.9 e-h
N15041oI	2.4 c-g	1.4 b-d	81.1 c-e	9.8 h-j	13.6 f-i	0.6 c-e	4.9 e-g
N15044oIF	2.3 fg	1.4 b-f	80.4 c-g	11.4 g-j	13.3 g-i	0.5 c-g	4.7 gh
N16005	2.3 e-g	1.1 g	80.7 c-f	9.2 h-k	14.5 bc	0.6 c-e	4.7 gh
N16011	2.5 b-f	1.4 b-e	79.2 d-j	16.2 c-h	13.1 ij	0.4 e-j	5.1 c-g
N16028	2.6 b-e	1.4 c-f	77.3 ij	23.2 a-c	13.5 f-i	0.3 ij	5.2 b-e
N16030	2.5 b-f	1.4 b-e	77.5 ij	22.7 a-c	13.4 f-i	0.3 ij	5.1 c-g
N16032	2.3 d-g	1.4 c-f	81.6 cd	10.1 h-j	13.7 e-i	0.6 cd	4.8 e-h
N16034	2.4 c-g	1.4 c-f	80.1 c-h	12.8 e-j	13.4 f-i	0.5 c-h	4.9 e-h
N16035	2.4 c-g	1.3 d-f	77.5 ij	24.0 ab	13.2 h-j	0.3 ij	4.9 e-h
N16055	2.4 c-g	1.5 a-c	79.3 d-i	15.2 d-i	13.2 ij	0.4 d-j	5.0 d-g
Mean	2.5	1.4	79.7	15.8	13.7	0.5	5.0
LSD²	0.3	0.2	2.5	7.4	0.7	0.2	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's 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 Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Average of Digs from Martin County, NC, 2019¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	8.9 a ²	2.7 d-g	56.6 l	25.1 a	1.3 c-e	1.3 n
Sullivan	5.8 k-o	2.6 h-j	79.4 a-e	5.5 f-j	1.2 f-j	1.7 e-h
Wynne	6.2 e-i	2.7 e-h	76.7 f-j	7.9 c-e	1.2 e-i	1.5 k-m
Emery	5.6 m-p	2.8 c-e	80.3 a-c	4.6 h-k	1.3 d-f	1.6 h-l
Bailey II	6.8 b	2.7 f-h	72.0 k	11.9 b	1.2 d-g	1.5 i-m
08X09-1-2-1	6.1 f-k	2.3 lm	77.7 d-i	6.4 d-h	1.1 l-o	2.0 a
Walton	5.3 p	2.6 g-i	81.4 ab	3.1 k	1.2 d-g	2.0 a
09X38-1-5-1	6.1 e-j	2.7 d-f	79.1 b-f	5.4 f-j	1.3 d-f	1.6 h-l
09X39-1-11-2	5.9 h-m	3.1 a	78.3 c-h	5.5 f-j	1.4 a	1.6 h-l
11X33-1-4-3	6.1 g-k	3.0 bc	80.5 a-c	3.9 i-k	1.3 bc	1.4 m
N13049oIJ	5.8 j-o	2.3 lm	81.2 ab	4.3 h-k	1.1 o	1.7 d-f
N13054oI	5.7 l-o	2.3 lm	81.3 ab	3.8 jk	1.1 no	1.9 ab
N14002oIJ	6.6 b-d	2.7 e-h	75.0 j	9.1 c	1.2 f-i	1.5 lm
N14004oIJ	6.3 d-h	2.9 b-d	77.0 e-j	7.1 c-g	1.3 b-d	1.6 g-l
N14023oI	5.8 j-o	2.4 k-m	81.0 ab	4.1 h-k	1.1 l-o	1.7 d-f
N14027oIJ	6 h-m	2.3 lm	80.7 a-c	4.7 h-k	1.1 o	1.7 e-h
N15017oI	5.9 i-m	2.4 k-m	79.2 b-f	5.6 e-j	1.2 h-l	1.8 b-d
N15039oI	5.5 n-p	2.7 e-h	81.4 ab	4.0 i-k	1.2 e-h	1.6 f-k
N15041oI	6.4 c-f	2.3 lm	76.2 g-j	8.6 cd	1.1 m-o	1.6 f-k
N15044oIF	6.3 d-g	2.3 lm	77.5 e-j	7.4 c-f	1.1 o	1.7 e-i
N16005	6.7 bc	3.0 ab	75.3 ij	9.0 c	1.3 ab	1.2 n
N16011	5.5 op	2.4 j-l	81.0 ab	4.3 h-k	1.2 j-n	1.8 c-e
N16028	5.8 j-n	2.7 e-h	80.6 a-c	4.2 h-k	1.2 e-h	1.7 e-j
N16030	5.9 i-m	2.5 i-k	80.8 a-c	4.0 i-k	1.2 g-k	1.7 d-g
N16032	6.4 c-e	2.4 lm	75.8 h-j	8.9 c	1.1 l-o	1.6 f-k
N16034	5.9 i-n	2.4 j-l	80.2 a-d	5.0 g-k	1.1 k-o	1.7 d-g
N16035	5.7 m-o	2.5 h-j	82.0 a	3.5 jk	1.2 i-m	1.5 j-m
N16055	6.0 g-l	2.3 m	78.8 b-g	6.1 e-i	1.1 k-o	1.9 a-c
Mean	6.1	2.6	78.1	6.5	1.2	1.6
LSD²	0.3	0.1	2.6	2.3	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's LSD test.

Fatty Acid Results

Table 25. Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/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 ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.7 a-c ²	1.3 d-j	93.2 a	2.3 l	17.0 a	1.5 a	5.3 a-c
Sullivan	2.5 d-j	1.4 b-g	79.2 e-g	15.1 c-g	13.4 f-i	0.4 f-j	5.0 c-h
Wynne	2.5 d-j	1.3 c-j	80.8 c-e	10.0 g-k	13.9 c-e	0.6 c-e	5.0 c-i
Emery	2.5 d-i	1.3 e-j	78.3 f-h	17.9 b-f	13.5 d-h	0.3 h-k	5.0 c-h
Bailey II	2.6 c-g	1.4 c-i	83.7 b	6.1 kl	14.6 b	0.8 b	5.2 c-e
08X09-1-2-1	2.9 a	1.5 ab	79.4 e-g	14.3 e-i	14.0 cd	0.5 e-i	5.5 ab
Walton	2.8 ab	1.6 a	77.0 h	26.2 a	13.5 d-g	0.2 k	5.6 a
09X38-1-5-1	2.6 c-f	1.2 h-k	78.6 f-h	15.3 c-g	14.0 cd	0.4 g-j	5.1 c-h
09X39-1-11-2	2.9 a	1.3 g-j	78.1 gh	14.7 d-h	14.6 b	0.4 g-k	5.6 a
11X33-1-4-3	2.6 b-e	1.2 jk	77.1 h	22.6 ab	14.2 bc	0.3 jk	5.2 c-e
N13049oIJ	2.3 j	1.3 d-j	78.6 f-h	19.3 b-e	12.8 j	0.3 h-k	4.7 k
N13054ol	2.4 e-j	1.4 a-d	78.0 gh	21.7 ab	13.0 h-j	0.3 jk	5.0 d-k
N14002oIJ	2.6 b-d	1.3 c-j	81.3 cd	8.8 i-k	14.5 b	0.6 cd	5.2 b-d
N14004oIJ	2.4 f-j	1.5 a-c	79.8 d-f	12.2 g-j	14.3 bc	0.5 d-g	5.1 c-f
N14023oI	2.4 g-j	1.4 a-d	78.2 f-h	20.1 b-d	13.1 g-j	0.3 h-k	4.9 d-k
N14027oIJ	2.3 ij	1.3 c-j	78.8 fg	18.4 b-f	13 h-j	0.4 g-k	4.7 i-k
N15017oI	2.5 c-h	1.4 b-d	79.2 e-g	15.1 c-g	13.4 e-i	0.4 f-j	5.1 c-g
N15039oI	2.3 h-j	1.3 g-j	78.1 gh	21.3 ab	13.1 g-j	0.3 jk	4.8 f-k
N15041oI	2.3 h-j	1.3 c-j	81.7 c	9.2 h-k	13.6 d-g	0.6 cd	4.8 g-k
N15044oIF	2.3 h-j	1.4 b-h	80.8 c-e	10.6 g-k	13.4 d-i	0.6 c-f	4.8 h-k
N16005	2.4 g-j	1.1 k	81.2 cd	8.5 jk	14.5 b	0.6 cd	4.8 f-k
N16011	2.5 d-i	1.4 b-g	78.5 f-h	20.2 b-d	12.9 ij	0.3 h-k	5.0 c-j
N16028	2.5 d-i	1.3 f-j	77.9 gh	20.0 b-d	13.5 d-g	0.3 i-k	5.0 d-j
N16030	2.5 d-i	1.4 c-j	77.8 gh	20.6 a-c	13.5 d-i	0.3 jk	5.0 c-i
N16032	2.3 h-j	1.4 b-f	81.9 c	9.7 g-k	13.7 d-f	0.6 c	4.9 e-k
N16034	2.3 h-j	1.3 c-j	79.0 fg	18.3 b-f	13.1 g-j	0.4 g-j	4.8 h-k
N16035	2.3 h-j	1.2 i-k	77.8 gh	23.4 ab	13.0 h-j	0.3 jk	4.7 jk
N16055	2.4 f-j	1.4 b-e	79.8 d-f	13.4 f-j	13.3 f-j	0.5 e-h	4.9 d-k
Mean	2.5	1.3	79.8	15.5	13.7	0.5	5.0
LSD²	0.2	0.1	1.7	5.7	0.5	0.1	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's 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 Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Rocky Mount, NC, 2019¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	8.8 a ²	2.5 c-e	57.1 j	25.3 a	1.2 b-g	1.2 l
Sullivan	5.8 g-j	2.4 c-f	79.4 a-e	5.3 f-h	1.2 c-j	1.6 b-i
Wynne	6.3 c-j	2.6 cd	78.2 a-g	7.2 d-g	1.1 f-j	1.4 j-l
Emery	5.6 j	2.7 c	81.1 a-c	4.0 gh	1.2 b-e	1.7 b-i
Bailey II	6.9 b-d	2.7 c	71.1 i	12.9 b	1.2 b-f	1.4 h-l
08X09-1-2-1	6.2 d-j	2.5 c-f	76.6 c-h	7.5 d-g	1.2 b-i	1.8 a-d
Walton	5.6 j	2.6 cd	79.0 a-f	5.2 f-h	1.3 a-c	2.0 a
09X38-1-5-1	6.4 b-g	2.6 cd	76.4 d-h	7.7 d-g	1.3 bc	1.6 c-j
09X39-1-11-2	5.8 g-j	3.1 ab	79.5 a-e	4.7 f-h	1.4 a	1.5 g-k
11X33-1-4-3	5.8 g-j	3.2 a	81.5 ab	3.0 h	1.4 a	1.4 i-l
N13049oIJ	5.7 g-j	2.2 gh	81.9 a	3.8 gh	1.1 ij	1.7 a-g
N13054ol	5.8 g-j	2.2 gh	81.2 ab	4.2 f-h	1.1 g-j	1.8 a-e
N14002oIJ	6.9 bc	2.6 cd	72.3 hi	11.7 bc	1.2 b-d	1.5 g-k
N14004oIJ	6.4 b-h	2.9 b	75.8 d-h	7.9 c-f	1.3 ab	1.6 d-j
N14023ol	5.9 g-j	2.2 gh	81.2 ab	4.4 f-h	1.1 ij	1.7 b-i
N14027oIJ	6.1 f-j	2.2 gh	79.5 a-e	6.0 e-h	1.1 j	1.6 c-j
N15017ol	5.8 g-j	2.3 e-g	79.8 a-d	4.8 f-h	1.2 c-j	1.8 a-e
N15039ol	5.9 g-j	2.5 c-f	78.1 a-g	6.6 e-h	1.2 c-j	1.6 e-j
N15041ol	6.7 b-f	2.3 fg	74.7 f-i	9.7 b-e	1.1 f-j	1.7 a-h
N15044oIF	6.3 c-i	2.3 f-h	77.2 b-g	8.0 c-f	1.1 h-j	1.6 b-i
N16005	7.1 b	3.0 b	73.7 g-i	10.7 b-d	1.3 a-c	1.2 kl
N16011	5.7 ij	2.2 gh	79.5 a-e	5.6 f-h	1.1 d-j	1.9 ab
N16028	5.8 g-j	2.4 d-f	81.9 a	3.3 h	1.3 bc	1.9 a-c
N16030	6.2 e-j	2.5 c-f	79.1 a-f	5.6 f-h	1.2 c-j	1.7 b-i
N16032	6.8 b-e	2.3 e-g	75.0 e-i	9.8 b-e	1.1 e-j	1.6 c-j
N16034	5.9 g-j	2.3 fg	80.1 a-d	5.2 f-h	1.1 f-j	1.7 b-i
N16035	5.7 h-j	2.6 cd	81.3 ab	4.1 f-h	1.2 b-h	1.5 f-j
N16055	5.9 g-j	2.0 h	80.2 a-d	5.0 f-h	1.1 j	1.8 a-f
Mean	6.2	2.5	77.6	7.1	1.2	1.6
LSD²	0.7	0.2	4.5	3.9	0.1	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's LSD test.

Fatty Acid Results

Table 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, 2019¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.6 a-d ²	1.2 a-c	93.8 a	2.3 k	16.4 a	1.5 a	5.0 ab
Sullivan	2.3 e-i	1.9 a	78.8 g-j	15.6 c-i	13.6 c-h	0.4 g-j	5.4 a
Wynne	2.2 hi	1.0 bc	80.8 c-h	12.6 e-j	13.2 d-i	0.5 c-h	4.3 b
Emery	2.2 f-i	1.5 a-c	78.0 h-j	20.4 a-d	13.2 d-i	0.3 h-j	4.9 ab
Bailey II	2.5 c-g	1.3 a-c	84.7 b	5.6 jk	14.5 bc	0.9 b	5.0 ab
08X09-1-2-1	2.8 ab	1.5 a-c	80.3 d-i	10.2 f-j	14 b-f	0.5 d-h	5.4 a
Walton	2.7 a-c	1.5 a-c	78.6 g-j	17.7 b-f	13.7 b-h	0.4 g-j	5.5 a
09X38-1-5-1	2.6 a-d	1.4 a-c	80.3 d-i	9.9 g-k	14.3 b-d	0.5 d-h	5.2 ab
09X39-1-11-2	2.8 a	1.3 a-c	77.7 ij	17.0 c-g	14.3 bc	0.3 h-j	5.4 a
11X33-1-4-3	2.5 c-h	1.2 a-c	76.4 j	27.7 a	14.1 b-e	0.2 j	5.1 ab
N13049oIJ	2.2 e-i	1.3 a-c	78.5 h-j	21.8 a-c	12.5 i	0.3 h-j	4.6 ab
N13054oI	2.3 e-i	1.4 a-c	78.6 g-j	19.8 b-e	12.8 hi	0.3 h-j	4.8 ab
N14002oIJ	2.5 c-h	1.3 a-c	83.6 bc	6.3 jk	14.5 bc	0.8 bc	5.0 ab
N14004oIJ	2.4 c-h	1.7 ab	80.2 d-i	9.6 g-k	14.7 b	0.5 d-h	5.4 a
N14023oI	2.3 e-i	1.4 a-c	78.7 g-j	18.6 b-e	12.8 hi	0.3 h-j	4.7 ab
N14027oIJ	2.2 g-i	1.4 a-c	80.0 d-i	13.2 d-j	12.9 g-i	0.5 e-j	4.6 ab
N15017oI	2.4 d-i	1.9 a	78.3 h-j	18.3 b-e	13.6 c-h	0.4 g-j	5.4 a
N15039oI	2.4 d-i	1.8 a	79.8 e-i	12.6 e-j	13.8 b-h	0.5 d-i	5.4 a
N15041oI	2.3 e-i	1.6 a-c	82.3 b-f	8.0 i-k	14.0 b-g	0.7 b-f	4.9 ab
N15044oIF	2.2 hi	1.3 a-c	81.5 c-g	9.7 g-k	13.2 e-i	0.6 c-g	4.6 ab
N16005	2.2 i	0.9 c	82.9 b-d	8.0 i-k	14.4 bc	0.7 b-d	4.4 b
N16011	2.5 c-h	1.5 a-c	79.6 f-i	14.5 c-i	13.0 e-i	0.4 f-j	5.1 ab
N16028	2.2 g-i	1.3 a-c	77.6 ij	24.9 ab	13.0 g-i	0.3 ij	4.7 ab
N16030	2.5 c-f	1.3 a-c	79 g-j	14.3 c-i	13.6 c-h	0.4 g-j	5.0 ab
N16032	2.2 i	1.2 a-c	82.7 b-e	8.5 h-k	13.6 c-h	0.7 b-e	4.5 ab
N16034	2.4 d-i	1.4 a-c	79.2 g-j	15.7 c-h	13.0 e-i	0.4 g-j	4.9 ab
N16035	2.3 e-i	1.2 a-c	78.3 h-j	19.8 b-e	13.0 e-i	0.3 h-j	4.7 ab
N16055	2.5 b-e	1.5 a-c	79.1 g-j	16.0 c-h	13.0 f-i	0.4 g-j	5.0 ab
Mean	2.4	1.4	80.3	14.2	13.7	0.5	5.0
LSD²	0.3	0.8	3.0	7.7	1.1	0.3	1.0

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's 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 Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Bladen County, NC, 2019¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	8.9 a ²	2.2 c-f	53.4 h	28.7 a	1.2 a-c	1.4 m
Sullivan	5.6 f-i	2.0 g-k	79.3 a-e	5.9 e-i	1.1 e-h	2.0 b-g
Wynne	5.8 e-i	2.2 c-e	79.4 a-e	6.0 d-i	1.1 c-g	1.7 i-l
Emery	5.5 g-i	2.2 d-h	80.9 ab	4.8 f-i	1.1 d-g	1.8 e-j
Bailey II	6.9 bc	2.1 e-i	70.7 fg	13.6 bc	1.1 d-g	1.7 h-l
08X09-1-2-1	5.9 d-i	1.8 l	77.6 a-e	6.9 d-i	1.0 ij	2.4 a
Walton	5.7 f-i	2.0 e-k	78.2 a-e	6.6 d-i	1.1 d-h	2.1 b
09X38-1-5-1	6.0 d-i	2.3 b-d	78.7 a-e	5.9 e-i	1.2 ab	1.8 f-k
09X39-1-11-2	5.9 d-i	2.5 ab	78.2 a-e	6.1 d-i	1.3 a	1.8 f-k
11X33-1-4-3	5.8 e-i	2.6 a	81.7 a	3.3 i	1.2 ab	1.6 kl
N13049oIJ	5.7 e-i	1.9 j-l	80.7 a-c	5.0 f-i	1.0 ij	2.0 b-g
N13054oI	6.1 d-h	1.9 j-l	78.6 a-e	6.6 d-i	1.0 h-j	2.0 b-e
N14002oIJ	7.2 b	2.2 d-g	69.0 g	14.9 b	1.2 b-e	1.6 j-l
N14004oIJ	6.0 d-h	2.2 c-e	77.3 a-e	7.6 d-h	1.2 b-d	1.8 h-k
N14023oI	6.0 d-h	1.8 kl	79.0 a-e	6.5 d-i	1.0 ij	2.0 b-d
N14027oIJ	5.7 e-i	1.9 j-l	81.6 a	4.6 f-i	1.0 j	1.9 d-i
N15017oI	5.7 e-i	2.0 i-l	80.4 a-c	5.1 f-i	1 f-j	1.9 c-h
N15039oI	5.4 i	2.2 d-h	81.6 a	4.2 g-i	1.1 c-f	1.8 d-i
N15041oI	6.5 cd	2.0 g-k	75.0 ef	9.9 cd	1.0 f-j	1.8 g-k
N15044oIF	6.2 d-f	1.8 l	77 b-e	8.0 d-g	1.0 ij	2.1 bc
N16005	6.3 c-e	2.4 a-c	76.3 c-e	8.4 d-f	1.2 ab	1.6 lm
N16011	5.5 hi	2.0 h-l	80.2 a-c	5.5 f-i	1 f-i	2.0 b-f
N16028	5.7 f-i	2.2 d-h	81.6 a	4.0 hi	1.1 d-g	1.7 h-l
N16030	5.9 d-i	2.0 i-l	81.0 ab	4.4 g-i	1.0 f-j	1.8 d-i
N16032	6.4 cd	1.8 kl	75.6 de	9.4 de	1.0 h-j	1.9 d-i
N16034	5.9 d-i	2.0 f-k	80.1 a-d	5.5 f-i	1.0 g-j	1.8 f-k
N16035	6.1 d-g	2.1 e-j	77.9 a-e	7.2 d-h	1.1 e-h	1.9 d-i
N16055	6.0 d-h	2.0 f-k	78.1 a-e	7.1 d-i	1.1 f-i	1.9 d-i
Mean	6.1	2.1	77.5	7.6	1.1	1.8
LSD²	0.6	0.2	4.5	3.9	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's LSD test.

Fatty Acid Results

Table 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 County, NC, 2019¹ (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.8 b-d ²	1.4 a-c	96.7 a	1.9 j	16.5 a	1.7 a	5.4 ab
Sullivan	2.6 c-g	1.5 a	80.0 e-h	13.8 b-g	12.8 f-h	0.5 e-i	5.2 a-e
Wynne	2.5 g-j	1.3 a-c	80.1 e-h	14.3 b-g	12.9 f-h	0.5 e-i	4.9 e-h
Emery	2.4 h-k	1.3 a-c	79.4 f-h	16.9 b-e	12.4 hi	0.4 f-i	4.7 f-i
Bailey II	2.6 d-g	1.3 a-c	85.8 bc	5.4 h-j	13.9 bc	1.0 bc	5.0 b-h
08X09-1-2-1	2.9 ab	1.5 ab	80.7 d-g	11.2 d-i	13.0 d-h	0.5 d-h	5.3 a-c
Walton	2.8 b-e	1.5 a	80.4 d-g	11.9 d-i	13.0 d-h	0.5 d-i	5.3 a-d
09X38-1-5-1	2.9 a-c	1.3 a-c	79.2 f-h	13.4 b-g	13.7 c-e	0.4 f-i	5.4 ab
09X39-1-11-2	3.0 a	1.3 bc	79.2 f-h	14.3 b-g	14.0 bc	0.4 f-i	5.6 a
11X33-1-4-3	2.6 c-g	1.2 c	77.2 h	25.1 a	13.4 c-f	0.2 i	5.1 b-g
N13049oIJ	2.3 i-k	1.4 a-c	79.6 f-h	16.2 b-f	12.3 hi	0.4 f-i	4.7 g-i
N13054oI	2.6 d-i	1.4 a-c	80.6 d-g	12.1 d-h	12.8 f-h	0.5 d-h	4.9 d-h
N14002oIJ	2.7 b-f	1.3 a-c	86.4 b	4.8 ij	14.5 b	1.0 b	5.2 b-f
N14004oIJ	2.5 e-j	1.4 a-c	81.1 d-g	10.2 e-i	13.3 c-g	0.6 d-h	5.1 b-h
N14023oI	2.4 h-k	1.3 a-c	80.7 d-g	12.3 c-h	12.5 g-i	0.5 d-h	4.7 hi
N14027oIJ	2.2 k	1.2 c	79.6 f-h	18.2 a-d	11.9 i	0.4 f-i	4.3 i
N15017oI	2.5 f-j	1.3 a-c	79.6 f-h	15.8 b-f	12.5 g-i	0.4 f-i	4.9 e-h
N15039oI	2.4 g-j	1.3 a-c	78.9 f-h	19.4 a-c	12.4 hi	0.3 g-i	4.8 e-h
N15041oI	2.5 f-j	1.3 a-c	83.0 cd	7.6 g-j	13.3 c-g	0.7 cd	4.9 e-h
N15044oIF	2.5 e-j	1.5 ab	81.7 d-f	10.7 e-i	13.0 e-h	0.6 d-f	5.0 b-h
N16005	2.5 e-j	1.3 a-c	81.3 d-g	9.6 f-i	13.8 b-d	0.6 d-g	5.0 b-h
N16011	2.6 e-j	1.4 a-c	80.0 e-h	14.7 b-g	12.4 hi	0.4 f-i	5.0 b-h
N16028	2.5 f-j	1.2 c	78.5 gh	20.5 ab	12.7 f-i	0.3 hi	4.8 e-h
N16030	2.6 d-h	1.2 c	78.8 f-h	18.3 a-d	12.7 f-i	0.3 g-i	4.8 e-h
N16032	2.5 f-j	1.4 a-c	82.8 de	8.4 g-j	13.1 d-h	0.7 c-e	4.9 e-h
N16034	2.3 jk	1.3 a-c	79.9 f-h	15.9 b-f	12.5 g-i	0.4 f-i	4.7 hi
N16035	2.5 f-j	1.4 a-c	80.9 d-g	12.9 c-g	13.1 d-h	0.5 d-h	5.0 c-h
N16055	2.5 f-j	1.4 a-c	81 d-g	12.8 c-g	12.9 e-h	0.5 d-h	4.9 d-h
Mean	2.6	1.3	81.2	13.2	13.1	0.6	5.0
LSD²	0.2	0.2	2.9	7.2	0.8	0.3	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's 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 Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Blackville, SC, 2019¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.6 a ²	2.7 de	55.6 j	25.6 a	1.3 b-d	1.2 i
Sullivan	6.4 e-h	2.4 g-k	79.0 a-e	5.8 c-g	1.2 e-h	1.6 e-h
Emery	6.1 hi	2.6 e-g	79.2 a-d	5.3 d-g	1.2 c-f	1.6 c-g
08X09-1-2-1	6.5 e-h	3.0 ab	78.7 a-f	5.1 d-g	1.3 ab	1.5 f-h
Walton	6.0 i	2.8 cd	78.7 a-f	4.9 e-g	1.3 b	1.9 a
09X38-1-5-1	6.7 d-f	2.3 i-l	76.3 e-i	7.4 b-d	1.1 f-h	1.9 ab
09X39-1-11-2	6.6 e-h	2.9 bc	77.5 c-g	5.7 c-g	1.3 ab	1.6 c-g
11X33-1-4-3	6.4 f-i	3.2 a	80.1 a-c	3.7 g	1.4 a	1.5 gh
N13049oIJ	6.5 e-h	2.2 kl	79.2 a-d	5.3 d-g	1.1 gh	1.8 a-d
N13054oI	6.7 d-f	2.2 kl	79.0 a-e	5.5 c-g	1.1 gh	1.7 b-f
N14002oIJ	7.2 bc	2.4 g-k	75.8 g-i	7.9 bc	1.2 e-h	1.6 c-g
N14004oIJ	6.7 d-f	2.5 g-j	77.4 c-h	6.5 c-e	1.2 b-e	1.7 b-g
N14023oI	6.6 e-g	2.3 i-l	78.7 a-f	5.5 c-g	1.1 e-h	1.8 a-d
N14027oIJ	7.1 b-d	2.2 kl	76.1 f-i	7.8 bc	1.1 h	1.7 a-f
N15017oI	6.7 d-f	2.3 j-l	78.1 b-g	6.0 c-g	1.2 e-h	1.8 a-e
N15039oI	6.2 g-i	2.5 g-j	81.2 a	4.0 fg	1.2 e-h	1.6 e-g
N15041oI	6.9 c-e	2.2 l	76.8 d-i	7.2 b-d	1.1 gh	1.8 a-d
N15044oIF	7.2 bc	2.3 i-l	74.5 i	9.2 b	1.1 f-h	1.7 b-f
N16005	7.5 b	2.7 d-f	74.6 hi	9.1 b	1.3 bc	1.3 hi
N16011	6.2 g-i	2.3 i-l	79.5 a-d	4.7 e-g	1.2 d-h	1.9 ab
N16028	6.5 e-h	2.5 f-i	80.5 ab	4.1 fg	1.2 e-h	1.6 d-g
N16030	6.6 e-h	2.4 g-k	79.5 a-d	4.7 e-g	1.2 c-g	1.7 a-f
N16032	6.9 c-e	2.2 l	77.7 b-g	6.2 c-f	1.1 gh	1.8 a-c
N16034	6.6 e-h	2.3 h-l	78.2 b-g	5.8 c-g	1.2 e-h	1.8 a-e
N16035	6.4 f-h	2.5 e-h	79.7 a-c	4.6 e-g	1.2 b-e	1.7 b-f
N16055	6.6 e-g	2.2 kl	79.7 a-d	4.7 e-g	1.1 gh	1.8 a-e
Mean	6.7	2.5	77.4	6.6	1.2	1.7
LSD²	-	-	-	-	-	-

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's LSD test.

Fatty Acid Results

Table 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, 2019¹, (cont.).

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.8 a-e ²	1.3 b-g	93.1 a	2.2 g	17.6 a	1.5 a	5.3 a-c
Sullivan	2.4 ef	1.2 b-g	79.2 c-f	13.7 c-f	13.7 hi	0.4 d-i	4.8 cd
Emery	2.6 c-f	1.3 a-g	78.6 d-f	15.4 b-e	13.9 f-i	0.4 e-j	5.2 b-d
08X09-1-2-1	2.8 a-d	1.1 e-g	77.7 fg	15.5 b-e	14.7 b-e	0.4 g-j	5.2 a-d
Walton	2.9 ab	1.5 a	77.7 fg	17.2 a-c	14.5 c-f	0.3 h-j	5.7 a
09X38-1-5-1	2.9 a-c	1.4 a-e	80.0 b-e	10.5 ef	14.4 c-g	0.5 b-f	5.4 a-c
09X39-1-11-2	3.1 a	1.3 b-g	77.8 fg	13.7 c-f	15.2 b	0.4 f-j	5.7 ab
11X33-1-4-3	2.7 b-e	1.1 fg	76.4 g	21.9 a	14.8 b-d	0.2 j	5.3 a-c
N13049oIJ	2.6 d-f	1.4 a-d	78.7 d-f	15.3 b-e	13.7 g-i	0.4 e-j	5.0 cd
N13054oI	2.5 d-f	1.2 b-g	78.8 d-f	14.8 b-e	13.8 g-i	0.4 d-j	4.8 cd
N14002oIJ	2.7 b-f	1.3 b-g	80.1 b-d	10.0 ef	14.7 b-e	0.5 b-e	5.1 b-d
N14004oIJ	2.7 b-f	1.4 a-e	79.2 c-f	12.0 c-f	14.4 c-g	0.5 c-h	5.3 a-c
N14023oI	2.6 d-f	1.4 a-c	78.6 d-f	14.4 b-f	14.0 e-h	0.4 d-j	5.1 b-d
N14027oIJ	2.6 c-f	1.3 a-g	80.3 b-d	9.9 ef	14.4 c-h	0.5 b-d	5.0 cd
N15017oI	2.7 b-f	1.4 a-e	78.9 d-f	14.8 b-e	14.2 d-h	0.4 d-i	5.2 b-d
N15039oI	2.4 f	1.1 fg	78.0 fg	20.3 ab	13.3 i	0.3 h-j	4.7 d
N15041oI	2.6 b-f	1.4 a-c	80.0 b-e	10.7 d-f	14.2 d-h	0.5 b-g	5.1 b-d
N15044oIF	2.6 b-f	1.3 a-f	81.4 b	8.3 fg	14.6 b-f	0.6 b	5.1 b-d
N16005	2.5 d-f	1.1 g	80.9 bc	8.4 fg	15.0 bc	0.6 bc	4.9 cd
N16011	2.8 a-d	1.4 a-c	78.0 fg	17.1 a-c	13.9 f-i	0.3 h-j	5.4 a-c
N16028	2.5 d-f	1.2 c-g	77.5 fg	20.1 ab	13.9 f-i	0.3 ij	4.9 cd
N16030	2.7 b-f	1.3 a-g	77.8 fg	17.1 a-c	14.1 d-h	0.3 h-j	5.2 b-d
N16032	2.7 b-e	1.4 ab	79.0 d-f	12.6 c-f	14.3 d-h	0.4 d-i	5.3 a-d
N16034	2.7 a-e	1.4 a-d	78.8 d-f	13.6 c-f	14.2 d-h	0.4 d-i	5.3 a-c
N16035	2.6 c-f	1.2 d-g	78.0 fg	17.2 a-c	13.9 f-i	0.3 h-j	5.0 cd
N16055	2.5 d-f	1.3 a-f	78.1 e-g	16.9 a-d	13.8 g-i	0.3 h-j	5.0 cd
Mean	2.7	1.3	79.3	14.1	14.4	0.4	5.2
LSD²	-	-	-	-	-	-	-

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's 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 Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated averaged across all locations, 2019.¹

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	8.9 a ²	2.6 b-d	55.9 l	25.8 a	1.3 cd	1.3 q
Sullivan	5.9 g-j	2.4 d-f	78.3 c-f	6.3 h-k	1.2 e-h	1.7 f-l
Wynne	6.1 f-h	2.6 b-d	78 d-g	6.6 g-j	1.2 c-f	1.6 m-p
Emery	5.7 j-l	2.7 bc	80.4 a	4.5 m-o	1.2 c-e	1.7 i-n
Bailey II	6.9 b	2.6 b-d	70.2 k	13.4 b	1.2 c-f	1.6 n-p
08X09-1-2-1	6.1 e-g	2.4 e-g	77.2 e-g	6.7 f-i	1.2 f-j	2.0 ab
Walton	5.6 l	2.6 bc	79.3 a-d	4.7 m-o	1.3 cd	2.0 a
09X38-1-5-1	6.3 d-f	2.5 b-d	77.5 e-g	6.7 g-j	1.3 c-e	1.7 h-m
09X39-1-11-2	6.0 g-i	3.0 a	78.3 c-f	5.4 j-n	1.4 a	1.6 l-o
11X33-1-4-3	6.0 gh	3.0 a	80.1 ab	4.0 o	1.4 a	1.5 op
N13049oIJ	5.9 g-k	2.2 hi	80.7 a	4.4 m-o	1.1 kl	1.8 c-g
N13054ol	6.0 g-i	2.2 i	79.9 ab	4.9 l-o	1.1 kl	1.9 bc
N14002oIJ	7.0 b	2.6 b-d	72.1 j	11.6 c	1.2 c-f	1.5 p
N14004oIJ	6.3 c-f	2.7 b	76.5 gh	7.5 f-h	1.3 bc	1.7 j-n
N14023ol	5.9 g-j	2.3 g-i	80.5 a	4.6 m-o	1.1 kl	1.8 d-i
N14027oIJ	6.1 f-h	2.2 g-i	79.5 a-d	5.6 i-m	1.1 l	1.7 f-l
N15017ol	6.1 f-h	2.3 f-i	78.5 b-e	6.0 i-l	1.2 e-i	1.8 c-f
N15039ol	5.7 i-l	2.5 b-e	80.3 a	4.8 l-o	1.2 e-g	1.7 k-n
N15041ol	6.6 c	2.3 g-i	75.3 hi	9.0 de	1.1 i-l	1.7 f-k
N15044oIF	6.4 cd	2.2 i	76.6 gh	8.0 ef	1.1 kl	1.8 e-j
N16005	6.8 b	2.9 a	74.4 i	9.6 d	1.3 ab	1.3 q
N16011	5.6 kl	2.3 f-i	79.9 a-c	5.1 k-o	1.2 g-k	1.9 b-d
N16028	5.9 g-k	2.5 c-e	80.6 a	4.1 no	1.2 d-f	1.7 f-k
N16030	6.0 gh	2.4 e-h	80.3 a	4.3 m-o	1.2 e-h	1.8 c-h
N16032	6.4 c-e	2.3 g-i	76.8 f-h	7.8 e-g	1.1 j-l	1.7 g-m
N16034	6.0 g-i	2.3 f-i	79.6 a-d	5.4 j-n	1.1 h-l	1.8 d-i
N16035	5.9 h-l	2.5 c-e	80.2 a	4.8 l-o	1.2 e-g	1.7 k-n
N16055	6.1 f-h	2.2 i	79.3 a-d	5.6 i-m	1.1 kl	1.9 b-e
Mean	6.2	2.5	77.4	7.0	1.2	1.7
LSD²	-	-	-	-	-	-

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's LSD test.

Fatty Acid Results

Table 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, 2019¹. (cont.)

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.8 bc ²	1.4 c-g	93.8 a	2.2 o	17.0 a	1.5 a	5.5 a-d
Sullivan	2.5 f-h	1.6 a	79.6 f-h	13.3 g-i	13.7 g-j	0.5 g-j	5.3 c-f
Wynne	2.6 d-g	1.4 c-g	79.7 fg	12.9 h-j	13.8 f-i	0.5 f-h	5.2 d-i
Emery	2.5 f-i	1.4 c-g	78.2 i-k	18.4 b-d	13.4 i-o	0.3 m-o	5.1 e-i
Bailey II	2.6 d-f	1.4 c-g	84.9 b	5.4 n	14.7 bc	0.9 b	5.2 d-h
08X09-1-2-1	2.9 a	1.5 a-d	79.6 f-h	12.7 h-j	14.2 d-f	0.5 gh	5.6 a-c
Walton	2.9 ab	1.6 ab	77.9 j-l	18.8 bc	14.0 d-g	0.3 m-o	5.7 a
09X38-1-5-1	2.8 bc	1.3 e-g	79.5 f-h	12.6 h-j	14.2 d-f	0.5 g-i	5.3 c-f
09X39-1-11-2	3.0 a	1.3 e-g	78.0 j-l	15.4 d-h	14.7 bc	0.4 j-n	5.7 ab
11X33-1-4-3	2.7 cd	1.4 c-g	77.0 l	21.7 a	14.4 b-d	0.3 o	5.4 b-e
N13049oIJ	2.4 ij	1.4 b-f	78.5 h-k	18.7 bc	13.0 o	0.3 l-o	4.9 ij
N13054oI	2.5 f-h	1.5 a-e	78.7 g-k	17.5 b-f	13.3 j-o	0.4 j-n	5.1 e-j
N14002oIJ	2.7 c-e	1.3 d-g	83.3 c	6.9 mn	14.8 b	0.8 c	5.2 d-h
N14004oIJ	2.5 e-g	1.5 a-f	80.1 ef	10.8 i-l	14.3 c-e	0.5 e-g	5.3 d-g
N14023oI	2.4 h-j	1.5 a-f	78.6 h-k	18.5 bc	13.1 no	0.3 l-o	5 h-j
N14027oIJ	2.4 j	1.4 c-g	79.4 f-h	15.3 e-h	13.2 m-o	0.4 h-l	4.8 j
N15017oI	2.6 d-g	1.5 a-f	79.4 f-h	14.8 f-h	13.6 g-l	0.4 g-k	5.2 d-h
N15039oI	2.4 h-j	1.3 c-g	78.7 g-k	17.8 b-f	13.2 k-o	0.4 k-o	5.0 h-j
N15041oI	2.5 f-j	1.5 a-f	81.8 d	8.6 k-m	13.9 e-h	0.6 d	5.1 f-j
N15044oIF	2.5 f-j	1.4 b-f	81.1 de	10.1 j-l	13.7 g-k	0.6 de	5.0 g-j
N16005	2.4 g-j	1.2 g	81.6 d	8.1 l-n	14.7 bc	0.6 d	5.0 h-j
N16011	2.6 d-g	1.5 a-c	79.0 g-j	16.5 c-f	13.2 l-o	0.4 i-n	5.2 d-h
N16028	2.5 e-h	1.3 c-g	77.9 kl	20.1 ab	13.5 h-n	0.3 no	5.1 f-j
N16030	2.6 d-g	1.5 a-f	78.0 j-l	19.1 a-c	13.6 g-m	0.3 m-o	5.2 d-h
N16032	2.5 g-j	1.4 b-f	80.9 de	11.4 i-k	13.7 g-k	0.6 d-f	5.0 h-j
N16034	2.5 f-j	1.4 b-f	79.1 f-i	16.2 c-g	13.3 j-o	0.4 h-m	5.0 f-j
N16035	2.4 g-j	1.3 fg	78.6 h-k	18.2 b-e	13.3 i-o	0.4 k-o	5.0 h-j
N16055	2.5 f-j	1.5 a-f	79.3 f-h	15.1 f-h	13.3 j-o	0.4 h-l	5.0 f-j
Mean	2.6	1.4	80.1	14.3	13.9	0.5	5.2
LSD	-	-	-	-	-	-	-

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's 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 Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Two-year averages across all locations, (2018 – 2019)¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.1 a ²	2.7 cd	55.4 g	26.2 a	1.3 b	1.3 f
Sullivan	6.2 d-f	2.5 ef	77.5 ef	6.9 b-d	1.3 e-h	1.7 d
Wynne	6.4 bc	2.7 b-d	76.5 f	7.8 bc	1.3 c-f	1.6 e
Emery	5.8 hi	2.7 bc	80.5 a-c	4.4 g	1.3 b-e	1.7 e
Bailey II	6.3 cd	2.6 c-e	76.2 f	8.4 b	1.3 d-g	1.6 e
08X09-1-2-1	6 f-h	2.4 fg	78.8 c-e	5.2 e-g	1.2 h	2.0 a
Walton	5.7 i	2.7 cd	79.9 a-d	4.3 g	1.3 b-d	2.0 a
09X38-1-5-1	6.3 cd	2.7 bc	78.9 c-e	5.3 e-g	1.3 b-d	1.7 e
09X39-1-11-2	5.9 gh	3.2 a	79.5 b-d	4.3 g	1.5 a	1.6 e
N13049oIJ	6.0 e-g	2.3 hi	80.7 ab	4.5 g	1.1 i	1.8 b-d
N13054oI	6.1 e-g	2.3 i	80.2 a-c	4.8 fg	1.1 i	1.8 b
N14002oIJ	6.5 b	2.6 cd	76.6 f	7.6 bc	1.3 d-f	1.6 e
N14004oIJ	6.2 c-e	2.8 b	78.3 de	6.0 d-f	1.3 bc	1.6 e
N14023oI	6 f-h	2.3 hi	81.0 ab	4.2 g	1.1 i	1.8 cd
N14027oIJ	6.1 d-g	2.3 hi	80.3 a-c	4.9 fg	1.1 i	1.7 d
N15017oI	6.1 e-g	2.4 gh	79.7 a-d	4.9 fg	1.2 gh	1.8 bc
N15039oI	5.7 i	2.6 de	81.3 a	4.0 g	1.2 f-h	1.7 e
N15041oI	6.3 cd	2.3 hi	78.5 de	6.4 c-e	1.1 i	1.7 d
N15044oIF	6.2 c-e	2.3 i	79.0 c-e	6.0 d-f	1.1 i	1.8 cd
Mean	6.3	2.5	77.8	6.6	1.2	1.7
LSD²	-	-	-	-	-	-

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's LSD test.

Fatty Acid Results

Table 30. Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Two-year averages across all locations, (2018 – 2019)¹, (cont.)

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.6 bc ²	1.3 b-e	94.1 a	2.1 h	17.1 a	1.5 a	5.3 ab
Sullivan	2.4 de	1.5 a	80 cd	14.6 e-g	13.9 c-e	0.5 c-e	5.2 bc
Wynne	2.4 de	1.3 c-e	80.6 bc	11.3 g	14.1 cd	0.5 bc	5.0 c-f
Emery	2.3 e-h	1.3 c-e	78.2 g-i	19.1 a-c	13.4 fg	0.3 h	4.9 d-g
Bailey II	2.4 e-g	1.3 c-e	81.3 b	14.0 fg	13.8 c-e	0.6 b	4.9 d-g
08X09-1-2-1	2.8 a	1.5 a	78.4 gh	17.7 b-e	14.0 cd	0.4 f-h	5.5 a
Walton	2.7 b	1.5 a	77.8 hi	20.2 ab	13.8 de	0.3 h	5.5 a
09X38-1-5-1	2.5 cd	1.2 e	78.4 gh	17.3 b-e	14.1 cd	0.4 f-h	5.1 c-e
09X39-1-11-2	2.8 a	1.3 de	77.1 i	20.5 ab	14.6 b	0.3 h	5.5 a
N13049oIJ	2.2 hi	1.4 bc	78.6 gh	19.2 ab	13.0 hi	0.3 gh	4.7 gh
N13054ol	2.3 e-h	1.4 bc	78.7 f-h	18.3 b-d	13.2 g-i	0.4 f-h	4.9 e-h
N14002oIJ	2.4 de	1.3 c-e	80.3 bc	14.8 ef	14.2 c	0.5 b-d	5.0 c-f
N14004oIJ	2.4 ef	1.4 b-d	79.0 d-g	14.7 ef	14.1 cd	0.4 e-g	5.1 cd
N14023ol	2.2 hi	1.4 bc	78.4 gh	20.1 ab	13.0 i	0.3 h	4.7 gh
N14027oIJ	2.2 i	1.4 b-d	78.9 e-g	18.5 b-d	13 hi	0.4 f-h	4.7 h
N15017ol	2.4 de	1.4 ab	78.5 gh	18.2 b-d	13.5 ef	0.4 f-h	5.1 cd
N15039ol	2.3 f-i	1.3 c-e	78.1 g-i	22.1 a	13.1 hi	0.3 h	4.8 f-h
N15041ol	2.2 g-i	1.4 bc	80 c-e	15.8 d-f	13.4 f-h	0.5 c-e	4.8 gh
N15044oIF	2.3 f-i	1.4 b-d	79.7 c-f	15.9 c-f	13.3 f-i	0.4 d-f	4.8 gh
Mean	2.4	1.4	79.8	16.6	13.8	0.5	5.0
LSD²	-	-	-	-	-	-	-

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's 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 Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Three-year averages across all locations, (2017 – 2019)¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey	9.2 a ²	2.6 cd	54.5 h	27.0 a	1.3 b	1.3 d
Sullivan	6.0 cd	2.5 e	78.3 d-f	6.2 c-e	1.2 e	1.8 b
Wynne	6.3 b	2.6 b-d	77.0 fg	7.4 c	1.3 c-e	1.7 c
Emery	5.8 ef	2.6 bc	80.5 ab	4.5 fg	1.3 c-e	1.7 c
Bailey II	6.4 b	2.5 de	75.5 g	9.0 b	1.2 e	1.7 c
08X09-1-2-1	5.9 de	2.3 f	79.0 c-e	5.2 e-g	1.2 f	2.0 a
Walton	5.7 f	2.6 b-d	79.5 b-d	4.7 fg	1.3 b-d	2.0 a
09X38-1-5-1	6.2 bc	2.6 b-d	79.3 b-e	5.1 e-g	1.3 bc	1.7 c
09X39-1-11-2	5.8 ef	3.0 a	79.9 a-c	4.1 g	1.4 a	1.7 c
N14002oIJ	6.4 b	2.6 b-d	77.8 ef	6.6 cd	1.3 de	1.7 c
N14004oIJ	6.1 cd	2.7 b	79 c-e	5.5 d-f	1.3 bc	1.7 c
N14023ol	5.9 de	2.2 f	81.2 a	4.2 g	1.1 g	1.8 b
Mean	6.3	2.6	76.8	7.5	1.3	1.7
LSD²	-	-	-	-	-	-

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's LSD test.

Fatty Acid Results

Table 31. Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Three-year averages across all locations, (2017 – 2019)¹, (cont.)

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
Bailey	2.7 b ²	1.4 b	94.7 a	2.1 f	17.2 a	1.6 a	5.4 a
Sullivan	2.4 cd	1.5 a	79.6 cd	15.6 d	13.7 c	0.4 de	5.2 b
Wynne	2.4 cd	1.4 bc	80.4 c	11.8 e	13.9 c	0.5 c	5.0 bc
Emery	2.3 e	1.3 b-d	78.3 e	19 a-c	13.3 d	0.3 fg	4.9 c
Bailey II	2.4 de	1.3 b-d	81.9 b	12.2 e	13.8 c	0.6 b	4.9 c
08X09-1-2-1	2.8 a	1.5 a	78.5 e	17.4 cd	13.8 c	0.4 ef	5.5 a
Walton	2.7 b	1.5 a	78.2 e	20.1 ab	13.7 c	0.3 fg	5.5 a
09X38-1-5-1	2.5 c	1.3 d	78.4 e	17.7 b-d	13.9 c	0.4 ef	5.1 bc
09X39-1-11-2	2.8 a	1.3 cd	77.1 f	21.5 a	14.4 b	0.3 g	5.5 a
N14002oIJ	2.4 cd	1.3 b-d	79.6 cd	16.3 d	13.9 c	0.5 cd	5.0 c
N14004oIJ	2.4 de	1.4 b	78.8 de	16.1 d	13.8 c	0.4 d-f	5.1 bc
N14023oI	2.2 f	1.4 b	78.4 e	20.3 a	12.9 e	0.3 fg	4.7 d
Mean	2.5	1.4	80.3	15.9	14.0	0.5	5.2
Fisher LSD	-	-	-	-	-	-	-

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 32. Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Rain Shelter Trial, Suffolk, VA 2019¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
N04074FCT (ck)	9 b ²	2.2 b	57 e	25 a	1.1 bc	1.63 de
SPT06-07 (ck)	10 a	2.5 a	52 f	28 a	1.24 a	1.42 e
N14004	6 d-g	2.1 b-d	77 a-c	7 de	1.11 b	1.94 a-c
N14023	6 e-g	1.9 cd	79 a	6 e	0.99 d	1.97 a-c
N15017	7 d-f	1.9 b-d	76 a-c	8 c-e	1.05 b-d	1.94 a-c
N15041	7 d	1.9 d	74 bc	10 cd	1 d	1.94 a-c
N16032	7 de	2 b-d	72 c	12 c	1.06 b-d	1.88 b-d
N16034	6 fg	2.1 b-d	79 a	6 e	1.01 d	1.83 b-d
N16035	6 d-g	2.2 bc	78 ab	6 de	1.09 bc	1.78 b-d
N16055	8 c	2 b-d	66 d	17 b	1.06 b-d	1.75 cd
N17033	6 d-g	1.9 cd	76 a-c	8 c-e	1.01 d	2.19 a
N17034	6 g	2.2 b	80 a	5 e	1.09 bc	1.84 b-d
N17045	6 fg	2 b-d	80 a	5 e	1.03 cd	1.9 b-d
N17047	6 fg	1.9 cd	78 a	6 de	1.01 d	2.04 ab
Mean	6.9	2.0	73.2	10.6	1.1	1.9
LSD	0.8	2.8	4.4	3.8	0.1	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's LSD test.

Fatty Acid Results

Table 32. Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Rain Shelter Trial, Suffolk, VA 2019¹, (cont.)

Variety	Behenic C22:0	Lignoceric C24:0	Iodine Value ³	O/L ratio ⁴	% Total Saturated	P/S ratio	% Total Long Chain Saturated
N04074FCT (ck)	2.98 b ²	1.53 ab	93 a	2 g	16 b	1.5 a	5.6 b
SPT06-07 (ck)	3.26 a	1.39 b	95 a	2 g	18 a	1.5 a	5.9 a
N14004	2.93 bc	1.54 ab	80 de	10 b-e	14 d	0.5 de	5.6 bc
N14023	2.66 d-f	1.55 ab	79 e	14 a-c	13 de	0.4 e	5.2 ef
N15017	2.76 c-e	1.69 a	81 de	9 c-e	14 d	0.6 de	5.5 b-d
N15041	2.79 b-d	1.56 ab	82 cd	8 d-f	14 d	0.7 cd	5.3 c-e
N16032	2.63 d-f	1.54 ab	84 c	6 e-g	14 d	0.8 c	5.2 ef
N16034	2.58 ef	1.43 b	80 de	15 ab	13 e	0.4 e	5 f
N16035	2.71 d-f	1.42 b	79 e	13 a-d	14 de	0.4 e	5.2 ef
N16055	2.94 bc	1.55 ab	88 b	4 fg	15 c	1.1 b	5.6 bc
N17033	2.94 bc	1.66 a	81 c-e	10 b-e	14 de	0.6 de	5.6 b
N17034	2.55 f	1.38 b	79 e	16 a	13 e	0.4 e	5 f
N17045	2.67 d-f	1.42 b	79 e	16 a	13 e	0.4 e	5.1 ef
N17047	2.69 d-f	1.54 ab	80 de	13 a-d	13 de	0.5 e	5.2 d-f
Mean	2.8	1.5	82.8	9.9	14.3	0.7	5.4
LSD	0.2	0.2	2.8	5.1	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.

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.