

2022

Peanut Variety and Quality Evaluation Results

Quality Data

**Tidewater Agricultural Research and
Extension Center**

Virginia Agricultural Experiment Station



**Virginia
Cooperative
Extension**

Virginia Tech
Virginia State University



PEANUT VARIETY AND QUALITY

EVALUATION RESULTS

2022

II. Quality Data

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TABLE OF CONTENTS

Acknowledgements.....	i
Technical Support.....	iii
List of Cooperators	iv
Table of Contents.....	v
List of Tables	vi
Introduction.....	1
Plant Material and Test Location.....	2
2022 Blanching Results	4
2022 Fatty Acid Results.....	22

List of Tables and Figures

1.	Breeding lines and varieties evaluated in 2022	2
2.	Laboratory sample blanching of Extra-Large Kernels (ELK) from Tidewater AREC (Suffolk), VA, Dig 1, 2022	4
3.	Laboratory sample blanching of Extra-Large Kernels (ELK) from Tidewater AREC (Suffolk), VA, Dig 2, 2022	5
4.	Laboratory sample blanching of Extra-Large Kernels (ELK) from Tidewater AREC (Suffolk), VA, Average of all Digs, 2022.....	6
5.	Laboratory sample blanching of Extra-Large Kernels (ELK) from Martin County, NC, Dig 1, 2022	7
6.	Laboratory sample blanching of Extra-Large Kernels (ELK) from Martin County, NC, Dig 2, 2022	8
7.	Laboratory sample blanching of Extra-Large Kernels (ELK) from Martin County, NC, Average of all Digs, 2022	9
8.	Laboratory sample blanching of Extra-Large Kernels (ELK). Averages from Tidewater AREC (Suffolk), VA and Martin County, NC, 2022	10
9.	Laboratory sample blanching of Extra-Large Kernels (ELK). Averages from Tidewater AREC (Suffolk), VA and Martin County, NC., Two-year averages (2021-2022).....	11
10.	Laboratory sample blanching of Extra-Large Kernels (ELK). Averages from Tidewater AREC (Suffolk), VA and Martin County, NC., Three-year averages (2020-2022).....	12
11.	Laboratory sample blanching of Medium Kernels from Tidewater AREC (Suffolk), VA, Dig 1, 2022	13
12.	Laboratory sample blanching of Medium Kernels from Tidewater AREC (Suffolk), VA, Dig 2, 2022	14
13.	Laboratory sample blanching of Medium Kernels from Tidewater AREC (Suffolk), VA, Average of all Digs, 2022	15
14.	Laboratory sample blanching of Medium Kernels from Martin County, NC, Dig 1, 2022	16
15.	Laboratory sample blanching of Medium Kernels from Martin County, NC, Dig 2, 2022	17
16.	Laboratory sample blanching of Medium Kernels from Martin County, NC, Average of all Digs, 2022	18
17.	Laboratory sample blanching of Medium Kernels. Averages from Tidewater AREC (Suffolk), VA and Martin County, NC, 2022	19
18.	Laboratory sample blanching of Medium Kernels. Averages from Tidewater AREC (Suffolk), VA and Martin County, NC, Two-year averages (2021-2022).....	20
19.	Laboratory sample blanching of Medium Kernels. Averages from Tidewater AREC (Suffolk), VA and Martin County, NC., Three-years averages (2020-2022)	21

20.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Tidewater AREC (Suffolk), VA, Dig 1, 2022.....	22
21.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Tidewater AREC (Suffolk), VA, Dig 2, 2022.....	24
22.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Tidewater AREC (Suffolk), VA, average of all Digs, 2022	26
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, 2022.....	28
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, 2022.....	30
25.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Martin County, NC, Average of all Dig, 2022	32
26.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Rocky Mount, NC, 2022	34
27.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Bladen, NC, 2022.....	36
28.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated from Blackville, SC, 2022	38
29.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Averaged across all locations, 2022.....	40
30.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Two-year averages across all locations, (2021- 2022).....	42
31.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic (O/L) Ratio, % Total Saturated, Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Three-year averages across all locations, (2020- 2022).....	44
32.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, %Total Saturated, Total Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Rain Shelter Trial, Suffolk, VA, 2022.....	46
33.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, %Total Saturated, Total Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Rain Shelter Trial, Suffolk, VA, (2021 – 2022) Two-year averages.....	48
34.	Fatty Acid Composition, Iodine Values, Oleic/Linoleic O/L Ratio, %Total Saturated, Total Polyunsaturated/Saturated (P/S) Ratio, and % Total Long Chain Saturated. Rain Shelter Trial, Suffolk, VA, (2020– 2022) Three-year averages	50

INTRODUCTION

Along with agronomic and grade information, data on kernel and pod quality are essential for release of new peanut cultivars to ensure acceptability by the entire peanut trade. The present report contains the quality data collected on 5 Virginia-type cultivars that currently are on the market and 20 advanced breeding lines tested in the Peanut Variety and Quality Evaluation (PVQE) small plots in 2022. The small PVQE plots with 25 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.

2022 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.

PLANT MATERIAL AND TEST LOCATIONS

Table 1. Names and pedigree of the genotypes (advanced breeding lines and commercial varieties) evaluated in 2022.

Genotype number	Variety/line	Parentage
1	Bailey II	Bailey /4/ X07016, Bailey // X05027, Bailey / N02060ol, X05249 /3/ Bailey
2	Emery	N03079FT*2 / Brantley
3	NC-20	N01015T / N00098ol, X02083 // Sugg
4	Sullivan	N03079FT*2 / N02059ol
5	Walton	2000x10-1-B2-3-2-2/97x48-HO3-7-B2-2-b3-B
6	N14002	N03079FT // X05024, N03079FT / N02064ol
7	N15017	Bailey /4/ X07018, Bailey // X05028, Bailey / N02064ol, X05250 /3/ Bailey
8	N15039	N03079FT*2 / N02054ol, X03153 // N05042F
9	N15041	N03079FT*2 / N02059ol, X03155 // N05044FCSm
10	N15044	N03079FT*2 / N02059ol, X03155 // N05044FCSm
11	N17036	Emery /3/ N11035olSrT, N03079FT*2 / Brantley, X03151 // Sugg
12	N17040	N03079FT*2 / Brantley, N10047ol // N12010ol, Bailey*4 / N02060ol
13	N17041	N03079FT*2 / Brantley, N10047ol // N12010ol, Bailey*4 / N02060ol
14	N17045	Bailey*2 / Brantley, N10053ol /3/ CRSP 1050-110, Florida MDR 98 / Bayo Grande, 0020-20 // FNC94022-1-2-1-1-b3-B, N91026E / PI 576638
15	N17047	Bailey*2 / Brantley, N10053ol /3/ CRSP 1050-110, Florida MDR 98 / Bayo Grande, 0020-20 // FNC94022-1-2-1-1-b3-B, N91026E / PI 576638
16	N18002	N00052 / N00098ol, N09024olJ // N09037ol, N03079FT*2 / Brantley
17	N18010	N03079FT*2 / Brantley, N09037ol // Sugg
18	N18012	N03075FT / N00098ol, N09053olCSm // N08070olJC, N03079FT*2 / N02059ol
19	N18026	N03079FT*2 / N02054ol, N09042olF // Bailey II, Bailey*4 / N02060ol
20	N18029	Emery /3/ N11035olSrT, N03079FT*2 / Brantley, X03151 // Sugg
21	N18033	Sullivan /3/ N11045ol, N03079FT*2 / N02054ol, X03153 // N03078FT
22	N18039	Sullivan /3/ N11045ol, N03079FT*2 / N02054ol, X03153 // N03078FT
23	N18044	Emery // N10043olJ, N02006*2 / N02059ol
24	N18049	N07018JCSm // N12009olCLT, Bailey*4 / N02060ol
25	N18055	Emery // N10043olJ, N02006*2 / N02059ol

¹ N14023ol was released as a cultivar in 2020, as 'NC 20'.

Small Test Plots

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 2022 PVQE locations and digging dates in Tables 20 through 28. Table 29 shows the content of the fatty acids averaged across all locations in 2022. Two- and three-year averages are included in Tables 30 and 31. Finally, fatty acid composition of cultivars and breeding lines exposed to soil water deficit stress is reported in Tables 32 and 34.

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, 2022 (19 September).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.5 ab	4.7 b	0.9 a	2.7 bc	91.2 a	0.0 c	4.4 f
Emery	5.5 ab	4.8 b	0.7 b	2.9 a-c	90.2 a-d	0.0 c	5.2 c-f
NC-20	5.6 ab	4.8 b	0.8 ab	3.6 a-c	89.3 a-h	0.2 c	5.3 b-f
Sullivan	5.5 ab	4.8 b	0.7 b	3.0 a-c	90.0 a-f	0.0 c	5.4 b-f
Walton	5.5 ab	4.7 b	0.9 a	4.5 a	88.0 d-h	0.2 c	5.9 a-f
N14002	5.6 ab	4.8 b	0.8 ab	3.3 a-c	88.1 d-h	0.0 c	7.0 a-d
N15017	5.5 ab	4.8 b	0.7 b	4.0 ab	88.5 c-h	0.2 bc	5.7 b-f
N15039	5.6 a	4.8 b	0.9 a	3.0 a-c	89.3 a-h	0.0 c	6.0 a-f
N15041	5.5 ab	4.7 b	0.8 ab	3.5 a-c	90.7 a-c	0.0 c	4.2 f
N15044	5.5 ab	5.3 a	0.7 b	3.8 ab	88.7 b-h	0.0 c	5.9 a-f
N17036	5.5 b	4.8 b	0.7 b	3.1 a-c	88.8 b-h	0.0 c	6.4 a-e
N17040	5.5 ab	4.8 b	0.8 ab	2.8 a-c	90.1 a-e	0.0 c	5.4 b-f
N17041	5.6 ab	4.7 b	0.9 a	3.4 a-c	89.8 a-f	0.0 c	5.1 d-f
N17045	5.6 ab	4.8 b	0.8 ab	2.0 c	90.8 ab	0.0 c	5.6 b-f
N17047	5.5 ab	4.8 b	0.8 ab	3.4 a-c	87.1 h	0.5 a	7.6 a
N18002	5.5 ab	5.3 a	0.8 ab	2.6 bc	89.9 a-f	0.0 c	5.8 a-f
N18010	5.6 ab	4.8 b	0.8 ab	3.7 a-c	87.8 e-h	0.0 c	6.9 a-e
N18012	5.6 ab	4.8 b	0.8 ab	3.8 ab	87.3 gh	0.2 c	7.1 a-c
N18026	5.5 ab	4.8 b	0.8 ab	4.0 ab	88.9 a-h	0.0 c	5.5 b-f
N18029	5.6 ab	4.8 b	0.8 ab	3.3 a-c	87.3 gh	0.4 ab	7.6 a
N18033	5.5 b	4.8 b	0.7 b	3.2 a-c	89.6 a-g	0.0 c	5.6 b-f
N18039	5.5 ab	4.8 b	0.8 ab	2.9 a-c	89.6 a-g	0.1 c	5.8 a-f
N18044	5.5 ab	4.7 b	0.8 ab	3.1 a-c	90.3 a-d	0.0 c	5.0 ef
N18049	5.6 ab	4.8 b	0.8 ab	3.7 ab	87.2 h	0.2 bc	7.2 ab
N18055	5.5 ab	4.8 b	0.7 b	4.0 ab	87.7 f-h	0.2 bc	6.4 a-e
Mean	5.5	4.8	0.8	3.3	89.0	0.1	5.9
LSD¹	0.1	0.4	0.1	1.7	2.3	0.2	1.9

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, 2022 (10 October).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.6 bc	4.8 a	0.8 a-c	4.1 a-f	89.4 a-d	0.0 b	4.9 d-f
Emery	5.6 bc	4.8 a	0.8 bc	3.3 c-g	90.4 a	0.4 ab	4.3 ef
NC-20	5.5 c	4.8 a	0.8 bc	2.7 g	87.5 a-e	0.2 ab	8.0 ab
Sullivan	5.6 bc	4.8 a	0.8 bc	3.4 c-g	89.6 a-c	0.1 ab	5.2 d-f
Walton	5.6 bc	4.8 a	0.8 a-c	3.9 a-g	88.2 a-d	0.3 ab	5.9 b-f
N14002	5.6 bc	4.8 a	0.8 a-c	4.5 a-c	87.8 a-e	0.4 ab	5.7 b-f
N15017	5.6 a-c	4.8 a	0.8 a-c	2.9 fg	89.7 a-c	0.0 b	5.8 b-f
N15039	5.7 ab	4.8 a	0.9 a	3.6 a-g	87.8 a-e	0.2 ab	7.0 a-d
N15041	5.6 bc	4.8 a	0.8 bc	3.8 a-g	90.0 ab	0.2 ab	3.9 f
N15044	5.6 bc	4.8 a	0.8 a-c	4.7 ab	86.5 de	0.2 ab	7.0 a-d
N17036	5.5 c	4.8 a	0.8 bc	3.5 b-g	87.2 b-e	0.0 b	7.7 a-c
N17040	5.5 c	4.7 a	0.8 a-c	4.3 a-e	87.0 c-e	0.2 ab	6.8 a-d
N17041	5.5 c	4.7 a	0.8 a-c	4.0 a-f	87.5 a-e	0.3 ab	6.5 a-e
N17045	5.6 a-c	4.8 a	0.9 ab	4.5 a-c	87.9 a-e	0.0 b	6.0 b-f
N17047	5.6 bc	4.8 a	0.8 a-c	3.2 d-g	88.0 a-c	0.2 ab	7.0 a-d
N18002	5.5 c	4.8 a	0.7 c	3.9 a-g	87.8 a-e	0.4 ab	6.3 a-f
N18010	5.6 a-c	4.8 a	0.9 ab	3.3 c-g	87.9 a-e	0.4 ab	6.9 a-d
N18012	5.6 a-c	4.8 a	0.8 a-c	4.8 a	87.0 c-e	0.2 ab	6.4 a-e
N18026	5.6 bc	4.8 a	0.8 a-c	3.1 e-g	90.2 a	0.0 b	5.1 d-f
N18029	5.6 a-c	4.8 a	0.9 ab	4.8 a	87.7 a-e	0.2 ab	5.7 b-f
N18033	5.5 c	4.8 a	0.7 c	3.7 a-g	87.9 a-e	0.4 a	6.4 a-e
N18039	5.6 bc	4.8 a	0.8 bc	3.7 a-g	89.3 a-d	0.2 ab	5.3 c-f
N18044	5.6 bc	4.8 a	0.8 bc	4.3 a-e	87.8 a-e	0.2 ab	6.1 b-f
N18049	5.7 a	4.8 a	0.9 a	4.5 a-d	85.1 e	0.3 ab	8.5 a
N18055	5.6 a-c	4.8 a	0.8 a-c	3.1 e-g	88.6 a-d	0.2 ab	6.5 a-e
Mean	5.6	4.8	0.8	3.8	88.2	0.2	6.2
LSD¹	0.1	0.1	0.1	1.3	3.0	0.4	2.5

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 4. Laboratory sample blanching of Extra-Large Kernels (ELK). Averages of both digging dates from Tidewater AREC (Suffolk, VA), 2022.

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.5 bc	4.7 b	0.8 a-c	3.4 ab	90.3 a	0.0 b	4.6 fg
Emery	5.5 bc	4.8 b	0.7 de	3.1 b	90.3 a	0.2 ab	4.8 fg
NC-20	5.5 bc	4.8 b	0.8 b-e	3.1 ab	88.4 a-e	0.2 ab	6.6 a-e
Sullivan	5.5 bc	4.8 b	0.7 de	3.2 ab	89.8 ab	0.1 b	5.3 e-g
Walton	5.5 bc	4.7 b	0.8 a-c	4.2 ab	88.1 b-f	0.2 ab	5.9 b-f
N14002	5.6 a-c	4.8 b	0.8 a-d	3.9 ab	87.9 b-f	0.2 ab	6.3 b-e
N15017	5.6 a-c	4.8 b	0.8 c-e	3.5 ab	89.1 a-e	0.1 ab	5.7 c-f
N15039	5.6 a	4.8 b	0.9 a	3.3 ab	88.6 a-e	0.1 ab	6.5 a-e
N15041	5.5 bc	4.8 b	0.8 b-e	3.6 ab	90.4 a	0.1 ab	4.0 g
N15044	5.5 bc	5.0 a	0.8 de	4.2 ab	87.6 c-f	0.1 ab	6.4 a-e
N17036	5.5 c	4.8 b	0.7 c-e	3.3 ab	88.0 b-f	0.0 b	7.0 a-c
N17040	5.5 bc	4.7 b	0.8 b-e	3.6 ab	88.6 a-e	0.1 ab	6.1 b-f
N17041	5.5 bc	4.7 b	0.8 a-c	3.7 ab	88.7 a-e	0.2 ab	5.8 c-f
N17045	5.6 ab	4.8 b	0.8 a-c	3.2 ab	89.3 a-d	0.0 b	5.8 c-f
N17047	5.5 bc	4.8 b	0.8 b-e	3.3 ab	87.5 d-f	0.3 a	7.3 ab
N18002	5.5 bc	5.0 a	0.7 de	3.3 ab	88.9 a-e	0.2 ab	6.0 b-f
N18010	5.6 ab	4.8 b	0.8 a-d	3.5 ab	87.8 b-f	0.2 ab	6.9 a-d
N18012	5.6 ab	4.8 b	0.8 b-e	4.3 a	87.1 ef	0.2 ab	6.7 a-e
N18026	5.5 bc	4.8 b	0.8 b-e	3.5 ab	89.6 a-c	0.0 b	5.3 e-g
N18029	5.6 ab	4.8 b	0.8 a-d	4.0 ab	87.5 d-f	0.3 a	6.6 a-e
N18033	5.5 c	4.8 b	0.7 e	3.4 ab	88.7 a-e	0.2 ab	6.0 b-f
N18039	5.5 bc	4.8 b	0.8 c-e	3.3 ab	89.4 a-d	0.1 ab	5.5 d-g
N18044	5.5 bc	4.8 b	0.8 b-e	3.7 ab	89.0 a-e	0.1 ab	5.5 d-f
N18049	5.6 a	4.8 b	0.9 ab	4.1 ab	86.2 f	0.2 ab	7.9 a
N18055	5.6 a-c	4.8 b	0.8 c-e	3.5 ab	88.1 b-f	0.2 ab	6.5 a-e
Mean	5.5	4.8	0.8	3.6	88.6	0.1	6.0
LSD¹	0.1	0.2	0.1	1.2	2.0	0.3	1.6

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 5. Laboratory sample blanching of Extra-Large Kernels (ELK) from Martin County, NC, Dig 1, 2022 (13 September).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.6 ab	4.8 ab	0.9 ab	2.4 ab	92.7 a	0.0 b	3.3 c
Emery	5.6 ab	4.7 b	0.9 a	3.4 ab	91.4 ab	0.0 b	3.5 c
NC-20	5.6 ab	4.8 ab	0.8 a-c	3.4 ab	87.9 b-e	0.2 ab	6.9 a
Sullivan	5.6 ab	4.7 b	0.9 ab	3.1 ab	89.5 a-e	0.2 ab	5.6 a-c
Walton	5.6 ab	4.8 ab	0.8 a-c	3.6 ab	87.5 b-e	0.2 ab	7.0 a
N14002	5.5 b	4.8 ab	0.8 bc	2.3 b	90.3 a-d	0.0 b	5.8 a-c
N15017	5.6 ab	4.8 ab	0.8 bc	3.1 ab	89.3 a-e	0.0 b	6.0 a-c
N15039	5.6 ab	4.8 ab	0.8 a-c	3.5 ab	89.1 a-e	0.2 ab	5.6 a-c
N15041	5.6 ab	4.8 ab	0.9 ab	3.9 ab	88.6 b-e	0.0 b	5.8 a-c
N15044	5.6 ab	4.8 ab	0.8 a-c	3.6 ab	87.8 b-e	0.4 ab	6.6 a
N17036	5.6 ab	4.8 ab	0.8 a-c	3.9 ab	87.3 c-e	0.3 ab	6.9 a
N17040	5.6 ab	4.8 ab	0.9 ab	3.9 ab	90.7 a-c	0.0 b	3.8 bc
N17041	5.6 ab	4.8 ab	0.8 a-c	3.0 ab	87.8 b-e	0.2 ab	7.4 a
N17045	5.6 ab	4.8 ab	0.8 a-c	3.7 ab	86.5 de	0.0 b	8.1 a
N17047	5.7 a	4.9 a	0.9 ab	4.2 ab	87.4 c-e	0.2 ab	6.6 a
N18002	5.5 b	4.8 ab	0.7 c	3.9 ab	87.3 c-e	0.2 ab	6.9 a
N18010	5.7 ab	4.8 ab	0.8 a-c	4.4 ab	85.8 e	0.4 ab	7.8 a
N18012	5.6 ab	4.8 ab	0.8 a-c	4.6 a	85.8 e	0.5 a	7.6 a
N18026	5.5 b	4.7 b	0.8 a-c	4.0 ab	88.3 b-e	0.2 ab	5.9 a-c
N18029	5.7 a	4.8 ab	0.9 a	3.9 ab	87.4 c-e	0.2 ab	6.9 a
N18033	5.7 ab	4.8 ab	0.9 ab	3.5 ab	88.1 b-e	0.2 ab	6.7 a
N18039	5.7 ab	4.8 ab	0.9 ab	3.2 ab	88.7 b-e	0.2 ab	6.3 ab
N18044	5.6 ab	4.8 ab	0.8 a-c	4.4 ab	85.8 e	0.3 ab	7.8 a
N18049	5.7 ab	4.8 ab	0.9 ab	4.3 ab	86.5 de	0.5 a	7.1 a
N18055	5.6 ab	4.8 ab	0.9 ab	4.1 ab	86.3 de	0.2 ab	7.8 a
Mean	5.6	4.8	0.8	3.7	88.2	0.2	6.4
LSD¹	0.2	0.1	0.1	2.3	4.0	0.4	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 6. Laboratory sample blanching of Extra-Large Kernels (ELK) from Martin County, NC, Dig 2, 2022 (26 September).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.5 c	4.7 c	0.9 ab	3.4 ab	90.6 a-e	0.0 b	4.4 d-g
Emery	5.5 c	4.8 ab	0.8 b	3.1 ab	91.4 ab	0.0 b	3.9 fg
NC-20	5.6 bc	4.7 bc	0.9 ab	3.7 ab	91.1 a-d	0.0 b	3.6 fg
Sullivan	5.6 bc	4.7 bc	0.9 ab	3.9 a	90.0 a-f	0.2 ab	4.2 e-g
Walton	5.7 a-c	4.8 a	0.9 ab	4.0 a	88.4 b-g	0.3 ab	5.3 b-f
N14002	5.6 bc	4.7 bc	0.9 ab	3.6 ab	89.6 a-g	0.0 b	5.2 b-g
N15017	5.5 c	4.7 bc	0.8 ab	3.7 ab	89.1 a-g	0.2 ab	5.4 b-f
N15039	5.6 bc	4.8 a	0.8 b	3.3 ab	91.2 a-c	0.2 ab	3.7 fg
N15041	5.6 bc	4.8 a	0.8 b	4.2 a	90.3 a-f	0.0 b	3.9 fg
N15044	5.6 bc	4.8 ab	0.8 ab	3.4 ab	89.4 a-g	0.3 ab	4.3 d-g
N17036	5.5 c	4.7 bc	0.8 ab	4.0 a	89.2 a-g	0.4 a	4.8 c-g
N17040	5.6 bc	4.7 bc	0.9 ab	3.4 ab	90.8 a-e	0.0 b	4.2 e-g
N17041	5.6 bc	4.8 ab	0.8 ab	3.9 a	91.8 a	0.0 b	2.7 g
N17045	5.6 bc	4.8 ab	0.8 ab	3.9 a	88.4 b-g	0.4 a	5.7 b-f
N17047	5.6 a-c	4.8 a	0.8 ab	3.9 a	86.7 g	0.2 ab	7.6 ab
N18002	5.7 a-c	4.8 a	0.9 ab	3.8 ab	89.3 a-g	0.2 ab	5.1 b-g
N18010	5.6 a-c	4.8 a	0.8 ab	3.0 ab	87.9 d-g	0.3 ab	7.2 a-c
N18012	5.7 a-c	4.8 a	0.9 ab	4.3 a	87.2 fg	0.3 ab	6.6 a-e
N18026	5.7 a-c	4.8 ab	0.9 a	4.0 a	88.8 a-g	0.0 b	5.5 b-f
N18029	5.6 a-c	4.8 ab	0.9 ab	3.4 ab	87.6 e-g	0.2 ab	7.2 a-c
N18033	5.7 a-c	4.8 ab	0.9 a	3.4 ab	87.9 c-g	0.2 ab	6.8 a-d
N18039	5.7 a-c	4.8 a	0.9 ab	3.9 a	89.6 a-g	0.0 b	4.9 c-g
N18044	5.7 a-c	4.8 ab	0.8 ab	4.4 a	87.7 e-g	0.2 ab	6.1 b-f
N18049	5.7 ab	4.8 ab	0.9 ab	2.3 b	87.1 fg	0.2 ab	8.7 a
N18055	5.8 a	4.8 ab	0.9 a	4.2 a	86.7 g	0.2 ab	7.3 a-c
Mean	5.6	4.8	0.9	3.7	89.1	0.2	5.4
LSD¹	0.2	0.1	0.1	1.5	3.3	0.3	2.6

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 7. Laboratory sample blanching of Extra-Large Kernels (ELK). Averages of both digging dates from Martin County, NC, 2022.

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.6 bc	4.7 d	0.9 ab	2.9 c	91.6 a	0.0 c	3.8 ij
Emery	5.6 bc	4.7 cd	0.8 ab	3.2 a-c	91.4 ab	0.0 c	3.7 j
NC-20	5.6 a-c	4.8 b-d	0.8 ab	3.6 a-c	89.5 a-f	0.1 bc	5.2 d-j
Sullivan	5.6 bc	4.7 d	0.9 ab	3.5 a-c	89.7 a-f	0.2 a-c	4.9 e-j
Walton	5.6 a-c	4.8 a-c	0.8 ab	3.8 a-c	87.9 d-j	0.3 ab	6.2 a-g
N14002	5.5 c	4.7 cd	0.8 ab	2.9 bc	89.9 a-e	0.0 c	5.5 b-j
N15017	5.5 c	4.8 b-d	0.8 b	3.4 a-c	89.2 b-h	0.1 bc	5.7 b-j
N15039	5.6 a-c	4.8 ab	0.8 b	3.4 a-c	90.1 a-d	0.2 a-c	4.6 g-j
N15041	5.6 a-c	4.8 a-c	0.8 ab	4.0 a-c	89.4 a-g	0.0 c	4.9 f-j
N15044	5.6 bc	4.8 b-d	0.8 ab	3.5 a-c	88.6 c-j	0.3 a	5.4 c-j
N17036	5.5 c	4.7 cd	0.8 ab	3.9 a-c	88.3 d-j	0.3 a	5.8 a-i
N17040	5.6 a-c	4.7 cd	0.9 ab	3.6 a-c	90.8 a-c	0.0 c	4.0 h-j
N17041	5.6 a-c	4.8 a-c	0.8 ab	3.4 a-c	89.8 a-f	0.1 bc	5.0 d-j
N17045	5.6 a-c	4.8 a-c	0.8 ab	3.8 a-c	87.5 f-j	0.2 a-c	6.9 a-f
N17047	5.7 ab	4.8 a	0.8 ab	4.1 a-c	87.0 g-j	0.2 a-c	7.1 a-d
N18002	5.6 a-c	4.8 ab	0.8 b	3.9 a-c	88.3 d-j	0.2 a-c	6.0 a-h
N18010	5.6 a-c	4.8 a-c	0.8 ab	3.7 a-c	86.8 h-j	0.3 a	7.5 a-c
N18012	5.6 a-c	4.8 a-c	0.8 ab	4.4 a	86.5 j	0.4 a	7.1 a-d
N18026	5.6 a-c	4.7 cd	0.9 ab	4.0 a-c	88.6 c-j	0.1 bc	5.7 b-j
N18029	5.7 ab	4.8 a-c	0.9 a	3.6 a-c	87.5 e-j	0.2 a-c	7.0 a-d
N18033	5.7 ab	4.8 a-c	0.9 a	3.4 a-c	88.0 d-j	0.2 a-c	6.7 a-f
N18039	5.7 ab	4.8 ab	0.9 ab	3.5 a-c	89.1 b-i	0.1 bc	5.6 b-j
N18044	5.6 a-c	4.8 a-c	0.8 ab	4.4 a	86.7 ij	0.2 ab	6.0 a-e
N18049	5.7 a	4.8 a-c	0.9 ab	3.3 a-c	86.8 h-j	0.3 a	7.9 a
N18055	5.7 a	4.8 b-d	0.9 a	4.1 ab	86.5 j	0.2 a-c	7.5 ab
Mean	5.6	4.8	0.8	3.7	88.6	0.2	5.8
LSD ¹	0.1	0.1	0.1	1.2	2.4	0.2	2.1

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 8. Laboratory sample blanching of Extra-Large Kernels (ELK). Averages from Tidewater AREC (Suffolk, VA) and Martin County, NC, 2022.

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.5 bc	4.7 c	0.8 ab	3.1 c	91.0 a	0.0 e	4.2 i
Emery	5.5 bc	4.8 c	0.8 b-d	3.2 c	90.9 a	0.1 c-e	4.2 i
NC-20	5.6 bc	4.8 c	0.8 a-d	3.3 bc	88.9 c-f	0.1 a-e	5.9 b-g
Sullivan	5.5 bc	4.8 c	0.8 a-d	3.4 bc	89.8 a-c	0.1 a-e	5.1 f-i
Walton	5.6 bc	4.7 c	0.8 a-c	4.0 ab	88.0 e-i	0.2 a-c	6.0 b-g
N14002	5.5 bc	4.7 c	0.8 a-d	3.4 bc	88.9 c-f	0.1 c-e	5.9 c-g
N15017	5.5 bc	4.8 c	0.8 cd	3.4 bc	89.1 c-e	0.1 c-e	5.7 d-h
N15039	5.6 ab	4.8 c	0.8 a-c	3.3 bc	89.3 b-e	0.1 a-e	5.5 e-h
N15041	5.6 bc	4.8 c	0.8 a-d	3.8 a-c	89.9 a-c	0.1 de	4.4 hi
N15044	5.5 bc	4.9 ab	0.8 b-d	3.9 a-c	88.1 e-h	0.2 a-d	5.9 b-g
N17036	5.5 c	4.7 c	0.8 cd	3.6 a-c	88.1 d-h	0.2 a-e	6.4 b-e
N17040	5.5 bc	4.7 c	0.8 a-d	3.6 a-c	89.7 a-d	0.1 de	5.0 g-i
N17041	5.6 bc	4.7 c	0.8 a-d	3.6 a-c	89.2 c-e	0.1 a-e	5.4 e-i
N17045	5.6 a-c	4.8 c	0.8 a-d	3.5 bc	88.4 c-g	0.1 c-e	6.3 b-f
N17047	5.6 ab	4.8 bc	0.8 a-d	3.7 a-c	87.3 g-i	0.2 a-c	7.2 ab
N18002	5.5 bc	4.9 a	0.8 d	3.6 a-c	88.6 c-g	0.2 a-d	6.0 b-g
N18010	5.6 ab	4.8 c	0.8 a-d	3.6 a-c	87.3 g-i	0.3 a-c	7.2 a-c
N18012	5.6 ab	4.8 bc	0.8 a-d	4.4 a	86.8 hi	0.3 ab	6.9 a-d
N18026	5.6 bc	4.7 c	0.8 a-d	3.8 a-c	89.1 c-e	0.0 de	5.5 e-i
N18029	5.6 ab	4.8 c	0.8 ab	3.8 a-c	87.5 f-i	0.2 a-c	6.8 a-d
N18033	5.6 bc	4.8 c	0.8 a-d	3.4 bc	88.3 c-h	0.2 a-d	6.4 b-e
N18039	5.6 ab	4.8 bc	0.8 a-d	3.4 bc	89.3 c-e	0.1 b-e	5.5 e-h
N18044	5.6 a-c	4.8 c	0.8 a-d	4.0 ab	87.9 e-i	0.2 a-e	6.2 b-g
N18049	5.7 a	4.8 c	0.9 a	3.7 a-c	86.5 i	0.3 a	7.9 a
N18055	5.6 ab	4.8 c	0.8 a-d	3.8 a-c	87.3 g-i	0.2 a-d	7.0 a-c
Mean	5.6	4.8	0.8	3.6	88.6	0.1	5.9
LSD ¹	0.1	0.1	0.1	0.8	1.6	0.2	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 9. Laboratory sample blanching of Extra-Large Kernels (ELK). Averages from Tidewater AREC (Suffolk, VA) and Martin County, NC. Two-year averages (2021- 2022).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.6 a	4.7 b	0.9 a	2.6 b	92.1 a	0.0 c	3.6 c
Emery	5.6 a	4.8 b	0.8 a	2.7 ab	91.9 ab	0.0 a-c	3.7 c
NC-20	5.6 a	4.8 b	0.9 a	2.9 ab	90.4 bc	0.1 a-c	5.0 ab
Sullivan	5.6 a	4.8 b	0.8 a	3.0 ab	91.0 a-c	0.1 a-c	4.2 a-c
Walton	5.6 a	4.8 ab	0.9 a	3.3 ab	89.9 c	0.1 a	5.0 ab
N14002	5.6 a	4.8 b	0.8 a	3.0 ab	90.4 bc	0.0 a-c	4.9 ab
N15017	5.6 a	4.8 b	0.8 a	3.0 ab	90.8 a-c	0.0 a-c	4.5 a-c
N15039	5.6 a	4.8 ab	0.8 a	3.0 ab	90.6 a-c	0.1 a-c	4.7 a-c
N15041	5.6 a	4.8 b	0.8 a	3.3 ab	90.9 a-c	0.0 bc	4.0 bc
N15044	5.6 a	4.8 a	0.8 a	3.3 a	90.0 c	0.1 ab	4.7 a-c
N17036	5.6 a	4.8 b	0.8 a	3.2 ab	89.8 c	0.1 a-c	5.2 a
N17040	5.6 a	4.7 b	0.8 a	3.3 ab	90.4 bc	0.0 bc	4.6 a-c
N17041	5.6 a	4.8 b	0.8 a	3.2 ab	90.4 bc	0.1 a-c	4.7 a-c
N17045	5.6 a	4.8 ab	0.8 a	3.2 ab	90.1 c	0.0 a-c	5.0 ab
N17047	5.6 a	4.8 b	0.9 a	3.1 ab	90.0 c	0.1 a	5.1 ab
Mean	5.6	4.8	0.8	3.1	90.6	0.1	4.6
LSD¹	0.1	0.1	0.1	0.7	1.7	0.1	1.2

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 10. Laboratory sample blanching of Extra-Large Kernels (ELK). Averages from Tidewater AREC (Suffolk, VA) and Martin County, NC. Three-year averages (2020- 2022).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.6 bc	4.7 bc	0.8 a-c	2.1 b	93.0 a	0.0 e	3.2 cd
Emery	5.6 a-c	4.8 bc	0.8 a-c	2.2 b	93.0 a	0.0 c-e	3.2 d
NC-20	5.6 a-c	4.8 bc	0.8 a-c	2.7 a	91.1 bc	0.1 ab	4.5 ab
Sullivan	5.6 bc	4.8 bc	0.8 a-c	2.5 ab	91.7 b	0.0 c-e	4.0 ab
Walton	5.6 ab	4.8 bc	0.8 a	2.7 a	91.0 bc	0.1 a-c	4.5 ab
N14002	5.6 a-c	4.8 bc	0.8 a-c	2.8 a	91.2 bc	0.0 c-e	4.3 ab
N15017	5.6 a-c	4.8 bc	0.8 a-c	2.7 a	91.4 bc	0.0 b-e	4.2 ab
N15039	5.6 a	4.8 ab	0.8 ab	2.9 a	91.2 bc	0.0 c-e	4.2 ab
N15041	5.6 a-c	4.8 bc	0.8 a-c	2.7 a	91.2 bc	0.1 a-d	4.3 ab
N15044	5.6 a-c	4.8 a	0.8 c	2.9 a	90.6 c	0.1 a	4.7 a
N17036	5.6 bc	4.8 bc	0.8 bc	2.9 a	91.1 bc	0.1 ab	4.2 ab
N17040	5.6 c	4.7 c	0.8 a-c	2.9 a	91.4 bc	0.0 de	4.1 ab
N17041	5.6 bc	4.8 bc	0.8 a-c	2.7 a	91.3 bc	0.1 a-e	3.9 bc
N17045	5.6 ab	4.8 bc	0.8 a	2.7 a	91.4 bc	0.0 b-e	4.2 ab
N17047	5.6 a-c	4.8 bc	0.8 a-c	2.7 a	91.4 bc	0.1 ab	4.1 ab
Mean	5.6	4.8	0.8	2.7	91.5	0.05	4.1
LSD¹	0.04	0.04	0.03	0.5	1.0	0.1	0.7

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 11. Laboratory sample blanching of Medium Kernels from Tidewater AREC (Suffolk, VA), Dig 1, 2022 (19 September).

Variety	% H ₂ O before roasting	% H ₂ O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.8 a	4.8 a	1.0 a	3.3 de	73.4 a	3.7 a-c	18.1 d
Emery	5.7 a	4.8 a	0.9 a	4.0 a-d	64.6 b-d	3.6 a-c	26.3 a-c
NC-20	5.8 a	4.8 a	1.0 a	3.3 c-e	67.0 a-d	3.1 a-c	25.0 a-d
Sullivan	5.8 a	4.8 a	1.0 a	2.7 e	68.7 a-c	3.0 bc	23.9 a-d
Walton	5.7 a	4.8 a	1.0 a	3.8 a-e	64.2 b-d	3.7 a-c	26.8 a-c
N14002	5.8 a	4.8 a	1.0 a	4.1 a-d	64.5 b-d	3.4 a-c	26.4 a-c
N15017	5.8 a	4.8 a	1.0 a	4.2 a-d	63.8 b-d	3.1 bc	27.4 a-c
N15039	5.7 a	4.8 a	0.9 a	4.5 a-c	63.0 b-d	3.7 a-c	27.4 a-c
N15041	5.7 a	4.8 a	0.9 a	3.9 a-d	66.6 a-d	3.8 a-c	24.1 a-d
N15044	5.8 a	4.7 a	1.1 a	4.5 ab	64.1 b-d	3.4 a-c	26.4 a-c
N17036	5.8 a	4.8 a	1.0 a	3.6 a-e	70.3 ab	3.4 a-c	21.2 cd
N17040	5.8 a	4.8 a	1.0 a	4.0 a-d	69.3 a-c	3.4 a-c	21.8 b-d
N17041	5.8 a	4.8 a	1.0 a	3.3 de	64.5 b-d	3.8 a-c	27.0 a-c
N17045	5.7 a	4.8 a	1.0 a	3.4 b-e	68.4 a-c	4.0 a-c	22.7 a-d
N17047	5.8 a	4.9 a	0.9 a	3.9 a-d	63.5 b-d	4.0 a-c	27.1 a-c
N18002	5.8 a	4.8 a	1.0 a	4.0 a-d	67.2 a-d	3.3 a-c	24.0 a-d
N18010	5.7 a	4.8 a	1.0 a	3.6 a-e	64.9 b-d	2.9 c	27.0 a-c
N18012	5.8 a	4.8 a	1.0 a	3.8 a-e	68.3 a-c	3.2 a-c	24.2 a-d
N18026	5.8 a	4.9 a	0.9 a	4.7 a	60.5 d	3.8 a-c	29.5 a
N18029	5.8 a	4.9 a	1.0 a	4.4 a-d	61.9 cd	3.5 a-c	28.7 ab
N18033	5.8 a	4.9 a	0.9 a	4.2 a-d	62.8 b-d	3.3 a-c	28.1 a-c
N18039	5.8 a	4.9 a	1.0 a	3.4 b-e	66.0 a-d	3.6 a-c	25.5 a-c
N18044	5.7 a	4.8 a	1.0 a	3.4 b-e	65.4 b-d	4.6 a	25.0 a-d
N18049	5.8 a	4.8 a	1.0 a	4.2 a-d	65.6 a-d	4.2 a-c	24.4 a-d
N18055	5.8 a	4.8 a	1.0 a	3.7 a-e	65.6 b-d	4.4 ab	24.8 a-d
Mean	5.8	4.8	1.0	3.8	65.8	3.6	25.3
LSD ¹	0.1	0.2	0.2	1.2	7.8	1.5	7.1

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 12. Laboratory sample blanching of Medium Kernels from Tidewater AREC (Suffolk, VA), Dig 2, 2022 (10 October).

Variety	% H ₂ O before roasting	% H ₂ O after roasting	%Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.7 cd	4.8 b	0.9 a-c	3.4 d	63.0 b-e	3.0 a	29.0 a-d
Emery	5.7 cd	4.8 b	0.9 a-c	3.7 b-d	62.9 b-e	3.1 a	28.8 a-e
NC-20	5.7 cd	4.7 c	1.0 a	3.7 b-d	63.8 b-e	3.3 a	27.7 a-e
Sullivan	5.7 cd	4.9 a	0.8 c	3.7 b-d	66.4 b	3.3 a	25.1 c-e
Walton	5.7 d	4.8 b	0.9 bc	4.3 a-d	61.8 b-f	3.1 a	29.4 a-d
N14002	5.8 b	4.9 ab	1.0 ab	3.7 b-d	62.7 b-f	3.4 a	23.7 ef
N15017	5.8 bc	4.9 ab	0.9 a-c	4.6 ab	58.0 f	4.0 a	31.9 a
N15039	5.7 cd	4.9 ab	0.9 bc	4.2 a-d	59.4 ef	3.9 a	31.5 a
N15041	5.7 d	4.8 b	0.9 bc	3.6 cd	60.6 d-f	4.2 a	30.1 a-c
N15044	5.8 b	4.8 b	1.0 a	4.0 a-d	63.4 b-e	2.8 a	28.3 a-c
N17036	5.7 cd	4.8 b	0.9 a-c	3.6 b-d	71.8 a	3.4 a	19.6 f
N17040	5.8 bc	4.9 ab	0.9 a-c	4.3 a-d	61.0 c-f	4.4 a	28.8 a-e
N17041	5.7 cd	4.8 b	0.9 a-c	4.0 a-d	62.4 b-f	3.4 a	28.7 a-e
N17045	5.8 bc	4.9 a	0.9 bc	3.7 b-d	66.0 b	3.5 a	25.3 b-e
N17047	5.8 bc	4.9 ab	0.9 a-c	3.9 b-d	60.9 d-f	3.4 a	30.3 ab
N18002	5.8 bc	4.9 ab	0.9 a-c	3.7 b-d	65.2 b-d	4.0 a	25.6 b-e
N18010	5.8 bc	4.9 ab	0.9 a-c	4.2 a-d	62.2 b-f	4.0 a	28.1 a-e
N18012	5.8 bc	4.9 ab	0.9 a-c	4.1 a-d	61.0 c-f	3.8 a	29.6 a-c
N18026	5.8 b	4.9 a	0.9 a-c	4.4 a-c	59.9 ef	3.9 a	29.7 a-c
N18029	5.7 cd	4.8 b	0.9 a-c	3.8 b-d	65.8 bc	4.6 a	24.3 d-f
N18033	5.7 cd	4.9 ab	0.9 bc	4.9 a	61.9 b-f	2.8 a	28.3 a-e
N18039	5.7 cd	4.8 b	0.9 a-c	4.4 a-c	61.8 b-f	3.3 a	28.9 a-e
N18044	5.7 cd	4.9 ab	0.9 bc	3.8 b-d	60.5 d-f	4.1 a	30.2 a-c
N18049	5.9 a	4.9 a	1.0 a	4.3 a-d	60.3 d-f	4.1 a	29.7 a-c
N18055	5.8 b	4.9 a	0.9 a-c	4.3 a-d	60.7 d-f	4.0 a	29.4 a-d
Mean	5.8	4.9	0.9	4.0	62.5	3.6	28.1
LSD ¹	0.1	0.1	0.1	1.0	4.9	2.3	5.2

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 13. Laboratory sample blanching of Medium Kernels. Averages from both digging dates from Tidewater AREC (Suffolk, VA), 2022.

Variety	% H ₂ O before roasting	% H ₂ O after roasting	%Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.7 bc	4.8 ab	0.9 ab	3.3 fg	68.2 ab	3.4 ab	23.6 bc
Emery	5.7 bc	4.8 ab	0.9 b	3.8 a-g	63.7 b-e	3.3 ab	27.5 ab
NC-20	5.7 bc	4.8 b	1.0 ab	3.5 e-g	65.4 a-e	3.2 ab	26.3 ab
Sullivan	5.7 bc	4.8 ab	0.9 b	3.2 g	67.6 a-c	3.1 ab	24.5 a-c
Walton	5.7 c	4.8 ab	0.9 b	4.0 a-f	63.0 b-e	3.4 ab	28.1 ab
N14002	5.8 ab	4.8 ab	1.0 ab	3.9 a-g	63.6 b-e	3.4 ab	25.1 a-c
N15017	5.8 a-c	4.8 ab	0.9 ab	4.4 ab	60.9 de	3.5 ab	29.7 a
N15039	5.7 bc	4.8 ab	0.9 b	4.3 ab	61.2 de	3.8 ab	29.4 a
N15041	5.7 c	4.8 ab	0.9 b	3.7 b-g	63.6 b-e	4.0 ab	27.1 ab
N15044	5.8 ab	4.8 b	1.0 a	4.2 a-d	63.7 b-e	3.1 ab	27.3 ab
N17036	5.7 bc	4.8 ab	0.9 ab	3.6 c-g	71.0 a	3.4 ab	20.4 c
N17040	5.8 ab	4.8 ab	1.0 ab	4.1 a-e	65.2 b-e	3.9 ab	25.3 a-c
N17041	5.7 bc	4.8 ab	1.0 ab	3.6 b-g	63.4 b-e	3.6 ab	27.8 ab
N17045	5.7 bc	4.8 ab	0.9 b	3.5 dg	67.2 a-c	3.7 ab	24.0 bc
N17047	5.8 a-c	4.9 ab	0.9 b	3.9 a-g	62.2 c-e	3.7 ab	28.7 ab
N18002	5.8 a-c	4.8 ab	0.9 ab	3.9 a-g	66.2 a-d	3.6 ab	24.8 a-c
N18010	5.7 bc	4.8 ab	0.9 ab	3.9 a-g	63.5 b-e	3.4 ab	27.6 ab
N18012	5.8 a-c	4.8 ab	1.0 ab	4.0 a-f	64.6 b-e	3.5 ab	26.9 ab
N18026	5.8 ab	4.9 a	0.9 b	4.6 a	60.2 e	3.9 ab	29.6 a
N18029	5.8 a-c	4.8 ab	0.9 ab	4.1 a-f	63.9 b-e	4.0 ab	26.5 ab
N18033	5.7 bc	4.9 ab	0.9 b	4.6 a	62.4 c-e	3.0 b	28.2 ab
N18039	5.8 a-c	4.8 ab	0.9 ab	3.9 a-g	63.9 b-e	3.5 ab	27.2 ab
N18044	5.7 bc	4.8 ab	0.9 b	3.6 c-g	62.9 b-e	4.3 a	27.6 ab
N18049	5.8 a	4.9 ab	1.0 ab	4.3 a-c	63.0 b-e	4.1 ab	27.1 ab
N18055	5.8 ab	4.9 ab	0.9 ab	4.0 a-f	63.1 b-e	4.2 ab	27.1 ab
Mean	5.8	4.8	0.9	3.9	64.1	3.6	26.7
LSD ¹	0.1	0.1	0.1	0.7	5.6	1.2	5.3

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, 2022 (13 September).

Variety	% H ₂ O before roasting	% H ₂ O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.7 c	4.8 ab	0.9 bc	4.3 a	60.8 b-d	4.4 a-d	29.0 a-d
Emery	5.8 bc	4.8 ab	1.0 a-c	3.7 a	62.2 b-d	3.7 b-e	29.0 a-d
NC-20	5.7 c	4.9 ab	0.9 c	3.9 a	58.9 cd	5.2 a	30.4 a-c
Sullivan	5.8 bc	4.9 ab	0.9 bc	4.0 a	66.7 ab	3.7 b-e	24.1 de
Walton	5.8 bc	4.9 a	0.9 c	3.6 a	60.7 cd	4.2 a-e	29.5 a-c
N14002	5.8 bc	4.8 ab	1.0 a-c	4.3 a	58.5 cd	4.9 ab	30.8 a-c
N15017	5.8 bc	4.8 b	1.0 ab	4.3 a	58.8 cd	4.3 a-d	31.0 ab
N15039	5.7 c	4.8 ab	0.9 bc	4.1 a	62.6 b-d	3.8 a-e	28.0 a-d
N15041	5.7 c	4.9 ab	0.9 c	4.2 a	57.8 d	4.7 a-d	31.9 a
N15044	5.7 c	4.8 b	1.0 a-c	4.6 a	58.1 d	4.9 a-c	30.9 a-c
N17036	5.8 bc	4.9 ab	0.9 bc	4.1 a	60.3 cd	3.9 a-e	30.2 a-c
N17040	5.7 c	4.9 ab	0.9 c	4.1 a	58.5 cd	5.0 ab	30.9 a-c
N17041	5.7 c	4.8 ab	0.9 bc	4.1 a	59.7 cd	4.1 a-e	25.6 cd
N17045	5.8 bc	4.9 ab	0.9 bc	3.3 a	71.4 a	4.0 a-e	19.7 e
N17047	5.8 bc	4.9 ab	0.9 bc	3.6 a	63.6 b-d	2.9 e	28.4 a-d
N18002	5.8 a-c	4.9 ab	1.0 a-c	4.3 a	62.4 b-d	4.0 a-e	27.8 a-d
N18010	5.8 bc	4.8 ab	1.0 a-c	3.9 a	60.1 cd	4.6 a-d	29.5 a-d
N18012	5.7 c	4.8 ab	0.9 bc	4.7 a	61.5 b-d	4.5 a-d	27.9 a-d
N18026	5.8 a-c	4.9 a	0.9 bc	4.7 a	63.1 b-d	3.3 de	28.4 a-d
N18029	5.9 ab	4.9 a	1.0 a-c	3.4 a	60.6 cd	4.5 a-d	28.9 a-d
N18033	5.8 a-c	4.8 ab	1.0 ab	4.4 a	62.9 b-d	3.9 a-e	27.4 a-d
N18039	5.9 a	4.9 ab	1.1 a	4.1 a	62.5 b-d	4.2 a-e	27.7 a-d
N18044	5.8 bc	4.9 ab	0.9 bc	4.5 a	61.4 b-d	4.6 a-d	28.0 a-d
N18049	5.8 a-c	4.9 ab	1.0 a-c	4.5 a	64.2 bc	3.5 c-e	26.3 b-d
N18055	5.8 bc	4.9 ab	0.9 bc	3.9 a	60.2 cd	4.2 a-e	30.3 a-c
Mean	5.8	4.9	0.9	4.1	61.5	4.2	28.5
LSD ¹	0.1	0.1	0.1	1.4	6.1	1.4	5.5

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 15. Laboratory sample blanching of Medium Kernels from Martin County, NC, Dig 2, 2022(26 September).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.8 a-c	4.9 ab	0.9 a-c	4.1 ab	67.9 a-c	3.5 d-g	23.0 de
Emery	5.8 a-c	4.9 ab	0.9 a-c	3.9 ab	62.3 a-h	3.7 c-g	28.6 a-e
NC-20	5.7 bc	4.9 ab	0.9 bc	3.8 ab	59.8 d-h	4.7 a-d	30.2 a-c
Sullivan	5.8 a-c	4.8 b	1.0 a	4.4 a	63.4 a-h	3.5 d-g	27.2 a-e
Walton	5.7 c	4.8 ab	0.9 bc	4.5 a	61.9 b-h	3.0 g	29.1 a-e
N14002	5.8 a-c	4.9 ab	0.9 a-c	4.4 a	57.4 h	5.1 ab	31.7 ab
N15017	5.8 a-c	4.9 ab	0.9 a-c	4.4 a	60.8 b-h	4.4 a-f	28.9 a-e
N15039	5.8 ab	4.8 ab	1.0 a	4.0 ab	58.4 f-h	4.1 a-g	32.0 ab
N15041	5.7 bc	4.9 ab	0.9 bc	4.3 a	59.5 d-h	4.6 a-e	31.0 ab
N15044	5.7 bc	4.8 ab	0.9 a-c	4.2 a	57.7 gh	5.3 a	31.3 ab
N17036	5.8 ab	4.9 a	0.9 a-c	3.8 ab	66.5 a-d	3.1 g	25.1 b-e
N17040	5.8 ab	4.9 a	0.9 a-c	3.7 ab	58.8 e-h	4.0 b-g	32.0 ab
N17041	5.9 a	4.9 a	1.0 ab	4.2 a	62.9 a-h	4.1 a-g	27.3 a-e
N17045	5.8 ab	4.9 ab	1.0 ab	4.3 a	68.3 ab	3.5 d-g	22.4 e
N17047	5.8 a-c	4.9 a	0.9 bc	4.0 ab	62.0 a-g	3.6 d-g	29.0 a-e
N18002	5.8 a-c	4.9 a	0.9 bc	4.7 a	56.8 h	4.9 a-c	32.1 a
N18010	5.7 bc	4.9 a	0.8 c	3.9 ab	65.9 a-f	3.3 fg	25.9 a-e
N18012	5.8 a-c	4.9 ab	0.9 a-c	4.1 a	59.5 d-h	4.1 a-g	30.8 a-c
N18026	5.8 a-c	4.9 ab	0.9 a-c	2.8 b	69.6 a	3.4 e-g	22.7 e
N18029	5.8 ab	4.9 ab	1.0 ab	4.3 a	66.2 a-c	4.0 b-g	24.0 c-e
N18033	5.9 a	4.9 ab	1.0 a	4.5 a	62.5 a-h	4.2 a-g	27.6 a-e
N18039	5.8 a-c	4.9 ab	0.9 a-c	4.3 a	63.9 a-h	3.7 c-g	26.6 a-e
N18044	5.9 a	4.9 ab	1.0 a	4.4 a	60.6 c-g	3.7 c-g	29.8 a-d
N18049	5.8 ab	4.9 ab	1.0 ab	4.6 a	60.1 d-h	3.6 c-g	30.2 a-c
N18055	5.8 a-c	4.8 ab	1.0 ab	3.5 ab	65.1 a-g	3.7 c-g	26.2 a-e
Mean	5.8	4.9	0.9	4.1	62.3	3.8	28.2
LSD ²	0.1	0.1	0.1	1.3	7.8	1.3	7.1

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 16. Laboratory sample blanching of Medium Kernels. Averages from both digging dates from Martin County, NC, 2022.

Variety	% H ₂ O before roasting	% H ₂ O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.7 bc	4.8 ab	0.9 b-d	4.2 a	64.3 b-d	4.0 d-h	26.0 d-f
Emery	5.8 a-c	4.8 ab	0.9 a-d	3.8 a	62.2 b-f	3.7 e-h	28.8 a-f
NC-20	5.7 c	4.9 ab	0.9 d	3.9 a	59.3 ef	5.0 a-c	30.3 a-c
Sullivan	5.8 a-c	4.8 ab	1.0 a-c	4.2 a	65.0 a-c	3.6 f-h	25.7 ef
Walton	5.7 c	4.9 ab	0.9 d	4.0 a	61.3 c-f	3.6 f-h	29.3 a-f
N14002	5.8 a-c	4.8 ab	0.9 a-d	4.3 a	57.9 f	5.0 ab	31.2 ab
N15017	5.8 a-c	4.8 ab	1.0 a-c	4.4 a	59.8 d-f	4.4 a-f	29.9 a-c
N15039	5.8 a-c	4.8 ab	1.0 a-c	4.0 a	60.5 c-f	3.9 d-h	30.0 a-d
N15041	5.7 c	4.9 ab	0.9 d	4.2 a	58.6 ef	4.6 a-d	31.4 a
N15044	5.7 c	4.8 b	0.9 a-d	4.4 a	57.9 f	5.1 a	31.1 ab
N17036	5.8 a-c	4.9 a	0.9 b-d	3.9 a	63.4 b-e	3.5 f-h	27.6 a-f
N17040	5.8 a-c	4.9 a	0.9 cd	3.9 a	58.6 ef	4.5 a-e	31.4 a
N17041	5.8 a-c	4.9 ab	0.9 a-d	4.1 a	61.3 c-f	4.1 b-h	26.5 c-f
N17045	5.8 a-c	4.9 ab	0.9 a-d	3.8 a	69.9 a	3.8 d-h	21.0 g
N17047	5.8 a-c	4.9 a	0.9 cd	3.8 a	62.8 b-e	3.2 h	28.7 a-f
N18002	5.8 a-c	4.9 a	0.9 b-d	4.5 a	59.6 d-f	4.4 a-f	29.9 a-c
N18010	5.7 bc	4.9 ab	0.9 cd	3.9 a	63.0 b-e	4.0 d-h	27.7 a-f
N18012	5.7 bc	4.8 ab	0.9 b-d	4.4 a	60.5 c-f	4.3 a-f	29.3 a-f
N18026	5.8 a-c	4.9 a	0.9 b-d	3.7 a	66.4 ab	3.3 gh	25.5 f
N18029	5.8 a	4.9 a	1.0 a-c	3.8 a	63.4 b-e	4.2 a-f	26.4 c-f
N18033	5.8 a	4.8 ab	1.0 a	4.4 a	62.5 b-f	4.1 c-h	27.5 a-f
N18039	5.8 a	4.9 ab	1.0 ab	4.2 a	63.2 b-e	3.9 d-h	27.1 b-f
N18044	5.8 ab	4.9 ab	1.0 a-c	4.4 a	61.0 c-f	4.2 b-g	28.9 a-f
N18049	5.8 ab	4.9 ab	1.0 a-c	4.5 a	62.1 b-f	3.5 f-h	28.2 a-f
N18055	5.8 a-c	4.8 ab	0.9 a-d	3.7 a	62.6 b-f	3.9 d-h	28.2 a-f
Mean	5.8	4.9	0.9	4.1	61.9	4.1	28.3
LSD¹	0.1	0.1	0.1	0.9	4.9	0.9	4.3

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 17. Laboratory sample blanching of Medium Kernels. Averages from Tidewater AREC (Suffolk, VA) and Martin County, NC, 2022.

Variety	% H ₂ O before roasting	% H ₂ O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.7 c-e	4.8 a-c	0.9 a-e	3.7 de	66.3 a-c	3.7 a-c	24.8 b-d
Emery	5.7 c-e	4.8 a-c	0.9 a-e	3.8 c-e	63.0 cd	3.5 a-c	28.1 ab
NC-20	5.7 de	4.8 bc	0.9 a-e	3.7 e	62.4 cd	4.1 a-c	28.3 ab
Sullivan	5.7 b-e	4.8 a-c	0.9 a-e	3.7 e	66.3 a-c	3.3 c	25.1 b-d
Walton	5.7 e	4.8 a-c	0.9 de	4.0 a-e	62.1 d	3.5 bc	28.7 a
N14002	5.8 a-d	4.8 a-c	1.0 a-c	4.1 a-e	60.7 d	4.2 ab	28.1 ab
N15017	5.8 b-d	4.8 a-c	0.9 a-d	4.4 a-c	60.3 d	3.9 a-c	29.8 a
N15039	5.7 c-e	4.8 a-c	0.9 a-e	4.2 a-e	60.8 d	3.8 a-c	29.7 a
N15041	5.7 e	4.8 a-c	0.9 e	4.0 a-e	61.1 d	4.3 a	29.3 a
N15044	5.7 b-e	4.8 c	1.0 a	4.3 a-d	60.8 d	4.1 a-c	29.2 a
N17036	5.8 b-d	4.8 ab	0.9 a-e	3.8 de	67.2 ab	3.5 bc	24.0 cd
N17040	5.8 a-d	4.9 ab	0.9 a-e	4.0 a-e	61.9 d	4.2 ab	28.3 ab
N17041	5.8 b-d	4.8 a-c	0.9 a-d	3.9 b-e	62.3 cd	3.8 a-c	27.1 a-c
N17045	5.8 b-d	4.8 ab	0.9 a-e	3.6 e	68.5 a	3.7 a-c	22.5 d
N17047	5.8 b-d	4.9 ab	0.9 c-e	3.8 b-e	62.5 cd	3.4 bc	28.7 a
N18002	5.8 a-d	4.9 ab	0.9 a-e	4.2 a-e	62.9 cd	4.0 a-c	27.4 a-c
N18010	5.7 c-e	4.8 a-c	0.9 b-e	3.9 b-e	63.3 b-d	3.7 a-d	27.6 ab
N18012	5.7 b-e	4.8 a-c	0.9 a-e	4.2 a-e	62.6 cd	3.9 a-c	28.1 ab
N18026	5.8 a-c	4.9 a	0.9 b-e	4.1 a-e	63.3 b-d	3.6 a-c	27.6 a-c
N18029	5.8 ab	4.9 ab	0.9 a-d	3.9 a-e	63.6 b-d	4.1 a-c	26.5 a-c
N18033	5.8 a-c	4.8 ab	0.9 a-d	4.5 a	62.4 cd	3.5 a-c	27.9 ab
N18039	5.8 ab	4.8 ab	1.0 a-c	4.0 a-e	63.5 b-d	3.7 a-c	27.1 a-c
N18044	5.8 b-d	4.8 a-c	0.9 a-e	4.0 a-e	62.0 d	4.2 ab	28.2 ab
N18049	5.8 a	4.9 ab	1.0 ab	4.4 ab	62.5 cd	3.8 a-c	27.6 ab
N18055	5.8 a-d	4.8 ab	0.9 a-e	3.8 b-e	62.9 cd	4.1 a-c	27.7 ab
Mean	5.8	4.8	0.9	0.9	4.0	63.0	3.8
LSD ¹	0.1	0.1	0.1	0.1	0.6	4.0	0.8

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 18. Laboratory sample blanching of Medium Kernels. Averages from Tidewater AREC (Suffolk, VA) and Martin County, NC. Two-year averages (2021- 2022).

Variety	% H ₂ O before roasting	% H ₂ O after roasting	%Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.7 a	4.8 a	0.9 ab	3.8 c	70.2 a	4.0 a	20.4 b
Emery	5.7 a	4.8 ab	0.9 ab	3.9 bc	67.3 ab	3.9 a	23.2 ab
NC-20	5.7 a	4.8 ab	0.9 ab	4.1 a-c	66.9 ab	4.0 a	23.3 ab
Sullivan	5.7 a	4.8 a	0.9 ab	3.9 bc	68.1 ab	3.9 a	22.4 ab
Walton	5.7 a	4.8 ab	0.9 ab	3.9 bc	66.4 ab	4.2 a	23.8 ab
N14002	5.7 a	4.8 a	0.9 a	4.0 bc	65.3 b	4.6 a	23.9 ab
N15017	5.7 a	4.8 a	0.9 ab	4.2 ab	65.1 b	4.3 a	24.7 ab
N15039	5.7 a	4.8 ab	0.9 ab	4.4 a	64.6 b	4.4 a	25.1 a
N15041	5.7 a	4.8 a	0.9 b	3.9 bc	65.3 b	4.5 a	24.8 a
N15044	5.7 a	4.7 b	0.9 a	4.3 ab	65.8 ab	4.2 a	24.2 ab
N17036	5.7 a	4.8 ab	0.9 a	3.9 bc	67.9 ab	4.0 a	22.5 ab
N17040	5.7 a	4.8 a	0.9 ab	4.2 a-c	66.4 ab	4.3 a	23.5 ab
N17041	5.7 a	4.8 ab	0.9a	4.2 a-c	65.7 ab	4.1 a	23.9 ab
N17045	5.7 a	4.8 ab	0.9 ab	4.0 a-c	68.8 ab	4.4 a	21.2 ab
N17047	5.7 a	4.8 ab	0.9 ab	3.9 bc	66.2 ab	4.0 a	24.3 ab
Mean	5.7	4.8	0.9	4.0	66.7	4.2	23.4
LSD¹	0.1	0.1	0.1	0.5	4.7	0.8	4.3

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 19. Laboratory sample blanching of Medium Kernels. Averages from Tidewater AREC (Suffolk, VA) and Martin County, NC. Three-year averages (2020 - 2022).

Variety	% H2O before roasting	% H2O after roasting	% Blanching loss	% Splits Blanched	% Whole Blanched	% Not Blanched	% Partially Blanched
Bailey II	5.7 a	4.8 ab	0.9 ab	3.4 c	74.6 a	3.3 b	17.0 b
Emery	5.7 a	4.8 ab	0.9 ab	3.6 bc	72.4 ab	3.5 ab	19.0 ab
NC-20	5.7 a	4.8 a	0.9 ab	3.9 ab	70.8 ab	3.5 ab	20.1 ab
Sullivan	5.7 a	4.8 ab	0.9 ab	3.6 a-c	72.0 ab	3.5 ab	19.3 ab
Walton	5.7 a	4.8 ab	0.9 ab	3.7 a-c	70.9 ab	3.6 ab	20.1 ab
N14002	5.7 a	4.8 a	0.9 ab	3.7 a-c	69.9 b	4.1 a	20.2 ab
N15017	5.7 a	4.8 ab	0.9 ab	4.0 a	69.1 b	3.9 ab	21.4 a
N15039	5.7 a	4.8 ab	0.9 ab	4.0 a	69.7 b	3.8 ab	21.0 ab
N15041	5.7 a	4.8 ab	0.9 b	3.9 ab	68.8 b	4.1 a	21.6 a
N15044	5.7 a	4.8 b	0.9 a	4.0 ab	69.7 b	3.8 ab	20.9 ab
N17036	5.7 a	4.8 ab	0.9 ab	3.7 a-c	71.3 ab	3.6 ab	19.7 ab
N17040	5.7 a	4.8 a	0.9 ab	3.9 ab	70.0 ab	4.0 ab	20.6 ab
N17041	5.7 a	4.8 ab	0.9 ab	3.8 a-c	69.8 b	3.8 ab	20.5 ab
N17045	5.7 a	4.8 ab	0.9 ab	3.7 a-c	72.9 ab	3.9 ab	17.9 ab
N17047	5.7 a	4.8 ab	0.9 ab	3.6 a-c	70.5 ab	3.6 ab	20.6 ab
Mean	5.7	4.8	0.9	3.8	70.8	3.7	20.0
LSD¹	0.1	0.1	0.04	0.4	4.7	0.7	4.0

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, 2022¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.3 b	2.3 b-d	80.0 a	5.4 b	1.0 b-d	1.6 a-c
Emery	6.4 ab	2.8 ab	80.8 a	3.9 b	1.2 a-c	1.6 a-c
NC-20	6.0 b	2.4 a-d	81.5 a	4.1 b	1.0 cd	1.6 a-c
Sullivan	7.0 a	2.8 ab	75.0 b	8.9 a	1.2 a-c	1.5 bc
Walton	6.4 ab	2.6 a-c	78.5 ab	6.2 ab	1.1 a-c	1.7 ab
N14002	6.4 b	2.3 cd	79.8 a	5.3 b	1.0 cd	1.7 a-c
N15017	6.3 b	2.4 a-d	80.1 a	4.7 b	1.1 a-c	1.8 a
N15039	6.2 b	2.4 a-d	81.1 a	4.5 b	1.1 b-d	1.6 bc
N15041	6.3 b	2.1 d	80.9 a	4.8 b	1.0 d	1.7 a-c
N15044	6.1 b	2.7 a-c	80.8 a	4.3 b	1.2 a-c	1.6 bc
N17036	6.2 b	2.6 a-c	80.7 a	4.4 b	1.2 a-c	1.6 a-0c
N17040	6.0 b	2.5 a-d	81.4 a	3.8 b	1.1 a-c	1.7 a-c
N17041	6.2 b	2.6 a-c	80.4 a	4.6 b	1.1 a-c	1.6 a-c
N17045	6.0 b	2.3 cd	81.3 a	4.2 b	1.1 b-d	1.7 a-c
N17047	6.6 ab	2.8 a	80.0 a	4.4 b	1.2 a	1.5 c
N18002	6.3 b	2.8 a	80.8 a	4.0 b	1.2 ab	1.5 bc
N18010	6.2 b	2.3 b-d	79.7 a	5.6 b	1.0 cd	1.6 a-c
N18012	6.3 b	2.6 a-c	80.0 a	5.2 b	1.1 a-c	1.5 c
N18026	6.0 b	2.3 cd	81.3 a	4.4 b	1.1 b-d	1.7 a-c
N18029	6.1 b	2.5 a-d	81.2 a	4.1 b	1.1 a-d	1.6 a-c
N18033	6.4 b	2.7 a-c	80.7 a	4.3 b	1.2 a-c	1.5 bc
N18039	6.0 b	2.5 a-d	78.3 ab	6.7 ab	1.1 a-d	1.6 a-c
N18044	6.0 b	2.3 b-d	81.1 a	4.2 b	1.1 b-d	1.8 a
N18049	6.3 b	2.4 a-d	79.7 a	5.5 b	1.1 a-d	1.6 a-c
N18055	6.3 b	2.3 b-d	80.3 a	4.9 b	1.1 b-d	1.7 a-c
Mean	6.3	2.5	80.2	4.9	1.1	1.6
LSD²	0.7	0.5	4.0	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 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, 2022¹, (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 II	2.1 c-f	1.2 ab	79.4 a-c	14.8 b-e	13.0 c-e	0.4 a-c	4.4 bc
Emery	2.2 a-e	1.2 ab	77.4 c	21.0 ab	13.8 a-c	0.3 c	4.6 a-c
NC-20	2.1 c-f	1.2 ab	78.5 bc	19.8 a-c	12.8 c-e	0.3 bc	4.4 bc
Sullivan	2.4 a	1.2 ab	81.0 a	11.8 e	14.6 a	0.6 a	4.8 a
Walton	2.4 ab	1.1 b	79.6 a-c	13.5 c-e	13.6 b-e	0.4 a-c	4.6 a-c
N14002	2.3 a-d	1.3 ab	79.1 a-c	15.3 a-e	13.3 b-e	0.4 a-c	4.6 a-c
N15017	2.4 a	1.3 ab	78.3 bc	17.3 a-e	13.5 b-e	0.3 bc	4.8 a
N15039	2.1 ef	1.1 b	78.8 a-c	18.1 a-e	12.8 c-e	0.4 bc	4.2 c
N15041	2.0 f	1.2 ab	79.3 a-c	17.0 a-e	12.6 e	0.4 bc	4.2 c
N15044	2.3 a-d	1.2 ab	78.1 bc	18.8 a-d	13.4 b-e	0.3 bc	4.6 ab
N17036	2.2 a-e	1.1 ab	78.3 bc	18.5 a-e	13.3 b-e	0.3 bc	4.5 a-c
N17040	2.2 a-f	1.3 ab	77.8 c	21.8 a	13.2 b-e	0.3 c	4.6 a-c
N17041	2.2 b-f	1.3 ab	78.4 bc	18.0 a-e	13.4 b-e	0.3 bc	4.6 a-c
N17045	2.1 d-f	1.3 ab	78.5 bc	19.3 a-d	12.8 c-e	0.3 bc	4.5 a-c
N17047	2.3 a-c	1.3 ab	77.5 c	18.5 a-e	14.2 ab	0.3 bc	4.8 ab
N18002	2.2 a-f	1.1 ab	77.6 c	20.2 a-c	13.7 a-d	0.3 c	4.5 a-c
N18010	2.2 a-e	1.2 ab	79.5 a-c	14.7 b-e	13.1 c-e	0.4 a-c	4.5 a-c
N18012	2.2 b-f	1.2 ab	78.9 a-c	16.3 a-e	13.4 b-e	0.4 bc	4.4 a-c
N18026	2.1 c-f	1.2 ab	78.8 a-c	18.5 a-e	12.7 de	0.3 bc	4.4 bc
N18029	2.2 b-f	1.2 ab	78.3 bc	19.7 a-c	13.1 c-e	0.3 bc	4.5 a-c
N18033	2.3 a-e	1.2 ab	78.0 c	19.2 a-d	13.5 b-e	0.3 bc	4.7 ab
N18039	2.3 a-e	1.2 ab	80.3 ab	12.7 de	13.4 b-e	0.5 ab	4.5 a-c
N18044	2.2 a-f	1.3 ab	78.4 bc	19.5 a-d	12.9 c-e	0.3 bc	4.5 a-c
N18049	2.2 b-f	1.2 ab	79.3 a-c	15.0 a-e	13.2 b-e	0.4 a-c	4.5 a-c
N18055	2.1 c-f	1.4 a	78.9 a-c	16.3 a-e	13.2 b-e	0.4 bc	4.6 a-c
Mean	2.2	1.2	78.7	17.4	13.3	0.4	4.5
LSD²	0.2	0.2	2.3	6.9	1.0	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 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, 2022¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.3 b-i	2.6 de	79.8 a-d	5.4 c-f	1.1 e-g	1.5 g-i
Emery	6.5 a-d	2.5 ef	78.1 de	6.9 bc	1.1 d-g	1.5 h-i
NC-20	6.4 b-g	2.2 ij	80.7 ab	5.0 d-g	1.0 j-l	1.6 f-h
Sullivan	6.7 a	2.5 ef	76.1 f	8.7 a	1.1 c-f	1.5 h-j
Walton	6.1 h-j	2.7 cd	78.9 c-e	5.7 c-e	1.2 ab	1.8 a
N14002	6.5 a-c	2.5 ef	80.5 a-c	4.4 e-g	1.1 c-f	1.6 f-h
N15017	6.5 a-d	2.1 j	80.4 a-c	4.7 e-g	1.0 h-k	1.8 ab
N15039	6.5 a-e	2.6 de	77.5 ef	7.4 ab	1.1 b-e	1.5 h-j
N15041	6.4 b-f	2.2 ji	81.2 a	4.5 e-g	1.0 kl	1.6 c-f
N15044	6.7 a	2.2 ji	79.1 b-e	6.4 b-d	1.0 l	1.6 d-g
N17036	6.4 b-f	2.7 b-d	80.9 ab	4.1 e-g	1.2 ab	1.4 jk
N17040	6.1 f-j	2.4 fg	80.7 a-c	4.8 e-g	1.1 f-j	1.6 c-g
N17041	6.1 h-j	2.4 f-h	80.8 ab	4.7 e-g	1.1 f-i	1.6 e-g
N17045	6.3 c-j	2.3 g-i	81.1 a	4.4 e-g	1.0 h-k	1.7 b-d
N17047	6.2 e-j	2.3 g-i	80.9 ab	4.5 e-g	1.0 g-k	1.7 b-e
N18002	6.3 b-h	2.8 a-c	81.1 a	3.8 g	1.1 b-e	1.6 g-i
N18010	6.0 j	2.2 h-j	81.2 a	4.3 e-g	1.0 f-j	1.7 bc
N18012	6.2 e-j	2.6 de	81.3 a	4.2 e-g	1.1 c-f	1.5 ij
N18026	6.6 ab	2.9 a	80.6 a-c	4.1 e-g	1.2 a	1.4 k
N18029	6.1 g-j	2.6 de	81.2 a	4.1 fg	1.1 b-d	1.6 f-i
N18033	6.3 b-i	2.3 g-i	81.3 a	4.2 e-g	1.0 i-k	1.6 d-g
N18039	6.1 ij	2.7 cd	81.0 a	4.2 e-g	1.1 bc	1.6 f-h
N18044	6.3 c-j	2.5 ef	81.0 a	3.9 fg	1.1 c-g	1.8 ab
N18049	6.2 d-j	2.3 g-i	80.4 a-c	4.6 e-g	1.1 f-h	1.7 ab
N18055	6.1 f-j	2.9 ab	81.1 a	3.7 g	1.2 ab	1.6 f-h
Mean	6.3	2.5	80.3	4.9	1.1	1.6
LSD²	0.3	0.2	1.9	1.6	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, 2022¹ (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 II	2.2 c-f	1.1 e-h	79.2 c-e	14.7 f-i	13.2 c-i	0.4 c-f	4.3 c-g
Emery	2.2 b-d	1.2 a-d	80.3 bc	11.3 h-j	13.5 b-f	0.5 bc	4.5 b-d
NC-20	2.0 g	1.1 c-h	79.4 cd	16.1 d-g	12.7 l	0.4 d-g	4.1 fg
Sullivan	2.2 b-d	1.1 b-h	81.7 a	8.8 j	13.6 ab	0.6 a	4.4 c-e
Walton	2.5 a	1.3 ab	79.1 d-f	15.2 e-h	13.7 ab	0.4 c-e	4.9 a
N14002	2.2 bc	1.1 b-h	78.1 e-i	18.4 a-f	13.5 a-f	0.3 e-h	4.5 b-e
N15017	2.3 bc	1.2 b-f	78.7 d-h	17.1 b-g	13.1 f-k	0.4 e-h	4.5 b-d
N15039	2.2 bc	1.1 c-h	80.7 ab	10.5 ij	13.6 a-d	0.5 ab	4.5 b-e
N15041	2.0 fg	1.2 b-h	78.8 d-g	18.2 a-f	12.7 kl	0.4 e-h	4.2 e-g
N15044	2.0 g	1.1 d-h	80.4 bc	13.4 g-i	12.9 h-l	0.5 b-d	4.0 g
N17036	2.2 c-f	1.0 f-h	77.9 f-i	19.6 a-d	13.5 a-e	0.3 e-h	4.4 c-f
N17040	2.2 c-f	1.1 b-h	79.0 d-f	16.7 c-g	12.9 h-l	0.4 e-h	4.4 c-f
N17041	2.2 b-d	1.1 b-h	79.0 d-f	17.0 b-g	12.9 i-l	0.4 e-h	4.4 c-e
N17045	2.2 b-e	1.1 d-h	78.7 d-h	18.4 a-f	12.8 j-l	0.3 e-h	4.3 c-g
N17047	2.2 c-f	1.2 a-e	78.7 d-h	18.0 a-f	12.9 h-l	0.4 e-h	4.4 c-e
N18002	2.2 c-f	1.0 f-h	77.6 g-i	21.2 ab	13.5 b-f	0.3 h	4.3 c-f
N18010	2.2 b-d	1.2 b-g	78.8 d-h	18.8 a-f	12.7 l	0.3 e-h	4.4 c-e
N18012	2.1 d-g	1.0 gh	78.4 d-i	19.6 a-d	13.0 g-l	0.3 e-h	4.2 d-g
N18026	2.2 c-f	1.0 h	77.6 hi	19.5 a-e	13.9 a	0.3 f-h	4.4 c-f
N18029	2.2 b-d	1.1 c-h	78.1 e-i	20.0 a-d	13.2 e-j	0.3 e-h	4.4 c-e
N18033	2.0 e-g	1.2 a-c	78.4 d-i	19.5 a-d	12.9 g-l	0.3 e-h	4.3 c-g
N18039	2.2 b-d	1.1 b-h	78.2 e-i	19.5 a-d	13.2 d-j	0.3 e-h	4.5 b-d
N18044	2.3 bc	1.2 b-h	77.9 f-i	20.7 a-c	13.3 b-h	0.3 gh	4.5 b-d
N18049	2.3 ab	1.4 a	78.4 d-i	17.8 a-f	13.3 b-g	0.3 e-h	4.8 ab
N18055	2.2 bc	1.2 b-h	77.4 i	22.1 a	13.6 a-c	0.3 h	4.6 bc
Mean	2.2	78.8	17.3	13.2	13.2	0.4	4.4
LSD²	0.2	0.2	4.4	0.4	0.4	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 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), 2022¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.3 bc	2.5 b-e	79.9 ab	5.4 b-d	1.1 c-f	1.6 e-i
Emery	6.4 bc	2.6 ab	79.4 ab	5.4 b-d	1.1 a-d	1.6 e-i
NC-20	6.2 bc	2.3 d-f	81.1 a	4.6 b-d	1.0 ef	1.6 c-h
Sullivan	6.9 a	2.6 ab	75.6 c	8.8 a	1.1 a-c	1.5 g-i
Walton	6.2 bc	2.6 ab	78.7 b	5.9 bc	1.1 a-c	1.8 ab
N14002	6.5 b	2.4 b-f	80.2 ab	4.8 b-d	1.1 b-e	1.6 b-f
N15017	6.4 bc	2.2 ef	80.2 ab	4.7 b-d	1.1 c-f	1.8 a
N15039	6.3 bc	2.5 a-e	79.3 ab	6.0 b	1.1 a-e	1.5 f-i
N15041	6.3 bc	2.1 f	81.0 a	4.6 b-d	1.0 f	1.7 a-e
N15044	6.4 bc	2.4 b-f	79.9 ab	5.4 b-d	1.0 c-f	1.6 c-i
N17036	6.3 bc	2.7 ab	80.8 a	4.3 b-d	1.2 a	1.5 hi
N17040	6.1 c	2.5 b-e	81.0 a	4.3 b-d	1.1 a-e	1.6 c-g
N17041	6.1 bc	2.5 a-e	80.6 ab	4.7 b-d	1.1 a-e	1.6 c-i
N17045	6.1 bc	2.3 c-f	81.2 a	4.3 b-d	1.0 d-f	1.7 a-c
N17047	6.4 bc	2.6 a-d	80.4 ab	4.4 b-d	1.1 a-d	1.6 c-i
N18002	6.3 bc	2.8 a	81.0 a	3.9 d	1.2 ab	1.5 f-i
N18010	6.1 bc	2.3 d-f	80.5 ab	5.0 b-d	1.0 c-f	1.7 a-e
N18012	6.2 bc	2.6 ab	80.6 ab	4.7 b-d	1.1 a-e	1.5 i
N18026	6.3 bc	2.6 ab	80.9 a	4.3 b-d	1.1 a-d	1.5 hi
N18029	6.1 bc	2.5 a-e	81.2 a	4.1 d	1.1 a-d	1.6 d-i
N18033	6.2 bc	2.5 a-e	81.0 a	4.2 cd	1.1 a-e	1.6 c-i
N18039	6.2 bc	2.6 a-d	79.7 ab	5.5 b-d	1.1 a-d	1.6 c-i
N18044	6.1 bc	2.4 b-f	81.1 a	4.1 d	1.1 a-e	1.8 a
N18049	6.3 bc	2.4 b-f	80.1 ab	5.0 b-d	1.1 a-e	1.7 a-d
N18055	6.2 bc	2.6 a-c	80.7 a	4.3 b-d	1.1 a-d	1.6 c-h
Mean	6.3	2.5	80.2	4.9	1.1	1.6
LSD²	0.4	0.3	2.0	1.7	0.1	0.1

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

² Minimum significant difference at P=0.05, based on the Fisher'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), 2022¹ (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 II	2.1 d-f	1.1 a-c	79.3 bc	14.8 cd	13.1 b-e	0.4 bc	4.4 c-f
Emery	2.2 b-d	1.2 a-c	78.9 b-d	16.2 b-d	13.6 ab	0.4 b-d	4.5 a-d
NC-20	2.0 ef	1.2 a-c	78.9 b-d	18.0 a-d	12.7 de	0.4 b-d	4.2 ef
Sullivan	2.3 a-c	1.2 a-c	81.4 a	10.3 e	14.1 a	0.6 a	4.6 a-c
Walton	2.4 a	1.2 a-c	79.3 bc	14.4 de	13.6 ab	0.4 bc	4.7 a
N14002	2.3 b-d	1.2 a-c	78.6 b-d	16.8 a-d	13.4 bc	0.4 b-d	4.5 a-d
N15017	2.4 ab	1.2 a-c	78.5 b-d	17.2 a-d	13.3 b-d	0.4 b-d	4.7 ab
N15039	2.2 d-f	1.1 bc	79.8 b	14.3 de	13.2 b-e	0.4 b	4.4 c-f
N15041	2.0 f	1.2 a-c	79.0 b-d	17.6 a-d	12.7 e	0.4 b-d	4.2 f
N15044	2.1 d-f	1.1 a-c	79.3 bc	16.1 b-d	13.1 b-e	0.4 bc	4.3 d-f
N17036	2.2 cd	1.1 c	78.1 cd	19.0 a-c	13.4 bc	0.3 cd	4.5 b-f
N17040	2.2 c-e	1.2 a-c	78.4 b-d	19.3 a-c	13.0 b-e	0.3 b-d	4.5 a-f
N17041	2.2 c-e	1.2 a-c	78.7 b-d	17.5 a-d	13.1 b-e	0.4 b-d	4.5 a-e
N17045	2.1 d-f	1.2 a-c	78.6 b-d	18.9 a-c	12.8 c-e	0.3 b-d	4.4 b-f
N17047	2.2 b-d	1.2 a-c	78.1 cd	18.2 a-d	13.5 ab	0.3 b-d	4.6 a-d
N18002	2.2 c-e	1.1 c	77.6 d	20.7 a	13.6 ab	0.3 d	4.4 b-f
N18010	2.2 b-d	1.2 a-c	79.1 bc	16.7 a-d	12.9 c-e	0.4 b-d	4.5 a-f
N18012	2.1 d-f	1.1 bc	78.6 b-d	17.9 a-d	13.2 b-e	0.4 b-d	4.3 d-f
N18026	2.1 d-f	1.1 bc	78.2 cd	19.0 a-c	13.3 b-e	0.3 cd	4.4 b-f
N18029	2.2 c-e	1.2 a-c	78.2 cd	19.9 ab	13.1 b-e	0.3 cd	4.5 a-f
N18033	2.2 d-f	1.2 a-c	78.2 cd	19.4 ab	13.2 b-e	0.3 cd	4.5 a-f
N18039	2.2 b-d	1.1 a-c	79.2 bc	16.1 b-d	13.3 b-e	0.4 bc	4.5 a-e
N18044	2.2 b-d	1.2 a-c	78.2 cd	20.1 ab	13.1 b-e	0.3 cd	4.5 a-d
N18049	2.3 b-d	1.3 a	78.8 b-d	16.4 a-d	13.3 b-e	0.4 b-d	4.6 a-c
N18055	2.2 c-e	1.3 ab	78.1 cd	19.2 a-c	13.4 bc	0.3 cd	4.6 a-d
Mean	2.2	1.2	78.8	17.4	13.2	0.4	4.5
LSD²	0.1	0.2	1.4	4.5	0.6	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 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, 2022¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.5 a-e	2.5 ef	79.2 a-c	5.5 b-e	1.2 de	1.6 d-i
Emery	6.2 e-g	2.5 fg	80.8 ab	4.5 b-f	1.1 fg	1.5 h-j
NC-20	6.6 a-c	2.2 kl	79.7 a-c	5.5 b-d	1.0 k	1.6 d-i
Sullivan	6.8 a	2.4 g-i	76.4 d	8.0 a	1.2 ef	1.6 b-g
Walton	6.3 d-g	2.7 c-e	77.9 cd	5.7 bc	1.3 bc	1.8 a
N14002	6.5 a-e	2.6 c-e	80.6 ab	4.0 c-f	1.2 de	1.6 e-i
N15017	6.6 a-c	2.4 g-j	80.4 ab	4.3 b-f	1.1 fg	1.6 b-f
N15039	6.4 b-f	2.6 de	78.5 b-d	6.1 b	1.2 cd	1.5 g-j
N15041	6.5 a-e	2.2 kl	80.2 a-c	5.0 b-f	1.0 jk	1.7 b-d
N15044	6.6 a-c	2.2 l	79.6 a-c	5.6 b-d	1.0 k	1.6 b-g
N17036	6.4 c-g	2.7 cd	80.6 ab	3.8 d-f	1.3 bc	1.5 ij
N17040	6.1 fg	2.3 h-l	81.1 a	4.5 b-f	1.1 h-k	1.6 b-g
N17041	6.1 fg	2.2 kl	81.0 a	4.4 b-f	1.1 h-k	1.7 bc
N17045	6.4 b-f	2.2 kl	80.7 ab	4.3 b-f	1.1 h-k	1.7 b
N17047	6.2 e-g	2.3 h-k	81.2 a	4.0 c-f	1.1 g-i	1.7 b-e
N18002	6.2 d-g	2.7 c	81.6 a	3.4 f	1.2 de	1.6 d-i
N18010	6.1 fg	2.3 i-l	81.4 a	3.9 c-f	1.1 gh	1.6 b-e
N18012	6.6 a-d	2.4 gh	79.7 a-c	5.2 b-f	1.1 fg	1.6 c-h
N18026	6.7 ab	3.1 a	79.7 a-c	4.0 c-f	1.3 a	1.4 j
N18029	6.2 e-g	2.6 c-e	80.9 ab	4.0 c-f	1.2 cd	1.5 f-j
N18033	6.6 a-c	2.3 j-l	80.9 ab	4.2 c-f	1.1 i-k	1.6 b-f
N18039	6.1 g	2.7 cd	81.4 a	3.5 f	1.2 cd	1.5 f-j
N18044	6.1 fg	2.7 cd	80.9 ab	3.4 f	1.3 b	1.8 a
N18049	6.5 a-e	2.3 j-l	80.6 ab	4.4 b-f	1.1 g-j	1.7 b-e
N18055	6.1 fg	2.9 b	80.7 ab	3.6 ef	1.3 ab	1.7 b-e
Mean	6.4	2.5	80.2	4.6	1.2	1.6
LSD²	0.3	0.1	2.5	1.9	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 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, 2022¹, (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 II	2.4 b-e	1.2 bc	78.8 b-e	14.5 f-i	13.8 c-g	0.4 b-d	4.7 b-i
Emery	2.2 e-g	1.2 bc	78.4 b-g	18.1 c-f	13.2 f-j	0.3 b-g	4.5 f-i
NC-20	2.1 g	1.3 b	79.4 bc	14.9 f-i	13.2 f-j	0.4 bc	4.4 i
Sullivan	2.5 b-d	1.3 b	80.8 a	10.9 i	14.0 bc	0.6 a	4.9 b-g
Walton	2.8 a	1.5 a	78.4 b-h	13.6 g-i	14.5 ab	0.4 b-d	5.6 a
N14002	2.3 b-f	1.2 bc	77.5 f-k	20.1 a-d	13.8 b-f	0.3 b-g	4.7 c-i
N15017	2.3 c-g	1.2 bc	78.0 d-j	18.6 c-f	13.6 c-h	0.3 d-g	4.6 c-i
N15039	2.4 b-e	1.3 b	79.2 b-d	13.3 hi	13.9 b-e	0.4 b	4.9 b-f
N15041	2.2 e-g	1.3 b	78.9 b-e	16.2 d-h	13.2 f-j	0.4 b-f	4.5 f-i
N15044	2.1 fg	1.3 b	79.4 b	14.4 f-i	13.2 f-j	0.4 bc	4.4 i
N17036	2.4 b-e	1.3 b	77.1 h-k	21.1 a-c	14.1 bc	0.3 e-g	5.0 b-d
N17040	2.2 d-g	1.1 c	78.8 b-e	18.0 c-g	12.8 j	0.4 b-g	4.4 i
N17041	2.3 b-g	1.2 bc	78.6 b-f	18.3 c-f	12.9 ij	0.3 b-g	4.6 d-i
N17045	2.3 c-g	1.2 bc	78.3 b-h	18.7 c-f	13.3 e-j	0.3 b-g	4.6 d-i
N17047	2.2 c-g	1.3 b	78.1 c-i	20.2 a-d	13.1 g-j	0.3 c-g	4.6 c-i
N18002	2.2 e-g	1.1 c	77.2 g-k	24.4 a	13.5 c-i	0.2 g	4.5 g-i
N18010	2.3 c-g	1.3 b	78.1 d-j	20.9 a-c	13.0 h-j	0.3 d-g	4.7 c-i
N18012	2.3 b-f	1.1 c	78.8 b-e	15.6 e-h	13.5 c-i	0.4 b-e	4.6 e-i
N18026	2.5 b-d	1.2 bc	76.7 k	20.0 a-d	14.8 a	0.3 e-g	5.0 b-e
N18029	2.4 b-e	1.2 bc	77.7 e-k	20.2 a-d	13.6 c-i	0.3 d-g	4.8 b-i
N18033	2.2 e-g	1.2 bc	78.1 c-i	19.4 b-e	13.3 d-j	0.3 c-g	4.4 hi
N18039	2.3 c-g	1.3 b	77.3 g-k	23.2 ab	13.6 c-h	0.3 g	4.8 b-h
N18044	2.6 ab	1.3 b	76.8 jk	24.4 a	14.0 b-d	0.2 g	5.1 b
N18049	2.3 b-g	1.2 bc	78.2 b-i	18.5 c-f	13.3 d-j	0.3 b-g	4.6 d-i
N18055	2.5 bc	1.2 bc	77.0 i-k	22.2 a-c	14.0 bc	0.3 fg	5.0 bc
Mean	1.6	1.2	78.2	18.4	13.6	0.3	4.7
LSD²	0.1	0.2	1.3	4.5	0.7	0.1	0.4

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

² Minimum significant difference at P=0.05, based on the Fisher'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, 2022¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.2 c-h	2.7 de	79.8 b	5.3 bc	1.2 e-h	1.5 f-h
Emery	5.9 gh	2.8 c-e	81.3 ab	4.1 c-f	1.2 c-f	1.5 f-h
NC-20	6.2 b-g	2.3 hi	80.7 ab	4.8 b-e	1.1 l-n	1.6 a-c
Sullivan	6.9 a	2.7 e-g	74.7 d	9.8 a	1.2 f-h	1.4 g-i
Walton	6.3 b-f	2.8 c-e	77.4 c	6.7 b	1.3 b-d	1.7 a
N14002	6.3 b-e	2.7 ef	81.2 ab	3.9 c-f	1.2 g-i	1.5 d-h
N15017	6.4 b-d	2.3 hi	81.2 ab	4.1 c-f	1.1 k-m	1.6 ab
N15039	6.2 d-h	2.6 e-g	80.4 ab	5.0 b-e	1.2 f-h	1.4 g-i
N15041	6.4 b-d	2.2 i	81.7 ab	4.1 c-f	1.0 n	1.6 b-f
N15044	6.5 bc	2.4 hi	80.4 ab	5.1 b-d	1.0 l-n	1.5 b-f
N17036	6.1 d-h	3.0 b	81.7 ab	3.3 c-f	1.3 b	1.4 hi
N17040	6.0 f-h	2.5 f-h	81.9 ab	3.9 c-f	1.1 j-m	1.5 e-h
N17041	5.9 h	2.4 h	81.6 ab	4.1 c-f	1.1 j-m	1.6 a-e
N17045	6.1 b-h	2.3 hi	81.8 ab	3.8 c-f	1.0 mn	1.6 a-c
N17047	6.0 e-h	2.4 h	81.8 ab	3.7 c-f	1.1 i-m	1.6 ab
N18002	6.1 d-h	2.9 b-d	81.9 ab	3.3 d-f	1.2 c-f	1.5 f-h
N18010	6.0 f-h	2.4 h	81.6 ab	3.9 c-f	1.1 i-k	1.6 a-d
N18012	6.1 d-h	2.7 de	81.8 ab	3.7 c-f	1.1 h-j	1.4 gh
N18026	6.5 b	3.4 a	80.7 ab	3.5 c-f	1.4 a	1.3 i
N18029	6.0 gh	2.8 c-e	81.8 ab	3.6 c-f	1.2 d-g	1.5 f-h
N18033	6.3 b-e	2.5 gh	81.6 ab	3.7 c-f	1.1 i-l	1.5 c-g
N18039	6.0 gh	2.9 b-d	81.6 ab	3.6 c-f	1.2 c-f	1.5 f-h
N18044	5.9 h	2.9 b-d	82.2 a	2.8 f	1.3 bc	1.6 a-c
N18049	6.2 c-h	2.5 gh	80.9 ab	4.3 c-f	1.1 i-k	1.6 a-e
N18055	6.1 d-h	2.9 bc	82.0 ab	3.1 ef	1.2 b-e	1.5 e-h
Mean	6.2	2.6	80.9	4.3	1.2	1.5
LSD²	0.3	0.2	2.3	2.0	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 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, 2022¹, (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 II	2.2 b-e	1.1 b-e	78.9 b-d	15.8 gh	13.4 bc	0.4 bc	4.5 bc
Emery	2.1 b-f	1.1 c-e	78.1 b-h	20.3 d-g	13.2 c-e	0.3 c-f	4.5 b-d
NC-20	2.1 c-g	1.2 b-d	79.0 b-d	16.7 fg	12.9 e-g	0.4 b-d	4.3 c-f
Sullivan	2.2 b-d	1.2 b-d	82.3 a	8.4 i	14.1 a	0.7 a	4.5 bc
Walton	2.5 a	1.3 a	79.6 b	11.9 hi	14.2 a	0.5 b	5.0 a
N14002	2.1 b-f	1.1 c-f	77.8 c-h	20.8 c-f	13.4 b-d	0.3 c-f	4.4 b-e
N15017	2.2 b-d	1.2 b-d	78.1 b-g	20.0 e-g	13.1 c-e	0.3 c-f	4.4 b-d
N15039	2.1 b-f	1.1 c-e	78.8 b-d	16.5 fg	13.3 c-e	0.4 b-e	4.4 b-e
N15041	2.0 g	1.1 n-e	78.6 b-e	20.0 e-g	12.7 g	0.3 c-f	4.1 f
N15044	2.0 fg	1.1 b-e	79.1 bc	16.1 gh	13.0 d-g	0.4 bc	4.2 ef
N17036	2.2 bc	1.1 c-f	77.1 e-h	24.6 a-d	13.7 b	0.2 ef	4.6 b
N17040	2.0 d-g	1.1 d-f	78.4 b-f	21.0 c-f	12.7 g	0.3 c-f	4.2 d-f
N17041	2.2 b-e	1.1 b-e	78.5 b-f	20.0 e-g	12.7 fg	0.3 c-f	4.4 b-e
N17045	2.1 c-g	1.1 b-e	78.3 b-g	21.3 c-e	12.7 fg	0.3 c-f	4.3 c-f
N17047	2.1 b-f	1.2 a-c	78.1 b-h	22.0 c-e	12.9 e-g	0.3 c-f	4.4 b-e
N18002	2.1 b-f	1.1 d-f	77.2 e-h	25.1 a-c	13.4 bc	0.2 d-f	4.4 b-e
N18010	2.2 b-d	1.1 b-e	78.2 b-g	20.9 c-f	12.9 e-g	0.3 c-f	4.4 b-d
N18012	2.1 c-g	1.0 ef	77.9 c-h	22.2 b-e	13.1 c-f	0.3 c-f	4.3 c-f
N18026	2.2 b-e	1.0 f	76.6 h	22.9 b-e	14.4 a	0.2 d-f	4.5 bc
N18029	2.1 b-f	1.1 c-f	77.7 c-h	22.9 b-e	13.1 c-e	0.3 c-f	4.4 b-e
N18033	2.0 e-g	1.2 ab	77.8 c-h	21.9 c-e	13.1 c-e	0.3 c-f	4.4 b-f
N18039	2.2 b-d	1.1 c-f	77.5 d-g	22.9 b-e	13.4 b-d	0.3 c-f	4.5 bc
N18044	2.2 b-d	1.2 b-d	76.8 gh	29.0 a	13.4 bc	0.2 f	4.6 b
N18049	2.3 b	1.1 b-d	78.3 b-g	18.8 e-g	13.2 c-d	0.3 c-f	4.5 bc
N18055	2.1 b-f	1.1 c-f	77.0 f-h	26.6 ab	13.5 bc	0.2 f	4.5 b-d
Mean	2.1	1.1	78.2	20.3	13.3	0.3	4.4
LSD²	0.2	0.1	1.5	2.3	0.4	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 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, 2022¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.3 c-g	2.6 d-g	79.5 c	5.4 b-d	1.2 d-f	1.5 d-h
Emery	6.1 h-k	2.6 d-g	81.1 ab	4.3 d-h	1.2 fg	1.5 g-i
NC-20	6.4 b-f	2.3 jk	80.2 bc	5.2 b-e	1.0 k-m	1.6 c-f
Sullivan	6.8 a	2.5 g-i	75.5 e	8.9 a	1.2 fg	1.5 d-h
Walton	6.3 d-j	2.7 c-f	77.7 d	6.2 b	1.3 bc	1.7 a
N14002	6.4 b-f	2.7 d-g	80.9 a-c	4.0 f-h	1.2 ef	1.5 d-h
N15017	6.5 b-d	2.3 jk	80.8 a-c	4.2 d-h	1.1 hi	1.6 bc
N15039	6.3 d-i	2.6 e-g	79.4 c	5.5 bc	1.2 d-f	1.5 g-i
N15041	6.4 b-f	2.2 k	80.9 a-c	4.5 c-f	1.0 m	1.6 b-e
N15044	6.6 bc	2.3 jk	80.0 bc	5.3 b-d	1.0 lm	1.6 c-g
N17036	6.2 e-k	2.9 bc	81.1 ab	3.6 f-h	1.3 b	1.4 hi
N17040	6.1 i-k	2.4 h-j	81.5 ab	4.2 d-h	1.1 i-k	1.5 c-h
N17041	6.0 jk	2.3 jk	81.3 ab	4.3 d-h	1.1 ij	1.6 bc
N17045	6.3 d-j	2.3 jk	81.3 ab	4.1 e-h	1.1 j-m	1.6 a-c
N17047	6.1 h-k	2.4 i-k	81.5 ab	3.9 f-h	1.1 ij	1.6 bc
N18002	6.2 f-k	2.8 b-d	81.8 a	3.3 gh	1.2 de	1.5 d-h
N18010	6.0 i-k	2.4 i-k	81.5 ab	3.9 f-h	1.1 hi	1.6 b-e
N18012	6.3 c-h	2.6 f-h	80.7 a-c	4.5 c-g	1.1 gh	1.5 d-h
N18026	6.6 ab	3.3 a	80.2 a-c	3.8 f-h	1.3 a	1.4 i
N18029	6.1 h-k	2.7 c-f	81.4 ab	3.8 f-h	1.2 de	1.5 f-h
N18033	6.5 b-e	2.4 i-k	81.3 ab	4.0 f-h	1.1 i-l	1.6 c-g
N18039	6.0 k	2.8 b-e	81.5 ab	3.5 f-h	1.2 cd	1.5 e-h
N18044	6.0 k	2.8 b-e	81.5 ab	3.1 h	1.3 b	1.7 ab
N18049	6.3 c-f	2.4 i-k	80.8 a-c	4.4 c-g	1.1 hi	1.6 b-d
N18055	6.1 g-k	2.9 b	81.3 ab	3.4 f-h	1.3 b	1.6 c-g
Mean	6.3	2.6	80.6	4.5	1.2	1.6
LSD²	0.3	0.2	1.6	1.2	0.04	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, 2022¹ (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 II	2.3 b-f	1.2 b-d	78.9 b-f	15.1 hi	13.6 d-g	0.4 b-d	1.2 b-d
Emery	2.2 c-g	1.2 b-d	78.3 d-j	19.2 ef	13.2 g-k	0.3 d-g	1.2 b-d
NC-20	2.1 fg	1.2 b	79.2 bc	15.8 g-i	13.0 i-l	0.4 b-d	1.2 b
Sullivan	2.3 bc	1.2 b	81.5 a	9.6j	14.1 bc	0.6 a	1.2 b
Walton	2.7 a	1.4 a	79.0 b-e	12.8 ij	14.3 ab	0.4 b	1.4 a
N14002	2.2 b-g	1.1 b-d	77.6 i-n	20.4 d-f	13.6 d-g	0.3 e-h	1.1 b-d
N15017	2.2 b-g	1.2 b-d	78.1 f-k	19.3 ef	13.4 e-j	0.3 e-g	1.2 b-d
N15039	2.3 b-e	1.2 b-d	79.0 b-d	14.9 hi	13.6 d-g	0.4 bc	1.2 b-d
N15041	2.1 e-g	1.2 bc	78.7 b-g	18.1 f-h	12.9 j-l	0.3 c-e	1.2 bc
N15044	2.0 g	1.2 b-d	79.3 b	15.2 hi	13.1 h-l	0.4 bc	1.2 b-d
N17036	2.3 bc	1.2 b-d	77.1 l-o	22.8 b-d	13.9 cd	0.3 f-h	1.2 b-d
N17040	2.1 c-g	1.1 cd	78.6 b-g	19.5 ef	12.7 l	0.3 c-f	1.1 cd
N17041	2.3 b-f	1.2 b-d	78.6 b-h	19.1 e-g	12.8 kl	0.3 c-f	1.2 b-d
N17045	2.2 b-g	1.2 b-d	78.3 d-i	20.0 d-f	13.0 j-l	0.3 e-g	1.2 b-d
N17047	2.2 b-g	1.2 b	78.1 f-k	21.1 c-f	13.0 i-l	0.3 e-h	1.2 b
N18002	2.2 c-g	1.1 cd	77.2 k-o	24.7 ab	13.4 d-i	0.2 gh	1.1 cd
N18010	2.2 b-f	1.2 bc	78.2 e-j	20.9 d-f	12.9 j-l	0.3 e-h	1.2 bc
N18012	2.2 b-g	1.1 d	78.3 c-i	18.9 e-g	13.3 e-i	0.3 c-f	1.1 d
N18026	2.3 b-d	1.1 cd	76.6 o	21.5 b-e	14.6 a	0.3 f-h	1.1 cd
N18029	2.2 b-f	1.1 b-d	77.7 h-m	21.6 b-e	13.4 e-j	0.3 e-h	1.1 b-d
N18033	2.1 d-g	1.2 bc	78.0 g-l	20.7 d-f	13.2 g-k	0.3 e-h	1.2 bc
N18039	2.2 b-f	1.1 b-d	77.4 j-o	23.1 b-d	13.5 d-h	0.3 f-h	1.2 b-d
N18044	2.4 b	1.2 b	76.8 no	26.7 a	13.7 c-f	0.2 h	1.2 b
N18049	2.3 b-d	1.2 b-d	78.3 d-j	18.6 e-g	13.3 f-j	0.3 c-f	1.2 b-d
N18055	2.3 b-d	1.2 b-d	77.0 m-o	24.4 a-c	13.7 c-e	0.2 gh	1.2 b-d
Mean	2.2	1.2	78.2	19.4	13.4	0.3	1.2
LSD²	0.2	0.1	0.9	3.4	0.4	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, 2022¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.2 a-d	2.1 c-f	80.6 a-c	4.8 b-d	1.0 d-f	1.8 a-f
Emery	6.5 a-d	2.3 b-f	78.0 c	7.0 a	1.0 b-f	1.8 a-f
NC-20	6.4 a-d	2.1 c-f	78.5 bc	6.3 a-c	1.0 c-f	1.9 ab
Sullivan	6.3 a-d	2.2 c-f	80.0 a-c	5.1 a-d	1.0 b-f	1.8 a-e
Walton	6.3 a-d	2.3 a-e	80.0 a-c	5.1 a-d	1.1 a-f	1.7 b-g
N14002	6.6 a-c	2.0 ef	78.7 bc	6.4 a-c	1.0 f	1.9 a-d
N15017	6.2 a-d	2.0 f	80.8 ab	4.8 b-d	1.0 f	1.9 a-d
N15039	6.4 a-d	2.1 d-f	79.6 a-c	5.6 a-d	1.0 ef	1.9 ab
N15041	6.3 a-d	2.2 c-f	78.0 c	6.7 ab	1.0 b-f	2.0 a
N15044	6.2 a-d	2.2 c-f	80.0 a-c	5.4 a-d	1.0 c-f	1.9 a-c
N17036	6.3 a-d	2.3 a-d	80.2 a-c	4.9 b-d	1.1 a-d	1.7 c-g
N17040	6.7 a	2.2 c-f	79.1 a-c	6.0 a-d	1.0 c-f	1.7 b-g
N17041	6.4 a-d	2.1 d-f	80.2 a-c	5.2 a-d	1.0 d-f	1.8 a-e
N17045	6.4 a-d	2.3 a-f	79.3 a-c	5.8 a-d	1.1 a-f	1.8 a-g
N17047	6.3 a-d	2.4 a-c	79.9 a-c	5.2 a-d	1.1 a-e	1.7 c-g
N18002	6.4 a-d	2.2 c-f	79.8 a-c	5.5 a-d	1.0 b-f	1.8 a-g
N18010	6.3 a-d	2.3 c-f	79.6 a-c	5.4 a-d	1.0 b-f	1.9 a-c
N18012	6.5 a-d	2.1 d-f	79.2 a-c	5.9 a-d	1.0 f	1.9 a-c
N18026	6.2 b-d	2.3 c-f	81.3 a	4.4 cd	1.0 b-f	1.6 e-g
N18029	6.0 d	2.7 a	81.4 a	4.0 d	1.1 ab	1.6 gf
N18033	6.4 a-d	2.2 c-f	79.2 a-c	5.6 a-d	1.0 c-f	2.0 a
N18039	6.4 a-d	2.5 a-c	81.0 ab	4.1 d	1.1 a-d	1.7 d-g
N18044	6.2 a-d	2.4 a-c	79.4 a-c	5.6 a-d	1.0 a-c	1.8 a-f
N18049	6.6 ab	2.6 ab	79.1 a-c	5.4 a-d	1.2 a	1.6 gf
N18055	6.1 cd	2.2 c-f	80.1 a-c	5.4 a-d	1.0 b-f	1.8 a-g
Mean	6.3	2.3	79.7	5.4	1.0	1.8
LSD²	0.3	2.6	2.1	0.1	0.2	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 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, 2022¹ (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 II	2.2 ab	1.2 b-d	79.1 a-c	16.6 a-c	12.7 bc	0.4 a-e	4.4 bc
Emery	2.2 ab	1.2 b-d	80.6 a	11.4 c	13.2 a-c	0.5 a	4.4 a-c
NC-20	2.3 ab	1.3 ab	80.0 ab	14.1 bc	13.2 a-c	0.4 a-c	4.6 a-c
Sullivan	2.3 ab	1.2 b-d	79.1 a-c	16.2 a-c	13.1 bc	0.4 a-e	4.5 a-c
Walton	2.2 ab	1.2 b-d	79.0 a-c	16.1 a-c	13.1 bc	0.4 a-e	4.4 a-c
N14002	2.2 ab	1.3 a-c	80.2 a	12.3 c	13.1 bc	0.5 a-c	4.4 a-c
N15017	2.1 b	1.2 b-d	79.3 a-c	17.1 a-c	12.5 c	0.4 a-e	4.3 bc
N15039	2.2 ab	1.3 a-d	79.6 a-c	14.8 a-c	12.9 bc	0.4 a-e	4.5 a-c
N15041	2.4 a	1.4 a	80.2 ab	11.7 c	13.4 ab	0.5 ab	4.8 a
N15044	2.2 ab	1.2 b-d	79.6 a-c	15.2 a-c	12.8 bc	0.4 a-e	4.4 a-c
N17036	2.3 ab	1.2 b-d	78.7 bc	17.3 a-c	13.2 a-c	0.4 b-e	4.5 a-c
N17040	2.1 b	1.2 b-d	79.7 a-c	13.6 bc	13.2 a-c	0.5 a-e	4.3 bc
N17041	2.1 ab	1.2 b-d	79.4 a-c	15.8 a-c	12.8 bc	0.4 a-e	4.3 bc
N17045	2.2 ab	1.2 b-d	79.6 a-c	15.9 a-c	13.2 bc	0.4 a-e	4.4 a-c
N17047	2.2 ab	1.2 b-d	79.0 a-c	15.5 a-c	13.2 a-c	0.4 a-e	4.5 a-c
N18002	2.2 ab	1.2 b-d	79.5 a-c	14.7 a-c	13.0 bc	0.4 a-e	4.4 bc
N18010	2.2 ab	1.2 b-d	79.4 a-c	15.1 a-c	13.0 bc	0.4 a-e	4.5 a-c
N18012	2.2 ab	1.3 a-d	79.9 ab	13.6 bc	12.9 bc	0.5 a-d	4.4 bc
N18026	2.1 b	1.1 cd	78.8 bc	18.7 ab	12.7 bc	0.3 c-e	4.3 bc
N18029	2.1 ab	1.1 d	78.1 c	20.8 a	13.1 bc	0.3 e	4.4 c
N18033	2.3 ab	1.3 ab	79.3 a-c	15.4 a-c	13.3 ab	0.4 a-e	4.7 ab
N18039	2.2 ab	1.1 b-d	78.1 c	19.6 ab	13.2 a-c	0.3 de	4.4 bc
N18044	2.3 ab	1.2 b-d	79.3 a-c	14.3 bc	13.3 ab	0.4 a-e	4.6 a-c
N18049	2.3 ab	1.2 b-d	78.6 bc	15.7 a-c	13.9 a	0.4 a-e	4.7 ab
N18055	2.2 ab	1.2 b-d	79.6 a-c	15.0 a-c	12.7 bc	0.4 a-e	4.4 bc
Mean	2.2	1.2	79.3	15.5	13.1	0.4	4.5
LSD²	0.2	1.6	6.3	0.7	0.2	0.4	0.6

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

² Minimum significant difference at P=0.05, based on the Fisher'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, 2022¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.0 c-h	2.6 e-g	80.8 ab	4.5 b-d	1.2 de	1.5 h-l
Emery	5.9 d-i	2.5 g-j	81.9 a	4.0 c-e	1.1 f-h	1.4 i-m
NC-20	6.1 c-f	2.3 jk	81.5 a	4.2 c-e	1.1 h	1.6 b-e
Sullivan	7.3 a	2.6 e-h	70.8 c	13.1 a	1.2 cd	1.4 lm
Walton	6.0 c-i	2.8 b-e	79.3 b	5.3 bc	1.3 a-c	1.7 a
N14002	6.2 b-d	2.7 d-g	82.0 a	3.4 de	1.2 d-f	1.4 j-m
N15017	6.1 b-e	2.4 i-k	81.6 a	3.7 c-e	1.1 e-g	1.6 b-e
N15039	5.8 f-i	2.6 f-i	81.9 a	3.8 c-e	1.2 d-f	1.5 f-l
N15041	6.0 c-i	2.4 jk	82.4 a	3.4 de	1.1 gh	1.5 b-i
N15044	6.4 b	2.4 jk	79.4 b	5.9 b	1.1 gh	1.6 b-h
N17036	6.0 c-h	2.9 b	81.9 a	3.3 de	1.3 ab	1.4 l-m
N17040	5.8 e-i	2.5 h-k	82.0 a	3.7 de	1.1 e-h	1.6 b-f
N17041	5.8 hi	2.4 i-k	82.5 a	3.6 de	1.1 gh	1.5 e-j
N17045	6.0 c-h	2.4 jk	82.1 a	3.6 de	1.1 h	1.6 b-f
N17047	5.9 d-i	2.4 jk	82.2 a	3.5 de	1.1 gh	1.6 b-g
N18002	6.1 c-g	2.9 k	81.9 a	3.2 de	1.2 b-d	1.5 d-k
N18010	5.9 d-i	2.3 bc	81.6 a	3.9 c-e	1.1 f-h	1.6 a-c
N18012	6.0 c-h	2.7 e-g	80.9 ab	4.5 b-d	1.2 de	1.5 f-l
N18026	6.2 bc	3.2 a	81.4 a	3.2 de	1.3 a	1.3 m
N18029	5.8 g-i	2.9 b-d	81.9 a	3.4 de	1.3 a-c	1.4 i-m
N18033	6.1 b-e	2.4 jk	82.5 a	3.3 de	1.1 gh	1.5 c-j
N18039	5.8 e-i	2.7 c-f	82.4 a	3.2 de	1.2 b-d	1.5 g-l
N18044	5.7 i	3.0 b	82.4 a	2.7 e	1.3 ab	1.6 ab
N18049	6.0 c-h	2.4 jk	81.4 a	3.9 c-e	1.1 e-h	1.6 b-d
N18055	5.9 d-i	2.9 b	82.0 a	2.9 e	1.3 ab	1.6 b-h
Mean	6.0	2.6	81.2	4.1	1.2	1.5
LSD²	0.3	0.2	1.9	1.6	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 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, 2022¹ (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 II	2.2 b-e	1.2 a-d	78.5 cd	18.7 d-f	13.2 c-h	0.3 cd	4.5 b-e
Emery	2.0 d-f	1.1 d	78.5 cd	21.0 c-e	12.6 ij	0.3 c-f	4.2 e
NC-20	2.0 d-f	1.2 a-d	78.6 cd	20.5 c-e	12.7 g-j	0.3 c-e	4.3 b-e
Sullivan	2.3 ab	1.2 a-d	84.8 a	5.4 g	14.6 a	0.9 a	4.7 ab
Walton	2.4 a	1.3 a-c	78.7 bc	17.9 ef	13.7 bc	0.4 bc	4.9 a
N14002	2.1 c-f	1.1 b-d	77.5 d-i	24.4 a-e	13.2 c-h	0.3 d-g	4.4 b-e
N15017	2.1 b-f	1.2 a-d	77.9 c-h	22.1 b-e	13.1 d-i	0.3 c-g	4.5 a-e
N15039	2.1 b-f	1.2 a-d	78.2 c-f	21.6 b-e	12.8 f-j	0.3 c-g	4.5 b-e
N15041	2.0 f	1.2 a-d	77.9 c-h	24.6 a-e	12.7 ij	0.3 d-g	4.3 de
N15044	2.0 ef	1.2 a-d	79.8 b	13.6 f	13.1 d-i	0.5 b	4.3 c-e
N17036	2.1 b-f	1.1 cd	77.2 e-i	25.1 a-d	13.4 cd	0.2 d-g	4.5 b-e
N17040	2.1 b-f	1.2 a-d	78.2 c-f	22.2 b-e	12.7 ij	0.3 c-g	4.4 b-e
N17041	2.0 d-f	1.1 cd	78.4 c-e	22.9 b-e	12.4 j	0.3 c-g	4.2 e
N17045	2.0 d-f	1.2 a-d	78.1 c-f	22.9 b-e	12.7 ij	0.3 c-g	4.3 c-e
N17047	2.1 c-f	1.2 a-d	78.0 c-h	23.6 a-e	12.7 i-h	0.3 d-g	4.4 b-e
N18002	2.1 b-f	1.1 a-d	77.2 f-i	25.8 a-c	13.4 c-e	0.2 d-g	4.4 b-e
N18010	2.2 a-d	1.3 a	78.2 c-f	21.1 b-e	12.9 e-j	0.3 c-g	4.6 a-d
N18012	2.1 b-f	1.2 a-d	78.6 cd	18.9 d-f	13.1 d-i	0.3 cd	4.4 b-e
N18026	2.1 b-f	1.1 d	76.7 i	25.1 a-d	14.0 b	0.2 e-g	4.5 a-e
N18029	2.1 b-f	1.2 a-d	77.5 d-i	24.1 a-e	13.3 c-f	0.3 d-g	4.7 a-d
N18033	2.0 ef	1.2 a-d	77.8 c-i	25.3 a-d	12.7 g-j	0.3 d-g	4.3 de
N18039	2.1 b-f	1.1 d	77.6 c-i	26.2 a-c	12.9 e-j	0.2 d-g	4.4 b-e
N18044	2.1 b-f	1.2 a-d	76.9 g-i	30.2 a	13.2 c-g	0.2 g	4.6 a-e
N18049	2.2 a-c	1.3 ab	78.0 c-g	20.9 c-e	13.1 d-i	0.3 c-g	4.7 ab
N18055	2.2 b-e	1.2 a-d	76.9 hi	27.9 ab	13.5 b-d	0.2 fg	4.7 a-c
Mean	2.1	1.2	78.2	22.1	13.1	0.3	4.5
LSD²	0.2	0.2	1.2	6.7	0.5	0.1	0.4

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

² Minimum significant difference at P=0.05, based on the Fisher'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, 2022¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.0 fg	2.5 e-i	80.5 ab	5.0 c-e	1.2 c-h	1.5 i-m
Emery	6.1 e-g	2.5 f-l	80.9 ab	4.2 de	1.2 d-i	1.6 c-j
NC-20	6.0 fg	2.2 n	81.9 a	3.7 e	1.1 j-l	1.7 bc
Sullivan	6.7 b	2.5 g-l	75.5 d	8.9 b	1.2 c-g	1.5 h-l
Walton	8.0 a	2.6 d-g	66.2 e	16.7 a	1.2 cd	1.5 j-m
N14002	6.6 b-d	2.7 cd	78.3 bc	6.5 b-d	1.2 bc	1.4 lm
N15017	6.1 ef	2.4 i-n	80.9 ab	4.0 de	1.2 c-g	1.7 bc
N15039	5.8 fg	2.5 e-j	82.3 a	3.3 e	1.2 c-g	1.5 h-m
N15041	6.2 d-f	2.3 l-n	80.9 ab	4.4 c-e	1.1 h-k	1.6 c-h
N15044	6.5 b-e	2.3 mn	78.5 bc	6.7 bc	1.1 j-l	1.6 f-l
N17036	6.0 fg	2.9 b	81.5 a	3.4 e	1.3 a	1.4 k-m
N17040	6.0 fg	2.3 l-n	81.5 a	4.1 de	1.1 i-l	1.6 e-k
N17041	5.8 fg	2.4 i-n	81.4 a	4.1 de	1.1 f-j	1.6 c-j
N17045	5.9 fg	2.3 mn	82.0 a	3.6 e	1.1 j-l	1.7 c-f
N17047	6.0 fg	2.4 i-n	81.5 a	3.9 e	1.1 g-k	1.6 c-h
N18002	6.2 d-f	2.6 c-e	81.4 a	3.7 e	1.2 c-f	1.6 f-l
N18010	5.9 fg	2.3 k-n	81.4 a	3.8 e	1.1 e-j	1.7 c-e
N18012	6.0 fg	2.6 d-h	81.4 a	4.1 de	1.2 c-h	1.5 g-l
N18026	6.2 c-f	3.1 a	81.3 a	3.3 e	1.3 a	1.4 m
N18029	5.8 fg	2.7 b-d	82.1 a	3.4 e	1.2 bc	1.5 j-m
N18033	6.1 ef	2.3 mn	82.1 a	3.5 e	1.1 kl	1.6 c-h
N18039	6.1 e-g	2.5 e-i	80.8 ab	4.5 c-e	1.2 c-h	1.5 g-l
N18044	5.9 fg	2.5 e-k	82.1 a	3.1 e	1.2 c-g	1.7 cd
N18049	6.0 fg	2.3 j-n	81.2 a	4.1 de	1.1 f-j	1.7 c-e
N18055	6.0 fg	2.6 d-g	81.9 a	3.2 e	1.2 c-e	1.6 c-i
Ga 19HP	6.2 d-f	2.3 k-n	79.7 ab	4.2 de	1.2 d-h	1.9 a
TifJumbo	6.1 ef	2.0 o	80.0 ab	5.1 c-e	1.0 l	1.8 ab
AU Barkley	6.6 bc	2.4 h-m	76.9 cd	6.8 bc	1.2 c-h	1.8 a
Contender	5.7 g	2.8 bc	81.9 a	2.9 e	1.3 ab	1.6 c-g
Comrade	5.9 fg	2.6 c-f	81.6 a	3.6 e	1.2 c	1.6 d-k
Mean	6.1	2.5	80.3	4.7	1.2	1.6
LSD²	0.4	0.2	2.7	2.5	0.1	0.1

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

² Minimum significant difference at P=0.05, based on the Fisher'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, 2022¹, (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 II	2.1 h-k	1.3 c-e	79.1 c-f	16.1 e-h	13.0 i-l	0.4 c-f	4.6 e-h
Emery	2.3 d-h	1.3 b-e	78.1 d-g	20.1 c-f	13.3 g-j	0.3 d-f	4.8 c-h
NC-20	2.1 h-k	1.3 b-e	78.1 d-g	22.3 a-e	12.8 kl	0.3 f	4.5 f-h
Sullivan	2.3 d-f	1.3 b-e	81.6 b	9.0 ij	14.0 b-d	0.6 b	4.8 c-g
Walton	2.6 bc	1.3 c-e	87.1 a	4.0 j	15.6 a	1.1 a	5.0 b-d
N14002	2.1 h-k	1.1 de	79.6 b-d	14.2 f-i	13.8 c-f	0.5 b-e	4.5 f-h
N15017	2.4 de	1.4 b-d	77.9 d-g	20.4 c-f	13.4 f-i	0.3 ef	4.9 c-f
N15039	2.2 e-k	1.2 de	77.7 d-g	24.9 a-d	12.9 j-l	0.3 f	4.6 e-h
N15041	2.1 i-k	1.3 b-e	78.6 c-g	18.7 d-g	13.0 i-l	0.3 c-f	4.5 f-h
N15044	2.1 jk	1.2 de	80.5 bc	13.3 g-i	13.2 l-h	0.5 bc	4.4 gh
N17036	2.3 e-j	1.2 de	77.2 fg	23.7 a-d	13.6 d-g	0.3 f	4.7 c-h
N17040	2.1 h-k	1.3 c-e	78.5 c-g	20.0 c-f	12.8 kl	0.3 d-f	4.5 f-h
N17041	2.2 e-k	1.3 b-e	78.3 d-g	19.9 c-g	12.9 j-k	0.3 d-f	4.7 c-h
N17045	2.2 f-k	1.3 c-e	78.1 d-g	22.9 a-d	12.7 l	0.3 f	4.5 f-h
N17047	2.2 e-k	1.2 de	78.1 d-g	21.0 b-e	13.0 i-l	0.3 ef	4.6 e-h
N18002	2.2 g-k	1.2 de	77.6 e-g	22.2 a-e	13.4 f-i	0.3 f	4.5 f-h
N18010	2.3 d-g	1.4 b-d	78.0 d-g	21.4 b-e	13.1 i-l	0.3 f	4.8 c-g
N18012	2.1 h-k	1.1 de	78.2 d-g	20.2 c-f	13.0 i-l	0.3 d-f	4.4 gh
N18026	2.2 e-k	1.1 e	76.8 g	24.4 a-d	14.0 b-e	0.2 f	4.6 d-h
N18029	2.1 h-k	1.1 de	77.6 e-g	24.5 a-d	13.0 i-l	0.3 f	4.5 f-h
N18033	2.1 k	1.2 de	77.9 d-g	23.6 a-d	12.8 kl	0.3 f	4.4 h
N18039	2.2 e-k	1.2 de	78.4 c-g	19.8 c-g	13.2 g-k	0.3 c-f	4.6 e-h
N18044	2.2 e-k	1.3 b-e	77.3 fg	27.1 ab	13.1 i-l	0.2 f	4.7 c-h
N18049	2.3 e-j	1.2 de	78.2 d-g	20.0 c-f	13.0 i-l	0.3 d-f	4.6 d-h
N18055	2.2 e-k	1.2 de	77.3 fg	25.5 a-c	13.2 g-k	0.2 f	4.6 d-h
Ga 19HP	2.9 a	1.7 a	77.3 fg	19.0 c-g	14.2 bc	0.3 ef	5.7 a
TifJumbo	2.4 cd	1.5 ab	79.0 c-f	15.9 e-h	13.2 h-l	0.4 c-f	5.0 b-e
AU Barkley	2.7 ab	1.5 a-c	79.4 c-e	11.2 hi	14.4 b	0.5 b-d	5.5 ab
Contender	2.4 cd	1.4 b-d	76.8 g	28.2 a	13.5 e-h	0.2 f	5.1 bc
Comrade	2.3 d-i	1.3 b-e	77.6 e-g	22.8 a-d	13.3 g-i	0.3 f	4.8 c-h
Mean	2.3	1.3	78.5	19.9	13.3	0.4	4.7
LSD ²	0.2	0.3	2.0	6.7	0.5	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 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, 2022.¹

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.2 d-k	2.5 e-h	80.1 bc	5.1 cd	1.1 f-i	1.6 e-g
Emery	6.2 c-k	2.5 c-f	80.2 a-c	4.9 c-e	1.1 e-i	1.6 e-g
NC-20	6.3 b-i	2.3 j	80.6 a-c	4.8 c-f	1.0 l	1.7 a-d
Sullivan	6.8 a	2.5 d-g	75.5 e	8.9 a	1.2 c-h	1.5 e-h
Walton	6.5 b	2.6 b-e	76.9 d	7.3 b	1.2 a-c	1.7 ab
N14002	6.4 bc	2.5 e-h	80.2 bc	4.8 c-f	1.1 f-i	1.6 c-g
N15017	6.3 b-f	2.3 ij	80.8 a-c	4.3 d-g	1.1 i-l	1.7 ab
N15039	6.2 e-k	2.5 e-h	80.2 bc	5.1 cd	1.1 d-i	1.6 d-g
N15041	6.3 b-h	2.2 j	80.8 a-c	4.7 c-g	1.0 l	1.7 a-d
N15044	6.4 b-d	2.3 ij	79.7 c	5.6 c	1.1 kl	1.6 a-f
N17036	6.2 b-d	2.7 ab	81.1 ab	3.9 e-g	1.2 ab	1.5 gh
N17040	6.1 f-k	2.4 f-j	81.1 ab	4.4 d-g	1.1 i-l	1.6 b-f
N17041	6.0 i-k	2.4 h-j	81.1 ab	4.4 d-g	1.1 i-l	1.6 a-e
N17045	6.2 e-k	2.3 ij	81.2 ab	4.2 d-g	1.1 j-l	1.7 a-c
N17047	6.2 e-k	2.4 f-i	81.1 ab	4.2 d-g	1.1 h-k	1.6 a-e
N18002	6.2 c-j	2.7 b	81.2 ab	3.8 fg	1.2 b-f	1.6 e-g
N18010	6.1 h-k	2.3 ij	81.0 a-c	4.4 d-g	1.1 i-l	1.7 ab
N18012	6.2 c-i	2.5 d-g	80.6 a-c	4.7 c-g	1.1 g-i	1.6 e-g
N18026	6.4 b-e	2.9 a	80.9 a-c	3.9 e-g	1.2 a	1.4 h
N18029	6.0 k	2.7 b-d	81.5 a	3.8 fg	1.2 a-e	1.5 f-h
N18033	6.3 b-g	2.4 g-j	81.2 ab	4.1 d-g	1.1 i-l	1.6 a-e
N18039	6.1 f-k	2.6 b-e	80.9 a-c	4.3 d-g	1.2 c-g	1.6 e-g
N18044	6.0 jk	2.6 b-e	81.3 ab	3.7 g	1.2 a-e	1.7 a
N18049	6.3 b-h	2.4 f-j	80.5 a-c	4.6 c-g	1.1 g-j	1.6 a-e
N18055	6.1 g-k	2.7 bc	81.2 ab	3.8 fg	1.2 a-d	1.6 b-f
Mean	6.2	2.5	80.4	4.7	1.1	1.6
LSD²	0.2	0.2	1.3	1.1	0.1	0.1

^{0.11} 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, 2022¹. (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 II	2.2 c-g	1.2 b-g	79.0 cd	15.9 h-j	13.2 d-h	0.4 cd	4.5 d-i
Emery	2.2 d-h	1.2 b-g	78.8 cd	17.6 f-i	13.3 c-g	0.4 c-e	4.5 d-i
NC-20	2.1 g-i	1.2 a-d	79.0 cd	17.8 e-i	12.9 hi	0.4 c-e	4.4 hi
Sullivan	2.3 b	1.2 a-d	81.6 a	10.1 k	14.0 a	0.6 a	4.7 b
Walton	2.5 a	1.3 a	80.2 b	13.2 j	14.1 a	0.5 b	4.9 a
N14002	2.2 c-f	1.2 b-g	78.5 d-f	17.9 e-i	13.4 cd	0.4 c-f	4.5 d-i
N15017	2.3 b-d	1.2 ab	78.3 d-g	18.9 d-g	13.2 d-i	0.3 d-g	4.6 b-f
N15039	2.2 c-f	1.2 b-g	79.0 cd	17.1 g-i	13.2 d-i	0.4 c-e	4.5 c-h
N15041	2.1 i	1.3 ab	78.9 cd	18.0 e-h	12.9 hi	0.4 c-e	4.4 hi
N15044	2.1 hi	1.2 b-g	79.6 bc	15.0 ij	13.1 f-i	0.4 c	4.3 i
N17036	2.2 b-e	1.1 e-h	77.6 gh	21.4 a-d	13.5 bc	0.3 fg	4.6 b-f
N17040	2.1 f-i	1.2 b-g	78.6 de	19.0 c-g	12.9 hi	0.3 d-g	4.4 hi
N17041	2.2 c-g	1.2 b-g	78.7 de	18.8 d-h	12.9 i	0.3 d-g	4.5 e-i
N17045	2.2 e-i	1.2 a-f	78.5 d-f	19.9 b-g	12.9 hi	0.3 d-g	4.4 g-i
N17047	2.2 c-g	1.2 a-c	78.2 d-h	19.8 b-g	13.1 d-i	0.3 d-g	4.5 b-h
N18002	2.2 e-i	1.1 gh	77.7 f-h	21.9 a-c	13.4 c-e	0.3 fg	4.4 e-i
N18010	2.2 b-e	1.2 ab	78.6 de	19.0 c-g	12.9 g-i	0.3 d-g	4.6 b-g
N18012	2.2 e-i	1.1 f-h	78.7 de	18.0 e-h	13.1 d-i	0.4 d-f	4.4 hi
N18026	2.2 c-f	1.1 h	77.4 h	21.3 a-d	13.8 ab	0.3 g	4.5 b-h
N18029	2.2 d-i	1.1 d-h	77.9 e-h	21.8 a-d	13.2 d-i	0.3 fg	4.5 b-h
N18033	2.1 f-i	1.2 a-d	78.2 d-h	20.6 a-e	13.1 e-i	0.3 e-g	4.4 f-i
N18039	2.2 c-f	1.2 c-h	78.2 d-h	20.6 b-f	13.3 c-g	0.3 d-g	4.5 b-h
N18044	2.3 b-d	1.2 a-d	77.6 gh	23.6 a	13.3 c-f	0.3 g	4.7 bc
N18049	2.3 bc	1.2 ab	78.4 d-g	18.1 e-h	13.3 c-f	0.3 d-g	4.6 b-d
N18055	2.2 b-f	1.2 a-e	77.7 f-h	22.2 ab	13.4 c-f	0.3 fg	4.6 b-e
Mean	2.2	1.2	78.6	18.7	13.3	0.4	4.5
LSD	0.1	0.1	0.9	3.0	0.3	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.

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, (2021 – 2022)¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.1 ef	2.5 b	80.5 a	4.8 de	1.2 b	1.5 e-g
Emery	6.1 ef	2.6 b	80.2 a	4.9 de	1.2 b	1.5 d-g
NC-20	6.2 de	2.3 e	81.1 a	4.4 de	1.1 e	1.6 ab
Sullivan	6.6 b	2.5 b	76.6 c	8.0 bc	1.2 b	1.5 d-f
Walton	6.5 bc	2.7 a	75.7 c	8.3 b	1.2 a	1.7 a
N14002	6.4 bc	2.6 b	79.9 a	5.0 de	1.2 b	1.5 c-f
N15017	6.3 cd	2.3 c-e	79.8 ab	5.2 d	1.1 c	1.7 a
N15039	6.5 b	2.6 b	76.4 c	8.3 b	1.2 b	1.5 g
N15041	6.5 bc	2.3 de	78.3 b	6.8 c	1.1 de	1.6 b-e
N15044	7.0 a	2.3 c-e	74.2 d	10.3 a	1.1 cd	1.5 e-g
N17036	6.1 ef	2.8 a	81.0 a	3.9 e	1.2 a	1.5 fg
N17040	6.0 ef	2.4 c	80.7 a	4.7 de	1.1 cd	1.6 a-d
N17041	5.9 f	2.4 cd	81.2 a	4.4 de	1.1 cd	1.6 a-c
N17045	6.1 ef	2.3 c-e	81.1 a	4.3 de	1.1 de	1.6 a
N17047	6.1 ef	2.4 cd	81.1 a	4.2 de	1.1 cd	1.6 ab
Mean	6.3	2.5	79.2	5.8	1.1	1.6
LSD²	0.2	0.1	1.5	1.2	0.03	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 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, (2021 – 2022)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 II	2.2 d-f	1.2 bc	78.7 c	78.7 c	13.2 fg	0.4 d	4.6 c-f
Emery	2.2 c-e	1.3 bc	78.8 c	78.8 c	13.3 e-g	0.4 d	4.6 b-d
NC-20	2.1 g	1.3 bc	78.7 c	78.7 c	12.8 h	0.3 de	4.4 f
Sullivan	2.3 b	1.3 bc	81.0 b	81.0 b	13.9 bc	0.6 bc	4.8 b
Walton	2.5 a	1.4 a	80.8 b	80.8 b	14.3 a	0.6 bc	5.1 a
N14002	2.3 b-e	1.2 bc	78.6 c	78.6 c	13.6 c-e	0.4 d	4.7 b-d
N15017	2.3 bc	1.3 ab	78.9 c	78.9 c	13.4 d-f	0.4 d	4.7 b-d
N15039	2.3 b-e	1.3 bc	81.2 b	81.2 b	13.8 bc	0.6 b	4.7 b-d
N15041	2.1 fg	1.3 bc	80.4 b	80.4 b	13.3 e-g	0.5 c	4.5 ef
N15044	2.2 d-f	1.3 bc	82.9 a	82.9 a	13.9 b	0.7 a	4.6 d-f
N17036	2.3 b-d	1.2 c	77.6 d	77.6 d	13.6 cd	0.3 e	4.7 bc
N17040	2.2 c-e	1.2 bc	78.8 c	78.8 c	13.0 gh	0.4 de	4.6 d-f
N17041	2.2 c-e	1.2 bc	78.6 c	78.6 c	12.9 h	0.3 de	4.6 c-f
N17045	2.2 ef	1.3 bc	78.4 cd	78.4 cd	13.0 gh	0.3 de	4.6 c-f
N17047	2.2 c-e	1.3 ab	78.3 cd	78.3 cd	13.1 gh	0.3 de	4.6 b-e
Mean	2.2	1.3	79.4	79.4	13.4	0.4	4.7
LSD²	0.1	0.1	0.9	2.4	0.3	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.

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, (2020 – 2022)¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.0 ef	2.5 cd	80.5 ab	5.0 de	1.1 de	1.6 d-f
Emery	6.0 ef	2.5 bc	80.3 ab	5.0 de	1.1 cd	1.6 d-f
NC-20	6.1 e	2.2 g	81.2 a	4.5 de	1.0 i	1.7 ab
Sullivan	6.4 b-d	2.4 d	77.5 cd	7.4 c	1.1 cd	1.6 cd
Walton	6.4 cd	2.6 ab	76.5 de	7.8 bc	1.2 ab	1.7 a
N14002	6.3 d	2.5 b-d	79.7 b	5.3 de	1.1 cd	1.6 de
N15017	6.3 d	2.3 e-g	79.6 b	5.5 d	1.1 ef	1.7 ab
N15039	6.5 bc	2.5 cd	76.2 e	8.7 b	1.2 bc	1.5 f
N15041	6.6 b	2.2 fg	78.0 c	7.3 c	1.0 hi	1.6 cd
N15044	6.6 b	2.3 e-g	74.0 f	10.7 a	1.1 g-i	1.6 d-f
N17036	6.1 e	2.7 a	80.2 ab	4.8 de	1.2 a	1.5 ef
N17040	6.0 ef	2.3 e	80.5 ab	5.0 de	1.1 fg	1.6 bc
N17041	5.9 f	2.3 e-g	81.0 a	4.7 de	1.1 f-h	1.6 a-c
N17045	6.1 e	2.3 e-g	80.7 ab	4.8 de	1.1 g-i	1.7 ab
N17047	6.0 ef	2.3 ef	81.0 a	4.4 e	1.1 f-h	1.7 ab
Mean	6.2	2.4	79.1	6.1	1.1	1.6
LSD²	0.2	0.2	1.2	1.0	0.03	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 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, (2020 – 2022)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 II	2.2 ef	1.2 cd	79.1 de	16.6 de	13.0 f-h	0.4 de	4.5 d-f
Emery	2.2 c-e	1.2 b-d	79.0 de	17.0 c-e	13.1 fg	0.4 de	4.6 b-d
NC-20	2.1 g	1.3 bc	78.9 de	18.8 a-c	12.7 i	0.4 de	4.4 f
Sullivan	2.3 b	1.3 bc	80.8 c	11.7 f	13.5 b-d	0.5 c	4.7 b
Walton	2.5 a	1.4 a	80.7 c	11.4 f	14.0 a	0.6 bc	5.0 a
N14002	2.2 b-e	1.2 b-d	78.9 de	16.4 de	13.4 c-e	0.4 de	4.6 b-d
N15017	2.2 bc	1.3 b	79.3 d	15.7 e	13.2 d-f	0.4 d	4.6 bc
N15039	2.2 b-d	1.2 b-d	81.7 b	11.0 f	13.7 bc	0.6 b	4.6 bc
N15041	2.1 fg	1.3 bc	80.9 c	12.4 f	13.2 ef	0.5 c	4.4 ef
N15044	2.2 ef	1.3 b-d	83.4 a	8.9 g	13.8 ab	0.8 a	4.5 d-f
N17036	2.3 b	1.2 d	78.5 e	19.8 a	13.5 c-e	0.3 de	4.7 b
N17040	2.2 c-e	1.2 b-d	79.2 de	17.4 b-e	12.8 hi	0.4 de	4.5 c-f
N17041	2.2 c-e	1.2 b-d	79.0 de	18.1 a-d	12.7 hi	0.4 de	4.5 c-f
N17045	2.2 ef	1.3 b-d	79.0 de	18.1 a-d	12.8 g-i	0.4 de	4.5 d-f
N17047	2.2 de	1.3 b	78.7 de	19.0 ab	12.9 g-i	0.3 e	4.5 b-e
Mean	2.2	1.3	79.8	15.5	13.2	0.5	4.6
LSD²	0.1	0.1	0.8	1.9	0.3	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 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 2022¹.

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.7 a-c	2.2 a-c	78.7 ab	6.0 a	1.0 bc	1.9 b-d
N17045	6.6 a-c	2.1 b-d	79.4 ab	5.5 a	1.0 cd	2.0 a-c
N18002	6.8 ab	2.0 b-d	78.4 ab	6.0 a	1.0 cd	2.1 a
N18010	6.5 bc	2.0 cd	79.2 ab	5.8 a	1.0 cd	2.1 a
N18012	6.8 a-c	2.1 b-d	77.7 ab	6.9 a	1.0 b-d	2.0 a-c
N18026	7.0 a	2.5 a	77.9 ab	6.2 a	1.1 ab	1.7 d
N18029	6.4 bc	2.3 ab	79.7 ab	5.3 a	1.1 ab	1.8 cd
N18033	6.7 a-c	1.9 d	78.0 ab	6.5 a	1.0 d	2.1 a
N18039	6.4 bc	2.1 b-d	79.2 ab	5.8 a	1.0 b-d	2.0 ab
N18044	6.6 bc	2.0 cd	78.7 ab	6.2 a	1.0 cd	2.0 ab
N18049	6.3 c	2.0 cd	79.8 a	5.5 a	1.0 cd	2.0 a-c
N18055	6.6 a-c	2.0 cd	77.4 b	7.2 a	1.0 b-d	2.2 a
Mean	6.6	2.1	78.6	6.1	1.0	2.0
LSD²	0.5	0.3	2.4	2.0	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 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 2022¹, (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 II	2.2 a-c	1.2 c-f	79.5 ab	14.6 a	13.4 b	0.4 a	4.5 a-d
N17045	2.2 c	1.3 b-f	79.4 ab	14.5 a	13.1 bc	0.4 a	4.4 d
N18002	2.3 ab	1.3 a-c	79.5 ab	13.4 a	13.5 b	0.4 a	4.6 a-c
N18010	2.3 a-c	1.3 a-d	79.7 ab	14.1 a	13.0 bc	0.4 a	4.5 a-d
N18012	2.3 a-c	1.3 b-f	80.4 ab	11.5 a	13.4 b	0.5 a	4.5 a-d
N18026	2.4 a	1.1 f	79.2 b	12.6 a	14.1 a	0.4 a	4.6 a-c
N18029	2.2 bc	1.2 ef	79.2 ab	15.2 a	13.2 bc	0.4 a	4.5 cd
N18033	2.3 a	1.4 a	80.1 ab	13.8 a	13.3 b	0.5 a	4.7 a
N18039	2.2 bc	1.3 b-e	79.8 ab	13.8 a	13.0 bc	0.4 a	4.5 b-d
N18044	2.2 a-c	1.2 c-f	80.1 ab	12.7 a	13.0 bc	0.5 a	4.4 cd
N18049	2.2 bc	1.2 d-f	79.8 ab	14.5 a	12.7 c	0.4 a	4.4 d
N18055	2.3 ab	1.4 ab	80.7 a	11.1 a	13.3 b	0.5 a	4.7 ab
Mean	2.3	1.3	79.8	13.3	13.3	0.4	4.5
LSD²	0.1	0.1	1.5	4.7	0.6	0.1	0.2

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

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

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 33. 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 (2021-2022)¹ Two-year averages

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.3 a	2.4 a	79.7 a	5.4 a	1.1 a	1.6 a
N17045	6.3 a	2.1 a	80.4 a	4.8 a	1.0 a	1.8 a
Mean	6.3	2.3	80.1	5.1	1.1	1.7
LSD	0.9	0.4	3.9	3.1	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 33. 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 (2021-2022)¹ Two-year averages (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 II	2.2 a	1.2 a	79.1 a	17.4 a	13.3 a	0.4a	4.5 a
N17045	2.2 a	1.3 a	79.0 a	17.7 a	12.9 a	0.4a	4.5 a
Mean	2.2	1.3	79.1	17.6	13.1	0.4	4.5
LSD	0.1	0.1	2.3	13.6	0.5	0.2	0.2

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

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

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.

Fatty Acid Results

Table 34. 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 (2020-2022)¹ Three-year averages

Variety	Palmitic C16:0	Stearic C18:0	Oleic C18:1	Linoleic C18:2	Arachidic C20:0	Eicosenoic C20:1
Bailey II	6.2 a	2.2 a	79.8 a	5.6 a	1.1 a	1.7 a
N17045	6.3 a	2.0 a	78.7 a	6.6 a	1.0 a	2.0 a
Mean	6.3	2.1	79.3	6.1	1.1	1.9
LSD	0.6	0.4	3.4	3.3	0.1	0.4

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

² Minimum significant difference at P=0.05, based on the Fisher's LSD test.

Fatty Acid Results

Table 35. 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 (2020-2022)¹ Three-year averages (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 II	2.2 a	1.2 b	79.7 a	16.1 a	12.9 a	0.4 a	4.4 a
N17045	2.2 a	1.3 a	80.7 a	14.3 a	12.7 a	0.5 a	4.4 a
Mean	2.2	1.3	80.2	15.2	12.8	0.5	4.4
LSD	0.1	0.1	3.1	9.2	0.8	0.3	0.2

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

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

³ Lower iodine value indicates longer shelf life.

⁴ Higher O/L ratio indicates longer shelf life.