UNIFORM SOYBEAN TESTS

SOUTHERN STATES

2021

COORDINATED, ANALYZED AND EDITED BY:

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Annual reports are available online at http://www.ars.usda.gov/Main/docs.htm?docid=23815
Uniform Soybean Test Parentage Information Database is available at:
https://soybase.org/uniformtrial/index.php?page=lines

ISSUED MARCH 2022

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INTRODUCTION

The Uniform Soybean Testing Program has been directed toward the testing of elite breeding lines that ultimately leads to the release of varieties. Breeding lines are developed and evaluated in several participating federal and state research programs. As breeding lines demonstrate specific qualities in the individual programs, they are advanced to the preliminary and uniform regional tests conducted in cooperation with research workers in the southern states. This testing program enables breeders to evaluate new strains under a wide variety of conditions; and permits new strains to be put into production in a minimum amount of time. Lines are usually entered only once in the Preliminary Test and then are either dropped or advanced to the Uniform Test for a maximum of three years if performance warrants further testing.

Eleven uniform test groups have been established to evaluate the best strains developed in the breeding programs. The groups 00 through IV are adapted in the northern part of the United States, and the groups IV-S through VIII are grown in the southern part. Within their area of adaptation, there is a maturity range of 12 to 18 days within each maturity class. The best varieties available in each maturity class are used as check varieties with which to compare new strains as to seed yield, chemical composition, maturity, height, lodging, seed quality, and reaction to diseases and nematodes. For the groups grown in the southern area, the check varieties are:
AG38X8, AG45X8, LD015-3818, AG46X6, AG48X9, AG49X9, Ellis, AG53X9, AG55X7, TN09-008, TN11-5140, AG56X8, AG64X8 RR2X, USDA-N6005 (release of N10-687), NC-Dunphy (release of NCC07-8138), NC-Dilday (release of NCC06-1090), CZ6730, AGS-738RR, AG74X8 RR2X, N7003CN, NC-Wilder (release of NCC06-899), SH 7418LL, AG79X9RR2X/SR, N8001, N8002, and AGS 798R2.

A wide range of soil and climatic conditions exists in the regions. As an aid in recognizing regional adaptation, the region has been subdivided into five rather broad areas which still represent a wide range of soil types. These are: (1) the East Coast, consisting of the Coastal Plain and Tidewater areas of the eastern shore of Maryland, Virginia, North Carolina, and the upper half of South Carolina; (2) the Southeast, consisting primarily of the Coastal Plain soils of the Gulf Coast area, but also including similar soil from South Carolina, southward; (3) the Upper and Central South, including the Piedmont and loessial hill soils east of the Mississippi River; (4) the Delta area, composed of the alluvial soils along the Mississippi River from southern Missouri, southward; and (5) the West, comprising Arkansas and Louisiana (outside the Delta), Kansas, Oklahoma, and Texas. In the West, the potential soybean-growing areas would include alluvial soils, and the Gulf Coast of Louisiana.

POLICY ON EVALUATION AND RELEASE OF STRAINS

Germplasm exchange among breeding programs is the foundation of breeding progress. The purpose of the Uniform Soybean Test is to facilitate the free exchange of germplasm in an effort to maximize genetic diversity and provide well-adapted, stable breeding lines and varieties in the pursuit of breeding progress. Participants are encouraged to exchange germplasm within the legal guidelines pertaining to transgenic strains.

Qualifications for Participation in the Uniform Soybean Tests

Participants must be willing and able to conduct unified tests with conventional strains and strains containing proprietary and/or transgenic traits.

Participants, upon submission of entries, must disclose pedigrees to the Uniform Soybean Test Coordinator for publication with performance data in the Uniform Soybean Test Report.

Participants are individually responsible to ensure that any transgenic entries that they submit are cleared for sale as commodity seed.

Use of Uniform Soybean Test Entries in Soybean Breeding and Research

Seed of Uniform Soybean Test entries is for evaluation in the Uniform Soybean Tests only and may not be distributed to non-participants in these tests without prior approval by the originator of the entry.

Trueness-to-type or purity of seed produced by the entries in the Uniform Soybean Tests cannot be guaranteed by the USDA. Therefore, seed produced by lines in the Uniform Test trials will not be distributed by the USDA to anyone, including the developer, except for trait analyses in connection with the Uniform Test program.

Non-transgenic entries in the Uniform Soybean Test may be used by Uniform Soybean Test participants as parents in biparental crosses or for developing recurrent selection populations, subject to the material transfer requirements of the institution who owns the entry. Transgenic entries may be used in crossing subject to similar rules unless licensing or patenting restrictions regarding ownership of the transgenic trait limit this use.

Uniform Soybean Test participants must obtain prior approval before using any entry, other than their own, as recurrent parent in backcrossing, molecular research, genetic studies, or any other research.

Seed of any entry must not be used for further evaluation without written permission from the originator of the entry and must be discarded at the end of the season, except for crossing purposes, subject to the restrictions outlined in the preceding sections two and three.

All published results from the USDA-ARS Uniform Soybean Tests Southern States may be used as a data base for statistical research and publication related to soybean breeding.

Release of Uniform Soybean Test Entries

Entries in the Uniform Soybean Tests are released according to USDA-ARS and State Agricultural Experiment Station policies.

ACKNOWLEDGEMENTS

The cooperation of the following scientists is gratefully acknowledged for their ratings of the Uniform Test entries: Dr. Zenglu Li and Dr. Melissa Mitchum, University of Georgia, Athens, Georgia - root-knot nematode; Dr. Prakash Arelli and Dr. Lesley Schumacher, USDA-ARS, Jackson, Tennessee - soybean cyst nematode; and Dr. Anne Gillen and Dr. Shuxian Li, USDA-ARS, Stoneville, MS – southern stem canker.

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A special thanks to the following people whose cooperation and participation have helped to make the Uniform Soybean Tests, Southern States possible:

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STRAIN DESIGNATION

The strains designated by number carry a letter prefix. This letter identifies where each strain was selected:

DA	-	Delta Branch Experiment Station and USDA-ARS, Stoneville, MS
DS	-	Delta Branch Experiment Station and USDA-ARS, Stoneville, MS
G	-	Georgia Agricultural Experiment Station
JTN	-	Tennessee Agricultural Experiment Station, Jackson and USDA-ARS
K	-	Kansas Agricultural Experiment Station
N	-	North Carolina Agricultural Experiment Station and USDA-ARS
NDPJE	-	North Carolina Agricultural Experiment Station and USDA-ARS
R	-	Arkansas Agricultural Experiment Station
S	-	Missouri Agricultural Experiment Station
SA	-	Missouri Agricultural Experiment Station
SC	-	South Carolina Agricultural Experiment Station, Clemson
TN	-	Tennessee Agricultural Experiment Station
V	-	Virginia Agricultural Experiment Station, Virginia Tech

UNIFORM SOYBEAN TESTS PARENTAGE INFORMATION DATABASE

Historical Uniform Soybean Test Parentage Information can be found at the following:
https://soybase.org/uniformtrial/index.php?page=lines

SOYBEAN NURSERY INFORMATION

A. LOCATION CONTACT AND TESTS- 2021

2021 Locations	Location Contact	IV-S-E*	IV-S-E	IV-S-L	IV-S-L	V-E	V-L	V	VI	VI	VII	VII	VIII	VIII
Belle Mina,AL	Jenny Koebernick		U		U			U						
Fairhope,AL	Jenny Koebernick											U	P	U
Tallassee,AL	Jenny Koebernick				U	P	P	U	P	U				
Keiser,AR	Leandro Mozzoni	P	U	P	U	P	P	U						
Stuttgart,AR	Leandro Mozzoni	P		P	U	P	P	U						
Athens,GA(A)	Zenglu Li								P	U	P	U	P	U
Athens,GA(B)	Zenglu Li											U		U
Calhoun,GA	Daniel Mailhot									U		U		
Plains,GA	Zenglu Li								P		P	U	P	U
Tifton,GA	Daniel Mailhot									U		U		U
McCune,KS	W. T. Schapaugh, Jr.			P	U			U						
Pittsburg,KS	W. T. Schapaugh, Jr.				U	P	P	U						
Bossier City,LA	Blair Buckley				U			U		U		U		
Portageville,MO(A)	Pengyin Chen		U		U			U						
Portageville,MO(B)	Pengyin Chen	P	U	P	U	P		U						
Columbia,MO	Andrew Scaboo	P	U											
Starkville,MS	Brad Burgess	P	U	P	U	P	P	U						
Stoneville,MS	Anne Gillen	P	U	P	U	P	P	U						
Jackson Springs, NC	Ben Fallen										P	U	P	U
Kinston,NC	Ben Fallen					P	P		P	U	P	U	P	U
Plymouth,NC	Rouf Mian							U	P	U	P	U		
Jackson,TN	Lisa Fritz	P	U	P	U	P		U						
Knoxville,TN	Vincent Pantalone	P	U	P	U	P	P	U						
Springfield,TN	Vincent Pantalone		U		U			U						
Orange,VA	Greg Lillard	P		P	U			U						
Suffolk,VA	David Holshouser							U						
Warsaw,VA	Bo Zhang				U	P	P	U						
Total Location Planted		9	10	9	16	11	9	18	5	7	5	10	5	7
TOTAL LOCATIONS REPORTING DATA		7	9	9	15	10	8	16	5	7	5	10	5	7

* U = Uniform Test; P = Preliminary Test

B. PLANTING DATES – 2021

Location	PIV-S-E	PIV-S-L	PV-E	PV-L	PVI	PVII	PVIII	UIV-S-E	UIV-S-L	UV	UVI	UVII	UVIII
Belle Mina,AL								22-Apr	22-Apr	18-May			
Fairhope,AL							14-Jun					14-Jun	14-Jun
Tallassee,AL			28-Apr	7-May	1-Jun				28-Apr	7-May	1-Jun		
Keiser,AR**	21-May	21-May	21-May	21-May				21-May	21-May	21-May			
Stuttgart,AR**	15-May	15-May	15-May	15-May					15-May	NH*			
Athens,GA(A)					17-May	17-May	17-May				17-May	17-May	17-May
Athens,GA(B)												NR*	NR
Calhoun,GA											NR	NR	
Plains,GA					19-May	19-May	19-May					19-May	19-May
Tifton,GA											17-May	17-May	17-May
McCune,KS		26-Jun							26-Jun	26-Jun			
Pittsburg,KS			NH	NH					NH	NH			
Bossier City,LA									17-Jun	17-Jun	17-Jun	30-Jun	
Portageville,MO(A)**								20-May	20-May	20-May			
Portageville,MO(B)**	15-May	15-May	15-May					15-May	15-May	15-May			
Columbia,MO	2-Jun							2-Jun					
Starkville,MS	NH	23-Apr	23-Apr	23-Apr				NH	23-Apr	23-Apr			
Stoneville,MS*	NH	1-May	1-May	1-May				1-May	1-May	1-May			
Jackson Springs, NC						9-Jun	9-Jun					9-Jun	9-Jun
Kinston,NC			16-Jun	16-Jun	16-Jun	16-Jun	16-Jun				16-Jun	16-Jun	16-Jun
Plymouth,NC					11-May	11-May				11-May	11-May	11-May	
Jackson,TN	20-May	20-May	20-May					20-May	20-May	20-May			
Knoxville,TN	17-May	27-May	13-May	13-May				13-May	13-May	13-May			
Springfield,TN								27-May	24-May	24-May			
Orange,VA	18-May	18-May							18-May	18-May			
Suffolk,VA										NR			
Warsaw,VA			11-May	11-May					11-May	11-May			

*NR = Date not reported, trial harvested. NH = Not Harvested or Data not reported due to various problems.

** Locations with damage conssitent with Dicamba herbicide damage.

C. HARVEST DATES – 2021

Location	PIV-S-E	PIV-S-L	PV-E	PV-L	PVI	PVII	PVIII	UIV-S-E	UIV-S-L	UV	UVI	UVII	UVIII
Belle Mina,AL								11-Oct	11-Oct	20-Oct			
Fairhope,AL							8-Nov					8-Nov	8-Nov
Tallassee,AL			8-Nov	8-Nov	18-Nov				14-Oct	8-Nov	16-Nov		
Keiser,AR**	1-Nov	27-Oct	4-Nov	4-Nov				27-Oct	27-Oct	4-Nov			
Stuttgart,AR**	22-Oct	22-Oct	22-Oct	22-Oct					22-Oct	NH*			
Athens,GA(A)					2-Nov	8-Nov	9-Nov				2-Nov	8-Nov	9-Nov
Athens,GA(B)												NR*	NR
Calhoun,GA											NR	NR	
Plains,GA					15-Nov	15-Nov	15-Nov					15-Nov	15-Nov
Tifton,GA											19-Oct	19-Oct	19-Oct
McCune,KS		16-Oct							16-Oct	16-Oct			
Pittsburg,KS			NH	NH					NH	NH			
Bossier City,LA									25-Oct	29-Oct	29-Oct	4-Nov	
Portageville,MO(A)**								3-Nov	3-Nov	3-Nov			
Portageville,MO(B)**	22-Oct	22-Oct	22-Oct					22-Oct	22-Oct	22-Oct			
Columbia,MO	19-Oct							18-Oct					
Starkville,MS	NH	12-Oct	12-Oct	12-Oct				NH	12-Oct	12-Oct			
Stoneville,MS**	NH	1-Oct	20-Oct	20-Oct				1-Oct	4-Oct	21-Oct			
Jackson Springs, NC						16-Nov	17-Nov					17-Nov	22-Nov
Kinston,NC			16-Nov	16-Nov	17-Nov	18-Nov	18-Nov				16-Nov	17-Nov	30-Nov
Plymouth,NC					1-Dec	2-Dec				1-Dec	2-Dec	2-Dec	
Jackson,TN	13-Oct	19-Oct	21-Oct					13-Oct	14-Oct	2-Nov			
Knoxville,TN	27-Oct	1-Nov	9-Nov	8-Nov				27-Oct	1-Nov	8-Nov			
Springfield,TN								4-Nov	4-Nov	4-Nov			
Orange,VA	25-Oct	4-Nov							21-Oct	4-Nov			
Suffolk,VA										NR			
Warsaw,VA			5-Nov	5-Nov					22-Oct	5-Nov			

*NR = Date not reported, trial harvested. NH = Not Harvested or Data not reported due to various problems.

** Locations with damage consistent with Dicamba herbicide damage.

D. AGRONOMIC CHARACTERISTICS OF LOCATIONS – 2021

2021 Location	Soil type	Row Spacing	Planted Length	Harvested Length	Trial Bordered	End Trim-med	# Rows Planted	# Rows Harvested	Prior Crop	Irri-gated
Belle Mina,AL	Decatur silt loan	36	20	20	Yes	No	4	2	Fallow	Yes
Fairhope,AL	Malbis fine sandy loan	38	20	20	yes	Yes	4	2	Cotton	No
Tallassee,AL	Cahaba fine sandy loam	36	20	20	Yes	No	4	2	Corn	Yes
Keiser,AR	Sharkey silty clay	38	15	15	Yes	No	4	2	Corn	Yes
Stuttgart,AR	Crowley silt loam	30	15	15	Yes	No	4	2	Rice	Yes
Athens,GA(A)	Wickham sandy loam	30	16	12	Yes	Yes	4	2	Corn/Small Grains	Yes
Athens,GA(B)	Wickham sandy loam	30	16	12	Yes	Yes	4	2	Grain sorghum	Yes
Calhoun,GA	Etowah loam, Wax loam	30	21	18	Yes	Yes	4	2	Small grains	Yes
Plains,GA	Tifton sandy loam	30	16	12	Yes	Yes	4	2	Grain sorghum	Yes
Tifton,GA	Tifton sandy loam	36	21	18	Yes	Yes	4	2	Cotton	Yes
McCune,KS	Parsons silt loam	30	12	12	Yes	No	4	2	Corn	No
Pittsburg,KS	Parsons silt loam	30	12	12	Yes	No	4	2	Corn	No
Bossier City,LA	Caplis very fine sandy loam	40	28	20	Yes	Yes	4	2	Soybeans	Yes
Portageville,MO(A)	Dundee silt loam	30	12	12	Yes	No	4	2	Soybean	Yes
Portageville,MO(B)	Sharkey clay	30	12	12	Yes	No	4	2	Soybean	Yes
Columbia,MO	Mexico-silt loam	30	12	12	Yes	No	4	2	Corn	No
Starkville,MS	Brooksville silty clay	19	18	16	Yes	Yes	3	3	Wheat	No
Stoneville,MS	Sharkey clay	26	16.5	15.5	Yes	No	5	3	Soybean	Yes
Jackson Springs, NC	Ailey loamy sand	38	12	10	Yes	Yes	4	2	Corn	Yes
Kinston,NC	Stallings loamy sand	30	16	14	Yes	Yes	4	2	Corn	No
Plymouth,NC	Portsmouth silt loam	38	12	10	Yes	Yes	4	2	Corn	No
Jackson,TN	Vicksburg silt loam/ Vicksburg fine sandy loam	30	12	12	Yes	No	4	2	Soybeans	No
Knoxville,TN	Sequatchie silt loam	30	20	16	Yes	Yes	4	2	Corn	No
Springfield,TN	Staser silt loam	30	25	16	Yes	Yes	4	2	N/A	Yes
Orange,VA	Davidson clay	21	16	12	Yes	Yes	3	3	Small grain	No
Suffolk,VA	Dragston fine sandy loam	15	24	17	Yes	Yes	6	4	Corn	No
Warsaw,VA	Kempsville loam	30	16	12	Yes	Yes	4	2	Small grains	No

E. WEATHER STATION INFORMATION – as of 2013

Location	Weather Station URL	Notes
Belle Mina, AL	national weather sevice	
Fairhope, AL	national weather sevice	
Tallassee, AL(A)	not reported	
Tallassee, AL(B)	not reported	
Pine Tree, AR	N/A	
Rohwer, AR	http://www.aragriculture.org/weather/default.asp	
Georgetown, DE	http://www.rec.udel.edu/TopLevel/Weather.htm	
Athens, GA (A)	http://www.griffin.uga.edu/aemn/cgi-bin/AEMN.pl?site=GAWP	
Athens, GA (B)	http://www.griffin.uga.edu/aemn/cgi-bin/AEMN.pl?site=GAWP	
Calhoun, GA	http://www.griffin.uga.edu/aemn/cgi-bin/AEMN.pl?site=GACA	
Plains, GA	http://www.griffin.uga.edu/aemn/cgi-bin/AEMN.pl?site=GAPL	
Tifton, GA	http://www.griffin.uga.edu/aemn/cgi-bin/AEMN.pl?site=GATI	
Ullin, IL	none	
McCune, KS	http://www.oznet.ksu.edu/wdl/	
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Bossier City, LA	www.lsuagcenter.com/weather/tabledata.asp	
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Portageville, MO(B)	http://agebb.missouri.edu/weather/realtime/portageville.asp	
Starkville, MS	http://www.deltaweather.msstate.edu/	
Stoneville, MS	http://www.deltaweather.msstate.edu/	Stoneville is at the end of the list of weather stations.
Jackson Springs, NC	http://www.nc-climate.ncsu.edu/cronos/index.php?station=JACK&temporal=daily	Sandhills Station, NC (Jackson Springs)
Kinston, NC	http://www.nc-climate.ncsu.edu/cronos/index.php?station=314689&temporal=D	Kinston, NC
Plymouth, NC(A)	http://www.nc-climate.ncsu.edu/cronos/?station=PLYM	Tidewater Research Station
Plymouth, NC(B)	http://www.nc-climate.ncsu.edu/cronos/?station=PLYM	Tidewater Research Station
Bixby, OK	www.mesonet.ou.edu	
Stillwater, OK	www.mesonet.ou.edu	
Blackville, SC(A)	http://www.ncdc.noaa.gov/crn/	
Blackville, SC(B)	http://www.ncdc.noaa.gov/crn/	
Clemson, SC	http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KSCCLEMS1&graphspan=month&month=6&day=1&year=2007	
Florence, SC	not reported	
Jackson, TN	None on the web	
Knoxville, TN	www.ncdc.noaa.gov	Look on left menu for "Find a Station" for Knoxville Experiment Station
Springfield, TN	not reported	
Bardwell, TX	not reported	
Cooper, TX	not reported	
Orange, VA	not reported	
Petersburg, VA	http://www.accuweather.com/forecast-climo.asp?partner=30371&traveler=0&zipChg=1&zipcode=23841&metric=0	This only has the past two months of data
Suffolk, VA	not reported	
Warsaw, VA	http://www.ext.vt.edu/cgi-bin/WebObjects/Mesonet.woa/wa/lookupCoordinate?472,102	EVAREC is location name

METHODS

CULTURAL PRACTICES

Please see Soybean Nursery Information – Tables A, B, C, D, and E for details on locations including contacts, row spacing, plot dimensions, end trimming, planting dates, harvest dates, crop rotation, and weather station URLs. Cultural practices, including fertilization, chemical application and irrigation practices, varied at each location to conform to the normal practices of each collaborator. The uniform tests were planted with three (3) replications and the preliminary tests were planted with two (2) replications except three (3) replications were planted for PVII and PVIII.

AGRONOMIC CHARACTERISTICS

Height. Height (HT) in a plot was measured as the average length of plants in inches from the ground to the top extremity at maturity.

Lodging. Lodging (LOD) notes were recorded on a scale of 1 to 5 according to the following criteria:

1 - almost all plants erect
2 - either all plants leaning slightly, or a few plants down
3 - either all plants leaning moderately, or 25 to 50% of the plants down
4 - either all plants leaning considerably, or 50 to 80% of the plants down
5 - all plants down

Maturity. Maturity (MAT) was recorded as the date when 95% of the pods had reached mature pod color (Fehr and Caviness, 1977). Maturity in all summaries is expressed as days earlier (-) or later (+) than the reference variety. The reference variety in each test is the first entry in each test.

Yield. Please see Agronomic Characteristics of Locations for information on end trimming and which rows were harvested for yield data at each location. Actual seed weights were recorded after the seed of the strains had reached uniform moisture content or seed weight at harvest was adjusted to 13% moisture content. Seed weights were converted to bushels per acre (60 lbs/bu.) by using the appropriate conversion factor for each location with respect to harvested plot size.

Seed Quality. Seed quality was rated from 1 to 5 according to the following scale:

1 - very good; 2 - good; 3 - fair; 4 - poor; 5 - very poor

Factors considered in estimating seed quality were development of seed, wrinkling damage, and brightness. While the seed quality score indicates relative appearance of seed for strains at one location, considerable differences can exist among factors responsible for the poorer grades at different locations. Seed size for each strain was determined from a composite sample from all replications at a location. Seed size is reported as grams per 100 seed.

SEED COMPOSITION

Oil and Protein. Oil and protein (PRO) percentages were determined from representative locations of the uniform and preliminary tests. A 50 ml composite sample all replications of a strain in trial was sent to the USDA-ARS, National Center for Agricultural Utilization Research, Bio-Oils Research Unit at Peoria, Illinois for analysis. One sample of 20ml of whole seed was analyzed for protein and oil composition by near infrared transmittance analysis (NIT) using an IM 9500 Grain Analyzer (Perten Instruments AB, Sweden). Analysis of the seed was conducted on an 'as is' basis and then mathematically converted to a 13% moisture basis (13%) beginning in 2015. Prior to 2015 protein and oil percentages were reported on a dry weight basis (DWB). The conversion factor is 1.1494252 to convert from 13% to DW. The conversion factor is 0.87 to convert DW to 13%.

Validation of the protein and oil percentages are done with combustion method and pulsed Nuclear Magnetic Resonance and AOCS method Ac 2-41 respectively. Lines that were expected to have high oleic (HO) acid percentage, over 75% oleic fatty acid, were analyzed using a CHN 628 (Leco, MI, USA) combustion analysis to verify the protein content; random samples of non-HO beans were also analyzed for comparison. Seed samples are ground in a coffee mill then dried at 85 °C for one hour then analyzed with data compared on a DWB. Pulsed Nuclear Magnetic Resonance, Bruker mq20 (Bruker Corporation, The Woodlands, TX) calibrated to report grams of oil in known grams of seed weight while the AOCS method obtains the moisture content for a DWB oil percentage. Protein values on a 13% moisture basis based on this method are reported only for lines designated at having high oleic acid in the parentage table.

Amino Acids. Seed amino acid percentages were determined for strains known to have modified amino acid percentages and normal checks from representative locations of the uniform and preliminary tests. A composite sample from all replications of a strain in a trial was sent to the University of Missouri Experiment Station Chemical Laboratories (ESCL) for analysis of crude protein and amino acids using the "Cysteine, Methionine, Lysine +9" analysis.

Fatty Acids. Fatty acid analysis of strains known to have oleic acid levels over 75% and normal checks were determined from representative locations of the uniform and preliminary tests. Percent palmitic, stearic, oleic, linoleic, and linolenic acid content in the oil were determined. A 30-gram composite seed sample of all replications of a strain in a trial was sent to Dr. Pengyin Chen, University of Missouri, Delta Center, Portageville, MO for analysis.

Mr. Stewart Selves at University of Missouri – Delta Center conducted the fatty acid analysis using a five-seed sample placed in an envelope and manually crushed with a hammer. Crushed seeds were extracted in 5mL chloroform:hexane:methanol (8:5:2, v/v/v) overnight. Derivatization was done by transferring 100 µL of extract to vial and adding 75 µL of methylating reagent (0.25 M methanolic sodium methoxide:petroleum ether:ethyl ether, 1:5:2 v/v/v). Hexane was added to dilute samples to approximately 1 mL. An Agilent (Palo Alto, CA) series 7890 capillary gas chromatograph fitted with a flame ionization detector (275°C) was used with an AT-Silar capillary column (Alltech Associates, Deerfield, IL). Standard fatty acid mixtures (Animal and Vegetable Oil Reference Mixture 6, AOACS) were used as calibration reference standards.

Oligosaccharides (Sugars). Seed sugar percentages were determined for strains known to have a modified sugar profile and normal checks from representative locations of the uniform and preliminary tests. Composite seed samples of all replications of a strain in a trial were sent to Dr. Bo Zhang, Virginia Polytechnic Institute and State University for analysis. A 0.1 gram of ground sample was used to extract sucrose, raffinose and stachyose and analyzed by High Performance Liquid Chromatography (HPLC). Four calibration standards are used: Standard Level 1: 75,7.5,18.75 ug/mL for sucrose, raffinose and stachyose, Standard Level 2: 150, 15, and 37.5 ug/mL for sucrose, raffinose and stachyose, Standard Level 3: 500, 50 and 125 ug/mL for sucrose, raffinose and stachyose and Standard Level 4: 1000, 100, and 250 ug/mL for sucrose, raffinose and stachyose. A reference standard is used as well: 4.90, 0.70 and 1.40 mg/mL of sucrose, raffinose and stachyose. Data is converted to percentage of sugars.

PEST ASSESSMENT

Root-knot Nematode. Screenings of strains of UIV-S - UVIII for reaction to southern root-knot nematode (*Meloidogyne incognita* (Kofoid and White) Chitwood) (SRK), peanut root-knot nematode (*Meloidogyne arenaria* (Neal) Chitwood) (PRK), and *Meloidogyne javanica (*Treub) Chitwood (JRK) were conducted in a greenhouse at the University of Georgia by Dr. Melissa G. Mitchum..

Four 3-day-old seedlings of each genotype were individually transplanted in a Ray Leach Cone-tainer (20.6 cm long) filled with heat-sterilized sandy loam soil to within 5 cm of the top. Eight Cone-tainers each of a susceptible and resistant standard cultivar were included in each test. Forty-nine Cone-tainers were placed in a RL-98 tray, filling every other row of the tray. The trays were placed on a greenhouse bench under supplemental light provided by 400-watt high pressure sodium lamps. Seven days after planting, each Cone-tainer was inoculated with 2500 root-knot nematode eggs collected using the 0.5% NaOCL (10% Clorox) method. A hole at a depth of 2-3 cm was poked on each side of the seedling. One ml of inoculum (1250 eggs/mL) was placed in each hole with a digital dispensing pump. Plants were overhead watered manually for 14 days following inoculation before being placed on a greenhouse bench in an automatic pan irrigation system. All plants were fertilized weekly with 20-20-20 (N = 20%, P = 8.7%, K = 16.6%) fertilizer solution.

Six weeks after inoculation, shoots were excised and root systems removed from the Cone-tainers and washed free of soil. For screening genotypes in the Uniform Tests, the total number of galls per root system was counted. The galls on each root system were converted to a gall index (GI) relative to the average number of galls on the susceptible check (GaSoy17) using a scale of 1-5 where 1 = <10% GI; 2=11-20%, 3=21-30%, 4=31-40%, 5 = >40% GI. The average GI across the four replications of each genotype is reported.

Soybean Cyst Nematode (SCN). Screening for plant reaction to soybean cyst nematode (Heterodera glycines Ichinohe) (SCN) populations was conducted in the greenhouse at the ARS-Crop Genetics Research Unit in Jackson, TN in 2020. Screening for SCN was done with HG Type 1.2.5.7 (race 2), and HG Type 2.5.7 (race 5). One seed of each soybean entry (UIVS-UVIII and PIV-S-PVIII) was planted in sterile soil mix with 7 replications per each SCN population. At the time of planting, approximately 2500 eggs of the population being evaluated were added to each pot. Approximately four weeks after planting, plants were rated based on the number of cysts on the roots. The ratings were as follows: 1 = 0-5 cysts on the root, 2=6-10 cysts on the root, 3=11-20 cysts on the root, 4=21-40 cysts on the root, and 5=> 40 cysts on the root. The 7 replications were averaged and if there were less than 4 plants to rate, the screening was repeated and the data was not shown if there were less than 4 plants for the rating. The mean rating = (rating category x number of plants receiving rating)/total number of plants in that comparison.

In 2020 the HG Types of the populations were as follows: HG Type 1.2.5.7 (race 2), and HG Type 2.5.7 (race 5). 5601T was used as the standard susceptible. The standard index lines were included in every test to confirm characterization. For race 2, 5601T had an average of 141 cysts per test. The female index for the cultures were as follows: Pickett FI 80(%), PI 548402 FI 33(%), PI 88788 FI 49(%), PI 90763 FI 0(%), PI 437654 FI 0(%), PI 209332 FI 52(%), PI 89772 FI 0(%), and PI 548316 FI 53(%). For race 5, 5601T had an average of 367 cysts per test. The female index for the cultures were as follows: Pickett FI 52(%), PI 548402 FI 7(%), PI 88788 FI 8(%), PI 90763 FI 0(%), PI 437654 FI 0(%), PI 209332 FI 48(%), PI 89772 FI 0(%), and PI 548316 FI 48(%).

Stem Canker (SC). Soybean strains from all tests were evaluated at the Delta Research and Extension Center, Stoneville, Mississippi for their reaction to *Diaporthe aspalathi* E. Jansen, Castl. & Crous (Syn D. *phaseolorum* var *meridionalis*) (SC), the fungus that causes southern stem canker. Strains were planted in non-replicated single-row plots 1.8 m long. Inoculum was produced by aseptically culturing isolates. Autoclaved, flat toothpicks containing a single isolate from Mississippi known as LiDA18-2 (isolated in 2018 from Stoneville, MS) were

provided by Dr. Shuxian Li, USDA-ARS. Eight plants per plot were inoculated by forcing a toothpick through the stem in the upper one-third of a young plant. Lesion development on the stem at the inoculation site was observed and noted approximately every 2 weeks beginning with initial signs of disease on the susceptible checks. Final scores were determined when the susceptible checks had been killed by the disease, or the plot was near maturity. Plants having any external lesion were considered as susceptible. The final score was based on the overall appearance of all inoculated plants in a plot.

A rating of R = resistant, MR = moderately resistant, SS = segregating or somewhat susceptible, MS = moderately susceptible or S = susceptible was applied to each strain and derived based on a comparison of the final score with the disease level of the susceptible checks. Leaf symptoms were based on the presence or absence of interveinal chlorosis as observed on inoculated plants. The presence of main stem lesions was observed at or around the point of inoculation based on the presence of a toothpick. Individual soybean strains were rated as follows:

1. No plants exhibited external lesions, no leaf damage and no dead plants (R).
2. No plants exhibited external lesions. A few plants showed minor leaf symptoms (MR).
3. Segregating for susceptible and resistant plants based on stem lesion; **or** minor external lesions and minor leaf symptoms, but no dead plants (SS).
4. All plants exhibited external lesions, all plant have leaf symptoms, some plants are not dead (MS).
5. All plants exhibited external lesion and all plants dead (S).

The score for susceptible checks AG4403 and GoSoy 54G16, and resistant checks Ellis and NC-Dunphy were 5, 5, 1 and 1, respectively.

Sudden Death Syndrome (SDS). SDS, which is caused by the fungus *Fusarium virguliforme*. SDS screening was discontinued in 2017 due to a lack of funding.

STATISTICAL ANALYSES

Yield, maturity, height, lodging and quality data for each test were analyzed by location by analysis of variance using a mixed model (Proc Mixed in SAS software) with variety as the fixed effect and replication as random effect. Coefficient of variation (CV), LSD ($\alpha = 0.05$) and LSD ($\alpha = 0.10$) were calculated from the Proc Mixed output for yield. LSmeans are presented when multiple replications of data were available. Any location that does not have at least two replications of yield data is not included in the yield analysis. In the cases when only I replication of data was provided for variables other than yield, the actual values for that replication were presented.

Yield, maturity, height, lodging and quality for each test were analyzed over all locations for the uniform tests and the preliminary tests by analysis of variance using a mixed model (Proc Mixed in SAS software) with variety as a fixed effect and location, replication nested within location, and the interaction of location and variety as random effects. Coefficient of variation (CV), LSD ($\alpha = 0.05$) and LSD ($\alpha = 0.10$)(for yield only) were calculated from the Proc Mixed output. **Yield data from locations with a yield CV of over 15 were omitted from yield test means and yield ranks.**

The protein and oil data for a variety/strain at a location is the NIR analysis results from one composite sample of all replications for each entry at the location, except in 2019 and 2020 when certain trials in the Uniform Tests had replicated data. Size data is collected either for all replications, or as a composite sample. Arithmetic means are presented for composite samples and LSmeans are presented for replicated data. Protein, oil and size were analyzed by test by analysis of variance using a mixed model (Proc Mixed in SAS) with variety as a fixed effect and location; as a random effect. Coefficient of variation (CV) and average LSD ($\alpha = 0.05$) were calculated from the Proc Mixed output. LSmeans are presented for the test means.

The Rank column in the general summary tables indicated the relative ranking of the yield based on the average performance of a line across locations. Locations with a high yield CV value are not included in Rank calculations.

The Average Rank column in the general summary tables indicates the yield rank of a line based on the average of a line's rank at each individual location. Locations with a high yield CV value are not included in Average Rank calculations.

When a 2-year mean is missing from the general summary table for a Uniform Test, the strain/variety was not in the test for the prior year. In this case the 3-year mean is the average of two years.

TABLE 1 - PARENTAGE OF ENTRIES
UNIFORM GROUP IV-S-EARLY 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG45X8	Commercial check	check		RRX	
2	AG38X8	Commercial check	check		RRX	
3	LD15-3818	Commercial check	check		CONV	
4	S13-3851C	Commercial check	check		CONV	
5	DS1062-11	R99-1613F x JTN 5203	Rusty Smith	F5	CONV	reniform nematode resistant
6	JTN-4119	5601T x PI 437655	Arelli	F10	CONV	new SCN resistance source
7	JTN-4219	5601T x PI 437655	Arelli	F10	CONV	new SCN resistance source
8	S16-12137C	S08-17361 x NCC09-2007	P. Chen		CONV	SC, Salt
9	S16-5540R	S11-16653 x S11-20337RR1	P. Chen		RR1	RKN, SCN, RN, Salt
10	S17-1946C	S11-16653 x S13-8585	P. Chen		CONV	SC, Salt
11	S17-19874R	S13-13360 x S13-16712RR1	P. Chen		RR1	SCN, RN, HO
12	S17-20605C	S12-16675 x S13-10592	P. Chen		CONV	SC, HO
13	S18-1042R	S13-10590 x S14-7233GT	P. Chen		RR1	SCN, RKN, RN, Salt
14	SA17-8882	SA13-2699 x A12-961044	Scaboo	F5	CONV	HOLL
15	V14-1235	B05-8046 x S04-12996	Zhang	F4	CONV	
16	V17-0454	R05-3239 x TN09-008	Zhang	F4	CONV	
17	V17-2478R	S10-11200 x V11-3163	Zhang	F4	RR1	

† Conv= Conventional(non-transgenic), LL=Liberty Link®, RR1=Roundup Ready®, RR2=Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high olelic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 2 - GENERAL SUMMARY OF PERFORMANCE
UNIFORM TEST IV-S-EARLY 2021

STRAIN/		AVG.		YIELD†			PROTEIN‡			OIL‡	
VARIETY	RANK	RANK	2021	20-21	19-21	2021	20-21	19-21	2021	20-21	19-21
AG45X8	1	2	70.3	69.0	.	35.6	35.2	.	18.7	18.8	.
AG38X8	7	7	58.7	60.9	.	36.2	35.7	.	19.5	19.5	.
LD15-3818	17	13	46.6	.	.	35.5	.	.	21.1	.	.
S13-3851C	3	4	63.3	.	.	35.2	.	.	20.0	.	.
DS1062-11	10	10	54.1	.	.	34.5	.	.	20.3	.	.
JTN-4119	15	14	46.9	46.0	.	32.5	32.3	.	21.1	21.1	.
JTN-4219	16	13	46.6	.	.	33.0	.	.	21.2	.	.
S16-12137C	5	6	60.4	.	.	34.6	.	.	19.8	.	.
S16-5540R	2	5	64.6	62.8	63.8	35.4	35.5	35.6	19.2	19.1	19.2
S17-1946C	9	9	55.9	.	.	35.3	.	.	19.1	.	.
S17-19874R	11	12	52.6	53.5	.	37.5	37.8	.	18.7	18.5	.
S17-20605C	4	4	63.3	.	.	36.2	.	.	20.6	.	.
S18-1042R	12	11	51.2	.	.	35.5	.	.	19.7	.	.
SA17-8882	14	14	47.9	.	.	37.7	.	.	19.8	.	.
V14-1235	13	12	50.7	.	51.8	32.7	.	32.7	21.4	.	21.1
V17-0454	8	9	56.6	.	.	34.9	.	.	19.4	.	.
V17-2478R	6	8	58.9	.	.	35.5	.	.	18.8	.	.
Mean	.	.	55.8	.	.	35.2	.	.	19.9	.	.
LSD(0.05)	.	.	6.3	.	.	1.0	.	.	0.6	.	.
CV(%)	.	.	14.0	.	.	3.0	.	.	2.8	.	.

†Data not included in the test mean: 2020 Belle Mina and Springfield; 2021 Knoxville. Certain field trials had damage consistent with Dicamba exposure, which may have resulted in an unfair yield advantage for check lines with Dicamba resistance.

‡ Protein percentage and oil percentage reported on a 13% moisture basis beginning in 2015.

TABLE 3 - GENERAL SUMMARY OF PERFORMANCE -Part 2
UNIFORM TEST IV-S-EARLY 2021

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
AG45X8	47.6	0	2	33	2.6	15.2			
AG38X8	48.9	-7	1	28	3.0	16.6			
LD15-3818	48.9	-7	1	25	4.0	14.8			
S13-3851C	47.8	-1	2	27	2.6	15.9			
DS1062-11	47.0	-3	2	34	2.2	13.1	P	Tw	Tn
JTN-4119	44.8	-5	2	27	2.8	12.1	P	G	
JTN-4219	45.5	-6	2	26	3.0	12.1	P	G	
S16-12137C	46.9	-1	2	35	2.5	17.6	P	T	Tn
S16-5540R	47.6	3	2	29	2.1	15.3	W	T	Tn
S17-1946C	47.5	3	3	38	2.0	13.1	W	T	Tn
S17-19874R	50.1	2	2	35	2.1	13.2	W	T	Tn
S17-20605C	49.6	1	3	31	2.5	13.7	W	G	Tn
S18-1042R	48.1	-4	1	25	3.2	13.0	P	T	Bl
SA17-8882	51.1	-7	2	27	3.0	14.7	P	T	
V14-1235	45.2	-5	1	29	3.0	12.7	P	T	
V17-0454	47.1	1	1	22	2.5	15.3	P	T	
V17-2478R	47.5	2	2	33	2.4	14.1	P	G	
Mean	47.7	-2	2	30	2.7	14.3			
LSD(0.05)	1.3	3	0	3	0.6	1.0			
CV(%)	2.8	173	32	13	23.0	8.2			

† Estimated meal protein content was added to the annual report in 2018.

TABLE 4 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST IV-S-EARLY 2021

STRAIN/	SCN Cyst Score (1-5 Scale)†			RKN Gall Score (1-5 Scale)*			SC	SC
VARIETY	Race 2	Race 3	Race 5	PRK	SRK	JRK	RATING	SCORE
AG45X8	.	4	.	5.0	4.5	5.0	R	1
AG38X8	.	4	.	5.0	5.0	5.0	R	1
LD15-3818	.	4	.	5.0	5.0	5.0	R	1
S13-3851C	.	3	.	1.5	5.0	1.8	R	1
DS1062-11	.	3	.	4.8	5.0	3.0	R	1
JTN-4119	.	1	.	3.7	1.5	4.5	R	1
JTN-4219	.	2	.	5.0	4.0	3.5	R	1
S16-12137C	.	3	.	5.0	5.0	5.0	R	1
S16-5540R	.	2	.	3.3	1.0	2.5	SS	3
S17-1946C	.	5	.	3.3	5.0	5.0	R	1
S17-19874R	.	1	.	4.0	5.0	5.0	MS	4
S17-20605C	.	2	.	5.0	5.0	5.0	R	1
S18-1042R	.	1	.	5.0	4.3	5.0	S	5
SA17-8882	.	2	.	3.3	5.0	5.0	R	1
V14-1235	.	3	.	4.3	5.0	4.5	R	1
V17-0454	.	1	.	5.0	5.0	5.0	R	1
V17-2478R	.	3	.	3.0	5.0	4.8	R	1

†The race 2, 3, and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7, HG Type 0, and HG Type 2.5.7, respectively. Results for race 2 and 5 were omitted. See Materials and Methods.
*The root-knot nematode (RKN) species used in these tests were Meloidogyne incognita (southern root knot = SRK), M. arenaria (peanut root knot = PRK), and M. javanica (Javanese root-knot = JRK;)MR = mixed reaction.

TABLE 5 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST IV-S-EARLY 2021 †

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR*	Knoxville, TN	Portageville, MO(A)*	Portageville, MO(B)*	Springfield, TN	Stoneville, MS *	Test Mean
AG45X8	73.2	65.2	51.0	84.1	68.4	85.4	71.3	51.0	81.2	70.3
AG38X8	58.2	58.3	43.5	72.5	45.7	71.5	59.9	42.3	63.7	58.7
LD15-3818	54.9	62.3	39.9	53.7	40.8	44.7	42.5	24.1	52.4	46.6
S13-3851C	67.4	58.8	47.9	72.7	54.0	69.5	67.8	52.9	69.3	63.3
DS1062-11	63.9	55.8	41.0	52.7	47.4	55.2	55.8	54.1	54.1	54.1
JTN-4119	53.1	58.0	41.6	44.4	45.1	53.2	36.4	47.0	42.9	46.9
JTN-4219	52.7	58.4	34.3	44.6	40.8	54.3	38.8	52.3	37.4	46.6
S16-12137C	71.0	57.5	45.3	71.4	54.6	61.1	62.2	50.7	64.2	60.4
S16-5540R	65.0	53.9	42.8	79.6	58.0	67.8	72.2	60.5	75.4	64.6
S17-1946C	58.4	53.3	45.6	64.5	56.5	59.7	57.8	47.9	59.8	55.9
S17-19874R	56.3	50.6	32.7	59.1	53.3	58.3	55.2	50.3	56.9	52.6
S17-20605C	72.0	59.6	52.3	71.9	31.9	72.2	55.2	54.8	68.1	63.3
S18-1042R	63.0	55.9	41.9	56.5	34.2	50.8	49.1	31.9	61.0	51.2
SA17-8882	54.6	55.1	39.2	47.5	36.1	54.4	39.7	44.4	47.1	47.9
V14-1235	57.8	54.9	35.8	59.1	45.5	54.6	50.4	34.0	58.7	50.7
V17-0454	80.2	49.2	44.7	55.4	56.3	56.5	56.3	50.0	60.2	56.6
V17-2478R	66.0	50.4	41.5	66.9	66.0	70.6	56.2	53.5	66.2	58.9
Mean	62.8	56.3	42.4	62.2	49.1	61.2	54.5	47.2	59.9	55.8
LSD(0.05)	9.9	13.3	8.2	6.9	14.8	7.3	8.8	9.5	9.3	6.3
LSD(0.10)	8.3	11.1	6.8	5.7	12.3	6.1	7.3	7.9	7.8	5.2
CV(%)	9.5	14.0	11.0	6.7	17.6	7.2	9.7	12.2	8.9	14.0

†Data not included in the test mean: Knoxville
* Locations with obvious damage consistent with exposure to the herbicide Dicamba.

TABLE 6 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	9/17	10/3	9/26	10/1	10/2	10/2	10/3	10/7	9/17	9/29
AG38X8	-11	-7	-11	-8	-3	-8	-3	-1	-12	-7
LD15-3818	-11	-8	-15	-8	1	-6	-3	3	-12	-7
S13-3851C	-7	-4	-2	-1	1	1	4	0	-4	-1
DS1062-11	-8	0	-6	-4	-3	-2	-3	0	-4	-3
JTN-4119	-6	-4	-10	-5	-1	-3	-8	-2	-7	-5
JTN-4219	-7	-4	-10	-6	-1	-3	-7	-2	-9	-6
S16-12137C	2	-3	0	-3	-2	0	1	0	-4	-1
S16-5540R	7	7	1	8	-6	6	4	0	4	3
S17-1946C	7	5	3	3	-2	3	2	0	3	3
S17-19874R	2	4	1	0	0	2	8	0	2	2
S17-20605C	7	-3	0	1	1	2	0	0	-3	1
S18-1042R	-6	-6	-9	-6	0	-3	-2	2	-7	-4
SA17-8882	-9	-6	-12	-8	-5	-5	-4	-2	-10	-7
V14-1235	-9	-4	-10	-6	-2	-3	-2	-2	-8	-5
V17-0454	3	4	1	4	1	-2	1	0	-5	1
V17-2478R	2	-1	1	5	2	6	2	1	3	2
Mean	-3	-2	-5	-2	-1	-1	-1	0	-4	-2
LSD(0.05)	4	2	3	3	7	3	5	2	3	3
CV(%)	80	63	45	93	358	187	483	497	30	173

TABLE 7 - PLANT HEIGHT (INCHES)
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	36	36	31	34	29	40	28	30	30	33
AG38X8	32	30	28	27	24	32	26	25	25	28
LD15-3818	30	28	25	22	24	21	24	29	23	25
S13-3851C	32	31	29	27	25	25	23	26	26	27
DS1062-11	41	37	36	31	30	32	25	36	35	34
JTN-4119	31	34	29	26	23	26	22	28	20	27
JTN-4219	31	34	28	25	21	27	21	29	19	26
S16-12137C	40	39	38	31	31	33	31	37	36	35
S16-5540R	38	35	29	21	32	20	24	30	31	29
S17-1946C	46	41	39	30	42	33	31	37	40	38
S17-19874R	42	39	36	32	34	30	28	37	41	35
S17-20605C	34	34	36	27	31	29	30	32	28	31
S18-1042R	30	29	28	21	23	20	22	25	25	25
SA17-8882	29	30	29	24	28	24	31	29	23	27
V14-1235	35	32	29	29	27	27	26	25	27	29
V17-0454	32	28	20	15	19	16	26	24	19	22
V17-2478R	37	37	35	31	33	30	30	30	36	33
Mean	35	34	31	27	28	27	26	30	29	30
LSD(0.05)	5	5	4	3	3	3	10	4	4	3
CV(%)	8	8	8	6	6	7	24	8	9	13

TABLE 8 - PLANT LODGING (1-5)
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	1.0	1.7	2.0	1.0	2.2	1.7	1.3	1.0	1.7	1.5
AG38X8	1.0	1.3	1.0	1.0	2.0	1.0	1.3	1.0	1.0	1.2
LD15-3818	1.7	1.2	1.0	1.0	2.0	1.0	1.0	1.0	1.0	1.2
S13-3851C	1.7	1.7	2.0	1.0	2.2	2.0	1.7	1.0	2.0	1.7
DS1062-11	2.7	2.5	2.0	1.0	2.0	1.7	1.3	1.0	2.7	1.9
JTN-4119	1.7	1.8	2.0	1.0	2.0	1.7	1.0	1.0	1.0	1.5
JTN-4219	1.3	1.8	2.0	1.3	2.0	2.3	1.3	1.0	1.0	1.6
S16-12137C	2.3	2.5	2.7	1.7	2.5	2.3	2.3	1.0	4.0	2.4
S16-5540R	2.3	4.0	2.7	1.0	4.0	1.3	1.3	1.0	2.0	2.2
S17-1946C	3.0	3.0	3.0	2.3	3.8	2.3	3.3	1.2	4.0	2.9
S17-19874R	2.0	1.8	1.3	1.7	2.0	2.0	1.3	1.0	3.3	1.8
S17-20605C	2.0	2.8	3.7	2.7	4.0	3.3	3.0	1.2	3.3	2.9
S18-1042R	1.0	1.3	1.7	1.0	2.0	1.3	1.0	1.0	1.0	1.3
SA17-8882	1.3	1.7	2.3	1.0	2.7	1.0	1.3	1.0	1.0	1.5
V14-1235	2.0	1.7	1.3	1.0	2.0	1.3	1.0	1.0	1.0	1.4
V17-0454	1.0	1.5	1.0	1.0	2.0	1.0	1.3	1.0	1.0	1.2
V17-2478R	2.0	1.8	2.0	1.0	2.5	2.3	2.0	1.0	2.0	1.9
Mean	1.8	2.0	2.0	1.3	2.5	1.7	1.6	1.0	1.9	1.8
LSD(0.05)	0.7	0.8	0.6	0.5	0.2	1.0	0.8	0.2	0.6	0.4
CV(%)	22.4	24.1	18.7	24.3	5.7	33.1	32.0	9.4	19.1	32.5

TABLE 9 - SEED QUALITY (1-5)
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	3.0	2.0	2.7	2.0	3.5	2.3	3.0	2.5	.	2.6
AG38X8	4.0	2.0	3.0	3.0	4.0	2.7	2.7	3.0	.	3.0
LD15-3818	5.0	2.0	3.7	4.0	4.5	3.7	4.0	5.0	.	4.0
S13-3851C	4.3	1.0	2.7	3.0	3.0	2.3	2.0	2.5	.	2.6
DS1062-11	4.0	2.0	2.7	2.0	2.0	2.0	1.0	2.0	.	2.2
JTN-4119	3.3	1.0	4.0	4.0	3.0	2.0	2.0	3.0	.	2.8
JTN-4219	4.7	1.0	3.3	3.7	3.5	3.0	2.0	2.5	.	3.0
S16-12137C	4.3	2.0	2.3	2.7	2.5	2.0	2.0	2.0	.	2.5
S16-5540R	3.3	3.0	2.0	2.3	2.0	2.0	1.3	1.5	.	2.1
S17-1946C	4.0	2.0	2.3	1.7	2.0	1.0	2.0	1.5	.	2.0
S17-19874R	4.0	2.0	2.3	2.3	1.0	2.0	2.0	1.0	.	2.1
S17-20605C	4.0	2.0	2.3	2.3	3.5	2.0	2.0	1.5	.	2.5
S18-1042R	4.7	2.0	3.3	3.7	3.0	3.0	2.3	3.5	.	3.2
SA17-8882	5.0	2.0	3.0	3.3	3.0	3.0	2.3	2.5	.	3.0
V14-1235	5.0	2.0	3.5	3.0	3.0	2.3	2.3	2.5	.	3.0
V17-0454	4.3	3.0	2.0	3.3	1.5	2.7	2.0	1.5	.	2.5
V17-2478R	5.0	1.0	2.0	2.3	2.0	2.0	2.7	2.0	.	2.4
Mean	4.2	1.9	2.8	2.9	2.8	2.4	2.2	2.4	.	2.7
LSD(0.05)	0.6	.	0.8	0.8	.	0.6	0.5	.	.	0.6
CV(%)	8.7	.	16.8	17.4	0.0	14.6	14.4	0.0	.	23.0

TABLE 10 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	17.5	12.5	14.5	15.3	19.4	14.9	13.3	16.1	13.2	15.2
AG38X8	16.2	13.6	15.5	17.0	20.1	15.6	16.2	18.7	16.3	16.6
LD15-3818	14.9	13.1	13.6	15.6	17.7	14.5	15.3	13.4	15.9	14.8
S13-3851C	16.5	13.1	15.3	16.3	17.3	16.6	16.3	19.4	11.7	15.9
DS1062-11	13.8	11.5	12.3	13.0	15.2	12.6	12.5	13.9	13.8	13.1
JTN-4119	13.1	12.6	11.3	10.7	14.6	12.2	10.3	13.8	10.9	12.1
JTN-4219	12.9	11.7	12.1	11.1	14.4	11.5	11.1	13.5	11.3	12.1
S16-12137C	19.5	14.9	17.3	16.2	21.7	16.1	16.0	20.7	15.3	17.6
S16-5540R	16.6	11.8	12.2	16.1	19.5	16.5	15.8	17.4	11.4	15.3
S17-1946C	13.9	11.3	12.7	12.7	15.4	13.3	12.1	15.7	10.5	13.1
S17-19874R	13.5	12.1	12.1	14.4	15.0	13.5	13.2	14.5	10.2	13.2
S17-20605C	14.6	10.8	13.1	13.8	16.8	13.7	12.8	14.8	12.9	13.7
S18-1042R	14.7	10.4	11.9	12.7	15.6	12.6	12.8	13.1	12.8	13.0
SA17-8882	14.3	12.6	13.6	14.3	18.2	13.2	12.6	17.5	16.5	14.7
V14-1235	13.9	10.2	11.9	12.4	14.7	12.3	11.9	14.4	12.5	12.7
V17-0454	17.6	11.6	13.8	16.0	19.1	15.5	15.3	17.7	10.2	15.3
V17-2478R	14.0	12.4	14.0	13.6	16.3	14.4	12.2	16.2	14.3	14.1
Mean	15.1	12.1	13.4	14.2	17.1	14.1	13.5	15.9	12.9	14.3
LSD(0.05)	1.6	.	1.0	1.0	0.2	1.0	1.1	0.2	.	1.0
CV(%)	6.3	.	4.4	4.4	0.8	4.2	4.9	0.8	.	8.2

TABLE 11 - OIL (%)†
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	19.0	19.4	18.7	18.8	19.0	19.0	.	17.0	18.8	18.7
AG38X8	20.1	20.3	19.8	19.4	19.8	19.6	.	17.6	19.4	19.5
LD15-3818	22.1	21.2	21.2	20.8	21.6	20.6	.	19.4	22.2	21.1
S13-3851C	20.8	20.7	20.9	19.4	20.9	20.0	.	18.1	19.1	20.0
DS1062-11	20.8	20.4	20.3	20.4	20.6	20.1	.	19.4	20.1	20.3
JTN-4119	21.2	21.8	21.0	21.3	21.5	21.3	.	20.5	20.7	21.1
JTN-4219	20.8	21.5	21.5	21.7	22.0	21.0	.	20.4	21.0	21.2
S16-12137C	20.5	20.7	20.1	20.0	19.7	19.6	.	17.8	20.0	19.8
S16-5540R	20.2	19.3	19.4	19.1	19.8	18.5	.	18.1	18.9	19.2
S17-1946C	20.2	20.0	18.7	19.8	19.7	18.8	.	17.3	18.8	19.1
S17-19874R	18.7	18.8	19.2	18.2	18.9	17.7	.	16.6	21.4	18.7
S17-20605C	20.9	20.5	20.8	19.9	23.5	19.8	.	19.2	20.5	20.6
S18-1042R	20.4	20.3	20.3	19.5	19.9	19.7	.	17.4	20.1	19.7
SA17-8882	20.8	20.6	20.3	20.1	19.5	19.8	.	18.5	19.1	19.8
V14-1235	21.9	21.7	22.4	21.0	21.8	20.7	.	19.7	21.7	21.4
V17-0454	19.5	19.8	19.0	19.1	20.0	19.2	.	18.4	19.9	19.4
V17-2478R	18.5	19.1	18.9	19.2	18.9	18.3	.	17.6	20.1	18.8
Mean	20.4	20.4	20.1	19.9	20.4	19.6	.	18.4	20.1	19.9
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.6
CV(%)	.	.	.	.	.	.	.	.	.	2.8

†Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 12 - PROTEIN (%)†
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	37.2	33.7	36.1	33.7	35.4	35.3	.	37.4	35.9	35.6
AG38X8	36.3	34.1	37.4	35.7	36.1	36.1	.	38.7	35.5	36.2
LD15-3818	35.9	33.9	35.5	33.6	38.0	33.9	.	37.9	35.0	35.5
S13-3851C	35.6	32.6	34.6	35.5	36.2	34.0	.	37.9	35.2	35.2
DS1062-11	35.4	33.1	35.7	33.3	35.4	32.4	.	35.8	35.1	34.5
JTN-4119	33.0	30.5	34.9	30.8	34.2	30.8	.	34.0	32.3	32.5
JTN-4219	33.7	30.8	33.6	30.6	35.1	31.5	.	34.0	34.7	33.0
S16-12137C	36.0	32.0	35.9	32.4	36.0	33.3	.	36.8	34.6	34.6
S16-5540R	34.2	33.2	36.1	35.2	34.9	36.1	.	37.3	36.5	35.4
S17-1946C	35.1	31.6	36.8	32.4	36.2	35.0	.	37.3	38.2	35.3
S17-19874R	39.0	36.0	36.7	38.1	39.0	38.1	.	40.1	33.3	37.5
S17-20605C	36.5	33.8	36.2	34.8	40.6	34.7	.	36.3	36.3	36.1
S18-1042R	36.7	32.7	35.6	34.3	37.3	34.2	.	36.9	36.8	35.5
SA17-8882	40.0	34.3	37.4	35.7	40.3	36.2	.	38.9	38.5	37.7
V14-1235	34.4	30.1	32.1	31.5	32.9	32.2	.	35.5	32.8	32.7
V17-0454	35.1	32.8	36.3	34.6	34.8	33.6	.	36.0	36.0	34.9
V17-2478R	36.7	33.3	36.2	33.5	36.6	34.9	.	37.5	35.4	35.5
Mean	35.9	32.8	35.7	33.9	36.4	34.2	.	37.0	35.4	35.2
LSD(0.05)	.	.	.	.	.	.	.	.	.	1.0
CV(%)	.	.	.	.	.	.	.	.	.	3.0

†Protein percentage reported on a 13% moisture basis beginning in 2015.

TABLE 13 - ESTIMATED MEAL PROTEIN (%)†
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	49.9	45.4	48.2	45.1	47.5	47.3	.	48.9	48.1	47.6
AG38X8	49.4	46.5	50.7	48.1	48.9	48.8	.	51.1	47.8	48.9
LD15-3818	50.1	46.8	48.9	46.1	52.6	46.5	.	51.1	48.9	48.9
S13-3851C	48.8	44.7	47.6	47.9	49.7	46.1	.	50.3	47.3	47.8
DS1062-11	48.5	45.1	48.7	45.5	48.4	44.1	.	48.2	47.7	47.0
JTN-4119	45.5	42.3	48.0	42.5	47.3	42.6	.	46.4	44.2	44.8
JTN-4219	46.3	42.7	46.5	42.5	48.9	43.3	.	46.4	47.8	45.5
S16-12137C	49.2	43.8	48.8	44.1	48.7	45.1	.	48.6	47.0	46.9
S16-5540R	46.6	44.8	48.6	47.3	47.3	48.2	.	49.5	48.9	47.6
S17-1946C	47.9	43.0	49.2	43.9	48.9	46.8	.	49.0	51.1	47.5
S17-19874R	52.1	48.2	49.4	50.5	52.2	50.3	.	52.2	46.1	50.1
S17-20605C	50.2	46.2	49.7	47.3	57.6	47.1	.	48.9	49.6	49.6
S18-1042R	50.0	44.5	48.6	46.3	50.5	46.3	.	48.6	50.0	48.1
SA17-8882	54.9	46.9	51.0	48.5	54.4	49.0	.	51.8	51.7	51.1
V14-1235	47.9	41.8	44.9	43.4	45.7	44.1	.	48.0	45.5	45.2
V17-0454	47.3	44.4	48.8	46.5	47.3	45.2	.	48.0	48.9	47.1
V17-2478R	49.0	44.7	48.6	45.0	49.0	46.4	.	49.5	48.2	47.5
Mean	49.0	44.8	48.6	45.9	49.7	46.3	.	49.2	48.2	47.7
LSD(0.05)	.	.	.	.	.	.	.	.	.	1.3
CV(%)	.	.	.	.	.	.	.	.	.	2.8

SUMMARY OF SEED FATTY ACIDS (%)
UNIFORM TEST IV-S-EARLY 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AG45X8	10.5	3.8	23.2	55.1	7.5
AG38X8	11.2	4.0	27.9	51.1	5.8
S17-19874R	7.6	3.2	78.1	6.3	4.8
S17-20605C	7.0	2.9	81.5	4.4	4.1
SA17-8882	7.7	3.4	81.4	5.4	2.0
Mean	8.8	3.5	58.4	24.5	4.8
LSD(0.05)	0.4	0.2	4.1	3.6	0.4
CV(%)	4.9	7.3	7.3	15.2	7.8

†Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	10.8	10.8	9.9	10.3	10.4	11.0	10.1	10.5	10.4	10.5
AG38X8	11.3	11.9	10.0	11.8	11.5	10.9	11.5	10.8	10.8	11.2
S17-19874R	6.6	7.4	7.2	8.3	7.7	8.4	7.7	7.6		7.6
S17-20605C	7.6	6.8	6.5	7.5	7.5	6.9	7.1	6.8	6.7	7.0
SA17-8882	7.9	7.5	7.6	8.4	7.5	7.8	7.5	7.0	8.2	7.7
Mean	8.9	8.9	8.2	9.3	8.9	9.0	8.8	8.6	9.0	8.8
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.4
CV(%)	.	.	.	.	.	.	.	.	.	4.9

SEED STEARIC ACID (%)
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	4.2	4.0	3.9	3.5	3.8	3.7	3.6	3.9	3.6	3.8
AG38X8	4.0	4.8	3.8	3.5	4.6	4.1	3.6	4.1	3.8	4.0
S17-19874R	2.8	3.6	3.3	3.7	2.9	3.2	3.1	3.2		3.2
S17-20605C	2.7	3.1	3.1	2.7	3.0	2.9	2.7	2.9	2.7	2.9
SA17-8882	3.6	3.5	3.3	3.6	3.3	3.4	3.4	3.5	3.3	3.4
Mean	3.5	3.8	3.5	3.4	3.5	3.5	3.3	3.5	3.4	3.5
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.2
CV(%)	.	.	.	.	.	.	.	.	.	7.3

SEED OLEIC ACID (%)
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	22.4	22.9	24.1	23.4	24.8	22.4	22.6	25.1	20.8	23.2
AG38X8	27.3	24.4	32.7	25.5	24.6	27.5	25.8	37.1	26.7	27.9
S17-19874R	85.5	78.7	80.3	61.4	80.5	77.8	79.0	80.8		78.1
S17-20605C	82.4	82.4	78.9	82.2	71.4	82.8	83.1	83.3	87.0	81.5
SA17-8882	82.2	82.7	83.8	68.3	83.7	81.6	82.7	84.1	83.7	81.4
Mean	59.9	58.2	59.9	52.2	57.0	58.4	58.6	62.1	54.6	58.4
LSD(0.05)	.	.	.	.	.	.	.	.	.	4.1
CV(%)	.	.	.	.	.	.	.	.	.	7.3

SEED LINOLEIC ACID (%)
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	55.8	54.3	55.6	55.3	53.9	54.6	55.8	52.7	57.9	55.1
AG38X8	51.6	52.5	48.6	52.9	53.1	51.3	53.2	42.8	53.8	51.1
S17-19874R	1.6	4.5	4.7	21.1	4.3	5.2	5.4	3.3		6.3
S17-20605C	3.5	3.2	7.7	3.1	13.7	2.9	2.8	2.6	0.5	4.4
SA17-8882	4.6	4.3	3.4	17.0	3.6	4.9	4.3	3.6	2.9	5.4
Mean	23.4	23.8	24.0	29.9	25.7	23.8	24.3	21.0	28.8	24.5
LSD(0.05)	.	.	.	.	.	.	.	.	.	3.6
CV(%)	.	.	.	.	.	.	.	.	.	15.2

SEED LINOLENIC ACID (%)
UNIFORM GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
AG45X8	6.8	8.0	6.5	7.5	7.1	8.4	7.9	7.8	7.3	7.5
AG38X8	5.8	6.4	4.9	6.3	6.3	6.2	5.9	5.2	4.9	5.8
S17-19874R	3.5	5.8	4.5	5.5	4.6	5.4	4.9	5.0		4.8
S17-20605C	3.7	4.6	3.8	4.4	4.4	4.5	4.3	4.5	3.0	4.1
SA17-8882	1.8	2.0	2.0	2.6	1.9	2.3	2.1	1.8	1.9	2.0
Mean	4.3	5.4	4.3	5.3	4.9	5.3	5.0	4.9	4.3	4.8
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.4
CV(%)	.	.	.	.	.	.	.	.	.	7.8

INTENTIONALLY BLANK

TABLE 14 - PARENTAGE OF ENTRIES
UNIFORM GROUP IV-S-LATE 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	Ellis	Commercial check	check		CONV	
2	AG 46X6	Commercial check	check		RRX	
3	AG 48X9	Commercial check	check		RRX	
4	AG49X9	Commercial check	check		RRX	
5	DA13092-015F	DB04-10836 x JTN-5203	Gillen		CONV	
6	DA13092-039F	DB04-10836 x JTN-5203	Gillen		CONV	
7	DS1169-323	(DT98-9102 x PI 587982A) x Osage	Rusty Smith	F6	CONV	tolerant mature seed damage
8	DS1260-260	(PI 587982A x DT97-4290) x LD00-3309	Rusty Smith	F5	CONV	tolerant mature seed damage
9	R15-2422	LEO2939-04S809 x R04-357	L. Mozzoni		CONV	
10	R16-253	S09-10871 x R11-1617	L. Mozzoni		CONV	
11	R16-259	S09-10871 x R11-1617	L. Mozzoni		CONV	
12	S16-13165C	S11-16653 x LG09-8545	P. Chen		CONV	SCN, SC, Salt
13	S16-7922C	S11-16653 x S11-20124	P. Chen		CONV	SCN, RKN, RN, SC, Salt
14	S17-19933R	S11-16653 x S13-16712RR1	P. Chen		RR1	SCN, SC, HO
15	S17-2193C	S11-20124 x S13-11434	P. Chen		CONV	SC, Salt
16	S18-3709R	S14-2088 x S14-15164GT	P. Chen		RR1	SCN, RN
17	S18-6097C	Ellis x S12-4718	P. Chen		CONV	SCN, RKN, RN, Salt
18	TN18-4047	NCC09-200719-1-37 x 2013-50,454	Pantalone		CONV	48% meal protein
19	TN18-4110	Ellis(4) x TN13-5001-ln x Ellis(4) x TN10-4037-HO	Pantalone		CONV	50% meal protein, HOLN
20	TN18-5001	DB06x038-70 x HM11-W193	Pantalone		CONV	
21	V15-0057DI	Ozark x PI 200508	Zhang	F4	CONV	diversity, 50% PI 200508
22	V16-0262DI	R99-1613F x R05-4114	Zhang	F4	CONV	diversity, 25% PI 290126B
23	V16-0293	S08-17361 x JTN-4307	Zhang	F4	CONV	
24	V17-0437	R05-3239 x TN09-008	Zhang	F4	CONV	

† Conv= Conventional(non-transgenic), LL=Liberty Link®, RR1=Roundup Ready®, RR2=Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high olelic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 15 - GENERAL SUMMARY OF PERFORMANCE
UNIFORM TEST IV-S-LATE 2021

STRAIN/ VARIETY	RANK	AVG. RANK	YIELD† 2021	YIELD† 20-21	YIELD† 19-21	PROTEIN‡ 2021	PROTEIN‡ 20-21	PROTEIN‡ 19-21	OIL‡ 2021	OIL‡ 20-21	OIL‡ 19-21
Ellis	16	15	66.4	59.9	59.0	35.3	35.1	35.3	18.8	18.7	18.8
AG 46X6	6	9	71.6	67.2	.	35.0	35.0	.	19.5	19.5	.
AG 48X9	1	4	80.9	71.6	.	35.0	34.8	.	20.0	19.9	.
AG49X9	2	7	74.3	.	.	33.6	.	.	20.4	.	.
DA13092-015F	4	8	73.0	.	.	35.6	.	.	18.9	.	.
DA13092-039F	12	12	68.0	.	.	35.1	.	.	18.7	.	.
DS1169-323	23	18	61.3	.	.	37.4	.	.	18.0	.	.
DS1260-260	21	18	62.4	56.7	.	35.8	35.5	.	18.3	18.2	.
R15-2422	24	21	57.0	.	.	37.1	.	.	19.2	.	.
R16-253	19	17	63.9	.	.	36.3	.	.	19.0	.	.
R16-259	18	16	64.1	.	.	36.0	.	.	19.6	.	.
S16-13165C	10	11	69.3	.	.	36.0	.	.	19.5	.	.
S16-7922C	3	7	74.0	67.1	65.3	35.9	35.4	35.4	19.4	19.3	19.4
S17-19933R	9	11	69.7	.	.	36.3	.	.	19.2	.	.
S17-2193C	15	13	67.3	.	.	34.5	.	.	19.8	.	.
S18-3709R	20	16	63.2	.	.	35.8	.	.	20.1	.	.
S18-6097C	5	8	72.8	.	.	36.0	.	.	19.1	.	.
TN18-4047	8	11	70.1	.	.	34.8	.	.	19.1	.	.
TN18-4110	22	17	62.0	56.7	.	35.8	35.5	.	19.4	19.2	.
TN18-5001	11	13	68.7	.	.	33.9	.	.	20.0	.	.
V15-0057DI	13	12	67.5	61.4	.	35.3	35.3	.	19.2	18.8	.
V16-0262DI	14	12	67.4	.	.	35.1	.	.	20.0	.	.
V16-0293	7	10	70.3	64.1	.	34.7	34.4	.	19.9	19.7	.
V17-0437	17	14	65.2	.	.	34.3	.	.	20.2	.	.
Mean	.	.	67.9	.	.	35.4	.	.	19.4	.	.
LSD(0.05)	.	.	5.6	.	.	1.0	.	.	0.5	.	.
CV(%)	.	.	13.2	.	.	3.3	.	.	3.2	.	.

†Data not included in the test mean: 2021 Bossier City and Orange. Certain field trials had damage consistent with Dicamba exposure, which may have resulted in an unfair yield advantage for check lines with Dicamba resistance.
‡ Protein percentage and oil percentage reported on a 13% moisture basis beginning in 2015.

TABLE 16 - GENERAL SUMMARY OF PERFORMANCE -Part 2
UNIFORM TEST IV-S-LATE 2021

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
Ellis	47.2	0	1	24	1.8	13.4			
AG 46X6	47.3	-4	2	33	2.5	17.2			
AG 48X9	47.6	-2	2	35	2.3	16.2			
AG49X9	45.8	-4	2	32	2.4	16.2			
DA13092-015F	47.8	-1	1	27	1.7	12.8	P	T	
DA13092-039F	46.9	-3	2	25	1.5	12.5	P	T	
DS1169-323	49.4	-7	2	34	1.6	11.4	W	G	Tn
DS1260-260	47.5	-7	1	34	1.6	11.5	P	G	Tn
R15-2422	49.9	-6	3	35	2.3	13.0	P	G	Tn
R16-253	48.8	-4	1	32	1.9	15.0	W	T	Tn
R16-259	48.7	-5	1	31	1.9	14.8	P	T	Tn
S16-13165C	48.6	-4	2	38	2.1	15.4	P	G	Tn
S16-7922C	48.4	-1	2	32	1.7	15.1	W	T	Tn
S17-19933R	48.8	-1	2	31	1.8	15.2	W	T	Bl
S17-2193C	46.8	-3	2	36	2.3	13.6	P	T	Bl
S18-3709R	48.7	-4	1	30	2.3	13.9	W	T	Tn
S18-6097C	48.4	-1	1	26	2.2	13.8	W	T	Tn
TN18-4047	46.8	-3	1	24	1.9	14.4			
TN18-4110	48.0	0	1	23	1.9	13.2			
TN18-5001	46.0	-2	2	30	1.9	16.1			
V15-0057DI	47.5	-4	1	25	1.7	16.1	P	G	
V16-0262DI	47.7	-5	2	36	2.1	15.6	P	T	
V16-0293	47.2	-2	2	34	2.3	16.7	W	T	
V17-0437	46.6	-3	1	25	1.9	15.8	P	T	
Mean	47.8	-3	2	30	2.0	14.5			
LSD(0.05)	1.2	2	0	2	0.4	0.7			
CV(%)	3.1	88	45	13	28.0	7.5			

† Estimated meal protein content was added to the annual report in 2018.

TABLE 17 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST IV-S-LATE 2021

STRAIN/	SCN Cyst Score (1-5 Scale)†			RKN Gall Score (1-5 Scale)*			SC	SC
VARIETY	Race 2	Race 3	Race 5	PRK	SRK	JRK	RATING	SCORE
Ellis	.	5	.	1.0	1.0	1.8	R	1
AG 46X6	.	4	.	2.3	5.0	2.5	R	1
AG 48X9	.	5	.	3.7	5.0	5.0	R	1
AG49X9	.	4	.	3.7	5.0	2.8	R	1
DA13092-015F	.	1	.	5.0	5.0	4.8	R	1
DA13092-039F	.	4	.	5.0	5.0	5.0	R	1
DS1169-323	.	4	.	2.8	5.0	4.0	R	1
DS1260-260	.	1	.	4.5	5.0	3.0	R	1
R15-2422	.	4	.	5.0	5.0	3.8	R	1
R16-253	.	5	.	5.0	4.5	5.0	R	1
R16-259	.	5	.	4.0	5.0	5.0	R	1
S16-13165C	.	2	.	4.3	5.0	4.8	R	1
S16-7922C	.	2	.	4.0	1.3	2.0	R	1
S17-19933R	.	3	.	5.0	5.0	3.0	R	1
S17-2193C	.	1	.	5.0	5.0	5.0	MR	2
S18-3709R	.	4	.	5.0	1.0	3.5	R	1
S18-6097C	.	1	.	1.5	1.0	1.0	R	1
TN18-4047	.	2	.	4.5	1.0	4.8	R	1
TN18-4110	.	3	.	5.0	1.0	5.0	R	1
TN18-5001	.	2	.	5.0	5.0	4.8	S	5
V15-0057DI	.	5	.	5.0	3.3	5.0	R	1
V16-0262DI	.	5	.	4.5	5.0	2.5	R	1
V16-0293	.	5	.	5.0	5.0	5.0	R	1
V17-0437	.	2	.	5.0	5.0	5.0	R	1

†The race 2, 3, and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7, HG Type 0, and HG Type 2.5.7, respectively. Results for race 2 and 5 were omitted. See Materials and Methods.
*The root-knot nematode (RKN) species used in these tests were Meloidogyne incognita (southern root knot = SRK), M. arenaria (peanut root knot = PRK), and M. javanica (Javanese root-knot = JRK;)MR = mixed reaction.

TABLE 18 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST IV-S-LATE 2021 †

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR*	Knoxville, TN	McCune, KS	Orange, VA
Ellis	68.9	53.1	40.0	53.5	61.3	55.6	44.9
AG 46X6	69.9	62.6	49.8	80.0	72.2	55.9	49.6
AG 48X9	82.5	50.1	46.3	92.6	96.9	57.0	55.9
AG49X9	75.7	54.4	43.1	86.5	76.8	56.1	50.3
DA13092-015F	72.1	67.7	43.6	66.4	88.2	58.8	75.4
DA13092-039F	66.3	58.2	48.0	59.5	78.5	54.6	67.6
DS1169-323	52.8	41.0	37.5	60.0	64.6	49.1	55.3
DS1260-260	55.5	41.5	42.9	65.3	63.3	43.7	60.4
R15-2422	52.1	51.8	35.0	62.1	65.5	50.1	52.5
R16-253	68.7	62.9	40.1	72.7	66.9	47.8	58.6
R16-259	68.1	47.1	45.3	67.0	65.0	50.6	63.4
S16-13165C	66.4	57.7	44.4	71.9	70.6	53.1	54.2
S16-7922C	74.6	42.0	48.6	79.4	71.2	54.9	61.2
S17-19933R	72.2	47.2	52.1	65.3	73.3	51.2	49.2
S17-2193C	68.9	55.5	46.6	64.1	77.5	55.3	62.1
S18-3709R	62.3	43.3	40.4	65.2	60.2	53.2	60.1
S18-6097C	77.5	49.5	39.0	71.2	71.4	55.7	64.0
TN18-4047	77.5	44.8	42.5	58.4	80.2	52.5	70.6
TN18-4110	67.0	40.3	36.0	40.2	62.0	53.8	64.4
TN18-5001	64.9	55.4	33.3	70.1	76.9	53.8	68.7
V15-0057DI	74.7	57.9	52.1	63.2	65.2	52.8	62.5
V16-0262DI	63.4	50.2	52.1	67.3	72.8	55.8	76.0
V16-0293	75.5	54.5	49.4	80.0	76.6	55.6	68.9
V17-0437	73.9	40.1	50.4	46.3	86.0	54.4	65.6
Mean	68.8	51.2	44.1	67.0	72.6	53.4	60.9
LSD(0.05)	8.2	21.5	8.9	7.9	11.4	4.6	17.4
LSD(0.10)	6.8	17.9	7.5	6.6	9.5	3.9	14.5
CV(%)	7.3	25.5	12.3	7.2	9.5	5.3	17.4

†Data not included in the test mean: Bossier City and Orange
* Locations with obvious damage consistent with exposure to the herbicide Dicamba.

TABLE 18 - SEED YIELD (BUSHELS PER ACRE) (continued)
UNIFORM TEST IV-S-LATE 2021 †

STRAIN/ VARIETY	Portageville, MO(A)*	Portageville, MO(B)*	Springfield, TN	Starkville, MS	Stoneville, MS*	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	51.9	53.6	54.4	97.1	70.8	88.6	71.0	95.9	66.4
AG 46X6	76.6	82.1	52.8	59.6	82.5	88.9	61.7	98.4	71.6
AG 48X9	79.4	85.6	60.6	93.4	79.1	103.2	79.8	95.2	80.9
AG49X9	79.9	80.5	58.1	68.0	77.7	96.3	71.6	95.5	74.3
DA13092-015F	61.6	69.4	64.2	84.3	71.9	88.2	81.6	97.8	73.0
DA13092-039F	62.9	59.3	56.1	66.5	69.5	90.2	73.4	99.4	68.0
DS1169-323	56.6	64.9	56.1	74.8	64.3	72.9	65.0	78.7	61.3
DS1260-260	59.8	62.2	54.8	71.1	64.9	86.3	56.9	84.6	62.4
R15-2422	60.1	54.9	51.6	43.2	58.7	70.4	55.0	83.2	57.0
R16-253	63.3	62.7	55.7	56.8	59.9	85.2	62.0	89.1	63.9
R16-259	62.0	68.1	55.8	59.6	67.8	78.6	55.5	90.9	64.1
S16-13165C	66.7	67.3	58.6	87.4	64.8	95.4	65.5	88.7	69.3
S16-7922C	74.9	71.5	60.6	88.3	68.1	92.2	77.3	100.2	74.0
S17-19933R	65.9	67.0	55.9	86.0	64.5	84.3	72.0	96.3	69.7
S17-2193C	65.0	68.7	55.6	75.6	60.6	88.5	51.3	97.1	67.3
S18-3709R	68.2	66.0	40.9	67.1	71.9	87.2	59.9	79.0	63.2
S18-6097C	59.3	72.8	62.1	105.9	71.3	90.5	66.5	102.8	72.8
TN18-4047	63.5	50.1	66.9	71.4	61.3	89.7	88.2	108.9	70.1
TN18-4110	43.7	53.9	57.7	87.4	69.5	83.6	58.9	93.2	62.0
TN18-5001	61.5	63.4	60.8	84.1	59.5	89.0	82.5	93.8	68.7
V15-0057DI	61.8	66.2	60.3	54.9	62.3	82.0	77.7	104.2	67.5
V16-0262DI	66.5	59.3	60.6	66.4	60.0	85.2	68.0	99.3	67.4
V16-0293	72.4	63.8	44.2	73.4	67.1	89.1	64.2	102.2	70.3
V17-0437	54.1	51.2	59.2	72.1	56.6	77.5	64.2	101.3	65.2
Mean	64.1	65.2	56.8	74.8	66.9	86.8	67.9	94.8	67.9
LSD(0.05)	7.5	10.1	11.3	12.5	7.6	15.7	15.4	8.3	5.6
LSD(0.10)	6.2	8.4	9.4	10.5	6.3	13.1	12.8	6.9	4.7
CV(%)	7.1	9.4	12.1	10.2	6.6	11.0	13.8	5.3	13.2

TABLE 19 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	*Belle Mina, AL*	*Bossier City, LA*	*Jackson, TN*	*Keiser, AR*	*Knoxville, TN*	*McCune, KS*	*Portageville, MO(A)*
Ellis	9/26	10/13	10/1	10/10	10/11	10/14	10/8
AG 46X6	-3	-1	-3	-7	-8	-5	-3
AG 48X9	-1	0	2	-8	-1	-2	-4
AG49X9	-4	-1	-2	-7	-4	-5	-4
DA13092-015F	-1	1	1	-1	-2	-1	1
DA13092-039F	-3	1	-1	-4	-3	-1	-3
DS1169-323	-5	0	-4	-8	-11	-4	-6
DS1260-260	-6	-1	-8	-12	-10	-9	-4
R15-2422	-3	0	-10	-11	-12	-5	-6
R16-253	-4	1	-1	-8	-2	-7	-2
R16-259	-6	-1	-3	-8	-9	-6	-2
S16-13165C	-3	0	-5	-8	-8	-1	-1
S16-7922C	0	1	2	-7	0	0	1
S17-19933R	0	0	5	-4	-2	0	1
S17-2193C	-3	0	4	-10	-1	-5	-1
S18-3709R	-3	0	-3	-4	-8	-8	-2
S18-6097C	0	0	0	-1	-8	-1	0
TN18-4047	-3	-1	1	-3	-9	-1	-3
TN18-4110	0	1	-3	1	-1	0	2
TN18-5001	0	1	-2	-2	-3	-1	-1
V15-0057DI	-3	0	1	-5	-7	-5	-8
V16-0262DI	-5	0	-4	-9	-11	-1	-3
V16-0293	-3	0	1	-3	-1	-4	1
V17-0437	-4	1	-4	-4	-6	0	-5
Mean	-3	0	-1	-5	-5	-3	-2
LSD(0.05)	1	2	3	3	1	2	4
CV(%)	33	899	142	33	12	37	96

TABLE 19 - RELATIVE MATURITY (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	10/10	10/11	9/26	10/4	10/16	10/2	10/7
AG 46X6	-3	-1	-1	-3	-8	-5	-4
AG 48X9	-3	0	-4	-3	-7	0	-2
AG49X9	-5	-2	-3	-3	-3	-4	-4
DA13092-015F	1	-2	-4	0	-7	0	-1
DA13092-039F	-2	-3	-3	-1	-10	-1	-3
DS1169-323	-9	-5	-15	-8	-15	1	-7
DS1260-260	-9	-4	-14	-6	-7	-2	-7
R15-2422	-9	-4	-5	-5	-9	-4	-6
R16-253	-5	-4	-4	-5	-5	-2	-4
R16-259	-4	-5	-7	-5	-11	-4	-5
S16-13165C	-4	-2	-5	-6	-11	1	-4
S16-7922C	2	0	-4	-4	-10	0	-1
S17-19933R	-1	0	-4	-1	-8	4	-1
S17-2193C	-3	-3	-5	-6	-9	-2	-3
S18-3709R	-4	-1	-3	-4	-6	-1	-4
S18-6097C	0	-1	-3	-2	-4	3	-1
TN18-4047	-4	-1	-4	-3	-10	5	-3
TN18-4110	0	1	-1	1	-5	3	0
TN18-5001	-3	-2	-3	0	-14	-1	-2
V15-0057DI	-6	0	-10	-4	-13	5	-4
V16-0262DI	-5	-3	-4	-3	-12	-1	-5
V16-0293	-3	0	-7	-3	-3	0	-2
V17-0437	-5	-2	-10	-4	-3	1	-3
Mean	-3	-2	-5	-3	-8	0	-3
LSD(0.05)	3	2	3	2	8	4	2
CV(%)	54	58	31	37	63	1390	88

TABLE 20 - PLANT HEIGHT (INCHES)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA
Ellis	35	31	22	22	19	30	23
AG 46X6	35	39	33	35	30	35	28
AG 48X9	39	37	34	33	34	35	28
AG49X9	38	34	30	30	28	34	25
DA13092-015F	32	31	25	19	26	33	27
DA13092-039F	32	28	25	15	22	29	25
DS1169-323	43	34	32	24	31	41	34
DS1260-260	43	34	29	31	29	34	32
R15-2422	43	39	38	26	36	38	28
R16-253	38	40	31	30	30	32	28
R16-259	39	30	30	26	29	31	31
S16-13165C	48	45	39	32	36	43	33
S16-7922C	39	36	33	21	38	34	26
S17-19933R	36	35	33	22	33	37	24
S17-2193C	41	41	36	29	35	38	32
S18-3709R	39	33	29	25	29	33	26
S18-6097C	31	30	24	19	24	31	24
TN18-4047	31	26	21	14	23	25	26
TN18-4110	32	27	20	14	19	27	23
TN18-5001	36	34	34	19	35	35	29
V15-0057DI	33	30	30	18	22	33	22
V16-0262DI	44	36	38	32	36	35	31
V16-0293	40	35	34	31	34	37	31
V17-0437	33	27	27	13	28	27	27
Mean	38	34	30	24	29	34	28
LSD(0.05)	5	6	4	8	4	4	4
CV(%)	8	10	8	20	8	7	9

TABLE 20 - PLANT HEIGHT (INCHES) (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	17	14	23	.	22	21	34	31	24
AG 46X6	39	31	29	.	29	30	37	35	33
AG 48X9	42	34	32	.	32	34	36	38	35
AG49X9	36	34	26	.	29	31	32	37	32
DA13092-015F	16	17	31	.	28	24	34	35	27
DA13092-039F	15	14	27	.	28	23	31	31	25
DS1169-323	30	31	35	.	31	31	29	44	34
DS1260-260	28	28	32	.	37	34	40	41	34
R15-2422	31	27	33	.	39	32	34	46	35
R16-253	29	27	30	.	32	31	32	38	32
R16-259	28	27	31	.	31	29	35	41	32
S16-13165C	35	35	38	.	41	39	32	41	38
S16-7922C	24	21	39	.	36	31	37	34	32
S17-19933R	19	23	34	.	33	28	35	38	31
S17-2193C	35	33	33	.	38	33	34	42	36
S18-3709R	26	26	26	.	33	30	35	36	30
S18-6097C	15	17	28	.	28	25	32	31	26
TN18-4047	18	13	26	.	24	22	36	31	24
TN18-4110	13	13	26	.	22	20	34	31	23
TN18-5001	21	17	33	.	31	28	32	35	30
V15-0057DI	20	14	28	.	24	20	30	31	25
V16-0262DI	30	27	33	.	42	35	40	42	36
V16-0293	30	30	29	.	33	30	40	42	34
V17-0437	17	14	30	.	21	23	33	32	25
Mean	26	24	31	.	31	29	34	37	31
LSD(0.05)	3	3	5	.	6	4	7	4	2
CV(%)	6	8	9	.	9	8	12	7	13

TABLE 21 - PLANT LODGING (1-5)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA
Ellis	1.0	1.0	1.0	1.0	2.0	1.0	1.0
AG 46X6	1.7	1.3	3.0	1.3	2.5	1.0	1.0
AG 48X9	1.7	1.0	2.3	1.3	2.2	1.0	1.0
AG49X9	2.3	1.0	1.7	1.0	2.2	1.0	1.3
DA13092-015F	1.7	2.7	1.3	1.0	2.2	1.0	1.7
DA13092-039F	2.7	2.0	1.0	1.0	2.0	1.0	1.0
DS1169-323	2.3	1.0	2.3	1.3	2.3	2.0	1.7
DS1260-260	2.0	1.0	1.3	1.0	2.0	1.0	1.0
R15-2422	4.0	1.3	3.3	2.7	3.3	1.3	1.3
R16-253	1.3	1.0	1.7	1.0	2.5	1.0	1.0
R16-259	2.0	1.0	1.0	1.0	2.5	1.0	1.0
S16-13165C	1.7	1.7	1.7	1.3	2.3	1.0	1.0
S16-7922C	2.3	4.0	3.0	1.0	4.0	2.7	2.0
S17-19933R	1.3	2.0	2.3	1.0	2.8	2.0	1.0
S17-2193C	2.3	1.0	2.3	1.3	2.7	1.0	1.0
S18-3709R	1.7	1.0	1.0	1.0	2.0	1.0	1.0
S18-6097C	1.3	1.3	1.0	1.0	2.0	1.0	1.7
TN18-4047	1.0	1.0	1.0	1.0	2.0	1.0	1.0
TN18-4110	1.0	1.0	1.0	1.0	2.0	1.0	1.0
TN18-5001	2.3	1.7	3.0	1.0	3.3	1.0	1.3
V15-0057DI	1.0	2.0	1.7	1.0	2.0	1.0	1.0
V16-0262DI	3.0	1.0	2.3	1.0	2.5	1.0	1.0
V16-0293	2.0	1.0	2.3	1.0	2.5	1.0	1.0
V17-0437	1.3	1.0	1.3	1.0	2.5	1.0	1.0
Mean	1.9	1.4	1.8	1.1	2.4	1.2	1.2
LSD(0.05)	0.7	1.0	0.9	0.5	0.4	0.3	0.8
CV(%)	24.3	43.2	28.2	25.3	9.2	14.3	41.9

TABLE 21 - PLANT LODGING (1-5) (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	1.0	1.0	1.0	.	1.0	-2.3	1.0	1.0	0.8
AG 46X6	1.7	1.3	1.0	.	2.0	1.7	1.0	1.7	1.6
AG 48X9	2.0	1.3	1.0	.	1.5	1.3	1.3	1.5	1.5
AG49X9	2.0	1.7	1.0	.	2.0	1.7	1.3	2.2	1.6
DA13092-015F	1.0	1.0	1.0	.	1.0	1.3	1.0	2.2	1.4
DA13092-039F	1.0	1.0	1.0	.	2.0	1.0	1.7	4.0	1.6
DS1169-323	2.0	2.7	1.0	.	3.0	2.3	1.7	2.8	2.0
DS1260-260	1.3	2.3	1.0	.	2.5	1.0	1.0	1.7	1.4
R15-2422	3.0	3.7	1.0	.	4.0	3.7	5.0	3.3	2.9
R16-253	1.0	1.7	1.0	.	1.5	1.0	1.0	1.7	1.3
R16-259	1.0	1.3	1.0	.	1.5	1.0	1.7	1.5	1.3
S16-13165C	1.7	2.0	1.0	.	2.5	2.0	2.0	2.0	1.7
S16-7922C	1.0	1.0	1.8	.	2.5	2.7	1.7	2.0	2.3
S17-19933R	1.0	1.0	1.0	.	2.5	1.0	2.0	1.7	1.6
S17-2193C	2.0	2.3	1.0	.	2.0	2.0	2.7	2.3	1.9
S18-3709R	2.0	1.3	1.0	.	1.5	1.3	1.0	1.5	1.3
S18-6097C	1.0	1.0	1.0	.	1.0	1.0	1.0	1.3	1.2
TN18-4047	1.0	1.0	1.0	.	1.0	1.0	2.0	1.3	1.2
TN18-4110	1.0	1.0	1.0	.	1.0	1.0	1.0	1.7	1.1
TN18-5001	1.0	1.0	1.3	.	1.0	1.7	1.3	3.0	1.7
V15-0057DI	1.0	1.0	1.0	.	1.0	1.0	1.0	1.4	1.2
V16-0262DI	1.0	1.3	1.0	.	2.0	1.7	2.0	1.4	1.6
V16-0293	1.7	1.7	1.0	.	2.0	1.7	2.3	1.5	1.6
V17-0437	1.3	1.0	1.0	.	1.0	1.0	1.0	1.1	1.2
Mean	1.4	1.5	1.0	.	1.8	1.4	1.6	1.9	1.5
LSD(0.05)	0.6	0.7	0.3	.	0.8	2.1	1.3	0.9	0.4
CV(%)	27.9	27.5	15.5	.	22.8	92.4	47.4	29.9	44.6

TABLE 22 - SEED QUALITY (1-5)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA
Ellis	1.7	1.0	1.7	2.0	1.5	1.0	1.0
AG 46X6	2.3	1.0	2.7	3.0	3.0	2.0	1.3
AG 48X9	2.7	1.0	2.3	2.3	3.0	2.0	1.0
AG49X9	2.7	1.0	2.7	2.7	2.5	2.0	1.3
DA13092-015F	1.7	1.0	1.7	1.7	1.0	1.0	1.7
DA13092-039F	1.3	1.0	1.7	1.3	1.5	2.0	1.0
DS1169-323	1.7	1.0	2.0	2.0	1.5	2.0	1.3
DS1260-260	1.3	1.0	2.3	2.0	1.5	2.0	1.0
R15-2422	2.7	1.0	3.0	2.3	3.5	2.0	1.3
R16-253	2.3	1.0	2.0	2.3	3.0	2.0	1.3
R16-259	2.3	1.0	2.3	1.7	2.5	2.0	1.7
S16-13165C	3.0	1.0	1.7	2.0	1.5	2.0	1.3
S16-7922C	1.3	1.0	1.7	1.7	2.0	1.0	1.0
S17-19933R	1.7	1.0	1.7	1.7	1.5	2.0	1.0
S17-2193C	1.7	1.0	2.3	2.7	1.5	2.0	1.3
S18-3709R	2.3	1.0	3.0	2.7	2.0	2.0	1.3
S18-6097C	1.7	1.0	2.3	2.3	2.0	2.0	1.7
TN18-4047	2.0	1.0	2.0	2.3	1.5	1.0	2.0
TN18-4110	1.7	1.0	1.7	2.0	1.5	2.0	1.3
TN18-5001	1.0	1.0	2.7	2.0	1.5	2.0	1.3
V15-0057DI	1.0	1.0	2.0	2.0	1.5	2.0	1.0
V16-0262DI	2.0	1.0	2.3	2.3	2.0	2.0	1.0
V16-0293	2.3	1.0	2.3	2.3	2.0	2.0	1.0
V17-0437	2.0	1.0	2.0	1.3	1.5	2.0	1.0
Mean	1.9	1.0	2.2	2.1	1.9	1.8	1.3
LSD(0.05)	0.8	.	0.8	0.9	.	.	0.7
CV(%)	25.9	0.0	21.1	26.3	0.0	.	34.0

TABLE 22 - SEED QUALITY (1-5) (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	2.0	2.0	1.5	.	.	2.3	4.0	.	1.8
AG 46X6	3.0	3.0	2.0	.	.	3.7	3.0	.	2.5
AG 48X9	2.0	2.0	2.5	.	.	2.7	4.0	.	2.3
AG49X9	2.0	2.7	1.5	.	.	3.3	4.0	.	2.4
DA13092-015F	2.0	2.0	1.5	.	.	1.7	3.3	.	1.7
DA13092-039F	1.3	1.0	1.0	.	.	1.7	3.7	.	1.5
DS1169-323	1.0	1.0	1.0	.	.	2.0	2.3	.	1.6
DS1260-260	1.0	1.0	1.0	.	.	1.7	3.0	.	1.6
R15-2422	2.3	1.0	2.0	.	.	3.3	3.0	.	2.3
R16-253	1.3	1.0	1.0	.	.	2.7	3.3	.	1.9
R16-259	1.3	1.0	1.5	.	.	2.7	3.0	.	1.9
S16-13165C	2.0	2.7	2.0	.	.	3.3	3.0	.	2.1
S16-7922C	2.0	2.0	1.5	.	.	2.7	2.7	.	1.7
S17-19933R	2.0	1.0	1.5	.	.	2.7	4.0	.	1.8
S17-2193C	2.0	2.7	1.5	.	.	3.3	5.0	.	2.3
S18-3709R	2.0	2.0	2.0	.	.	2.3	4.7	.	2.3
S18-6097C	2.0	2.0	1.5	.	.	3.0	5.0	.	2.2
TN18-4047	2.0	1.7	1.0	.	.	1.7	4.7	.	1.9
TN18-4110	2.0	1.3	1.5	.	.	2.7	4.0	.	1.9
TN18-5001	1.7	2.0	1.0	.	.	2.7	3.7	.	1.9
V15-0057DI	1.3	2.0	1.0	.	.	2.3	3.3	.	1.7
V16-0262DI	2.0	2.3	1.0	.	.	2.7	4.7	.	2.1
V16-0293	1.7	2.0	2.0	.	.	3.3	5.0	.	2.3
V17-0437	2.0	1.7	1.5	.	.	2.3	5.0	.	1.9
Mean	1.8	1.8	1.5	.	.	2.6	3.8	.	2.0
LSD(0.05)	0.5	0.5	.	.	.	1.0	1.2	.	0.4
CV(%)	17.0	17.3	0.0	.	.	22.7	18.6	.	28.3

TABLE 23 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	*Belle Mina, AL*	*Bossier City, LA*	*Jackson, TN*	*Keiser, AR*	*Knoxville, TN*	*McCune, KS*	*Orange, VA*
Ellis	13.5	13.4	11.7	12.9	15.7	12.5	14.7
AG 46X6	16.4	14.9	15.8	15.3	20.4	16.9	18.3
AG 48X9	16.4	15.8	15.5	15.4	20.2	13.8	18.0
AG49X9	16.0	16.0	14.3	15.3	20.6	14.5	17.7
DA13092-015F	12.8	12.7	11.5	12.1	14.4	12.4	13.7
DA13092-039F	12.0	12.9	10.8	12.0	13.4	12.8	15.0
DS1169-323	11.0	10.8	10.4	12.0	12.0	11.8	13.3
DS1260-260	11.0	11.6	11.2	11.6	14.0	11.3	14.0
R15-2422	14.3	12.7	11.3	13.2	16.9	11.6	14.7
R16-253	14.5	16.9	14.1	14.5	17.7	14.8	19.3
R16-259	14.4	15.3	14.3	14.9	18.4	14.4	17.7
S16-13165C	15.8	16.0	13.5	15.3	16.5	14.3	18.7
S16-7922C	15.4	13.7	13.3	15.0	19.8	14.2	17.3
S17-19933R	15.1	15.8	13.5	14.7	19.2	13.8	15.7
S17-2193C	13.6	13.8	13.6	13.0	17.4	12.6	15.7
S18-3709R	14.3	14.1	14.6	13.4	17.1	12.3	16.0
S18-6097C	14.5	13.2	12.7	13.5	17.0	13.5	15.7
TN18-4047	13.4	14.7	12.9	13.2	18.2	13.5	16.7
TN18-4110	13.3	12.7	11.6	12.8	15.2	14.5	15.0
TN18-5001	15.3	16.7	13.6	15.8	20.4	15.5	17.7
V15-0057DI	16.0	16.7	15.3	15.7	20.2	13.7	17.3
V16-0262DI	15.8	16.1	14.3	14.9	20.0	15.1	17.0
V16-0293	16.4	19.9	15.4	16.1	22.7	15.4	18.7
V17-0437	17.5	15.3	14.2	14.9	20.1	14.9	17.7
Mean	14.5	14.6	13.3	14.1	17.8	13.8	16.5
LSD(0.05)	1.2	.	1.0	1.1	0.3	.	1.7
CV(%)	5.1	.	4.7	4.6	0.9	.	6.2

TABLE 23 - SEED SIZE (GRAMS PER 100 SEED) (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	13.3	11.9	14.0	.	9.9	12.9	17.3	.	13.4
AG 46X6	18.1	17.1	20.2	.	13.5	17.0	18.7	.	17.2
AG 48X9	16.0	15.4	18.7	.	13.0	14.6	16.9	.	16.2
AG49X9	15.7	14.1	19.5	.	13.7	15.4	17.8	.	16.2
DA13092-015F	13.6	13.1	13.9	.	9.2	11.4	14.8	.	12.8
DA13092-039F	13.2	12.2	14.8	.	11.0	11.5	12.1	.	12.5
DS1169-323	10.5	11.0	11.9	.	8.3	11.3	13.4	.	11.4
DS1260-260	11.1	10.5	12.8	.	7.8	11.1	11.9	.	11.5
R15-2422	12.8	12.1	14.8	.	10.0	13.3	11.6	.	13.0
R16-253	14.8	13.7	17.2	.	11.3	14.1	13.1	.	15.0
R16-259	14.7	14.3	16.7	.	11.8	13.5	12.2	.	14.8
S16-13165C	15.5	14.4	18.5	.	11.2	15.2	14.7	.	15.4
S16-7922C	15.2	14.2	18.1	.	10.9	14.4	14.4	.	15.1
S17-19933R	15.3	14.1	19.1	.	10.0	14.6	15.8	.	15.2
S17-2193C	13.7	12.7	15.9	.	9.1	12.4	12.7	.	13.6
S18-3709R	13.8	13.4	15.5	.	11.6	12.6	12.1	.	13.9
S18-6097C	14.8	12.9	14.4	.	10.8	13.0	13.0	.	13.8
TN18-4047	14.4	12.2	17.2	.	11.7	13.4	16.0	.	14.4
TN18-4110	13.3	11.9	13.8	.	9.9	12.9	14.5	.	13.2
TN18-5001	16.1	15.4	18.3	.	12.0	15.7	16.3	.	16.1
V15-0057DI	15.3	15.5	17.4	.	12.4	15.9	17.7	.	16.1
V16-0262DI	15.8	14.0	17.2	.	12.0	15.9	14.4	.	15.6
V16-0293	15.0	15.8	18.1	.	11.9	15.6	17.1	.	16.7
V17-0437	16.6	14.6	18.7	.	10.8	16.0	13.6	.	15.8
Mean	14.5	13.6	16.5	.	11.0	13.9	14.7	.	14.5
LSD(0.05)	0.9	1.1	0.2	.	.	0.8	2.3	.	0.7
CV(%)	3.8	4.9	0.8	.	.	3.6	9.3	.	7.5

TABLE 24 - OIL (%)†
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA
Ellis	19.0	.	18.9	18.4	19.3	19.3	19.1
AG 46X6	19.1	.	20.3	19.9	20.1	19.1	20.2
AG 48X9	20.2	.	20.0	20.3	20.5	20.1	20.4
AG49X9	19.9	.	20.9	20.7	24.6	20.8	20.4
DA13092-015F	18.9	.	19.0	18.8	19.0	19.1	20.1
DA13092-039F	18.7	.	18.6	19.0	18.8	19.0	18.4
DS1169-323	18.4	.	17.0	18.2	18.2	18.2	
DS1260-260	18.5	.	18.2	18.0	18.8	18.5	17.4
R15-2422	19.5	.	18.7	19.2	21.1	19.2	18.2
R16-253	18.0	.	19.0	18.9	19.0	20.1	18.7
R16-259	19.5	.	19.1	19.1	20.1	20.1	19.1
S16-13165C	19.6	.	19.1	19.7	20.1	19.6	19.3
S16-7922C	19.8	.	18.7	19.3	20.5	19.6	19.0
S17-19933R	19.4	.	18.2	18.4	19.4	19.4	19.6
S17-2193C	20.5	.	19.9	20.3	19.7	20.0	18.1
S18-3709R	19.9	.	20.2	20.3	20.0	20.0	20.2
S18-6097C	19.2	.	18.6	18.5	19.7	19.1	19.6
TN18-4047	19.5	.	18.7	19.3	19.7	19.1	18.6
TN18-4110	19.2	.	19.6	19.0	19.7	19.5	
TN18-5001	20.3	.	19.6	20.3	20.7	20.0	19.8
V15-0057DI	19.5	.	18.8	19.6	19.5	19.3	18.8
V16-0262DI	20.1	.	19.8	20.2	20.0	19.9	19.7
V16-0293	20.5	.	20.4	20.2	20.3	20.2	19.1
V17-0437	20.6	.	20.0	20.5	20.1	19.9	20.2
Mean	19.5	.	19.2	19.4	20.0	19.5	19.3
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

†Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 24 - OIL (%)† (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	19.3	.	17.4	.	18.4	18.4	19.2	.	18.8
AG 46X6	19.9	.	17.8	.	19.4	18.2	20.7	.	19.5
AG 48X9	19.6	.	18.2	.	20.1	20.0	21.1	.	20.0
AG49X9	18.3	.	18.6	.	20.3	20.4	19.9	.	20.4
DA13092-015F	17.7	.	18.5	.	18.6	19.9	19.0	.	18.9
DA13092-039F	16.9	.	18.1	.	20.0	19.2	18.8	.	18.7
DS1169-323	17.9	.	17.8	.	17.6	17.7	19.4	.	18.0
DS1260-260	18.2	.	18.2	.	17.3	.	19.7	.	18.3
R15-2422	18.2	.	18.3	.	18.7	18.8	20.9	.	19.2
R16-253	18.9	.	17.8	.	18.4	18.9	21.4	.	19.0
R16-259	18.7	.	18.4	.	18.8	20.0	22.2	.	19.6
S16-13165C	19.4	.	17.5	.	19.2	19.5	21.1	.	19.5
S16-7922C	18.3	.	18.5	.	20.0	18.6	20.6	.	19.3
S17-19933R	19.5	.	18.1	.	19.2	19.7	19.9	.	19.2
S17-2193C	19.4	.	19.1	.	18.6	20.6	21.6	.	19.8
S18-3709R	18.6	.	18.7	.	20.4	20.2	22.9	.	20.1
S18-6097C	19.2	.	18.4	.	18.7	19.3	19.4	.	19.1
TN18-4047	18.5	.	18.6	.	19.3	19.7	19.1	.	19.1
TN18-4110	19.6	.	18.7	.	19.8	19.1	19.6	.	19.4
TN18-5001	19.2	.	18.8	.	19.1	20.8	21.4	.	20.0
V15-0057DI	18.9	.	18.4	.	19.9	19.4	19.7	.	19.2
V16-0262DI	19.4	.	19.2	.	19.6	20.1	22.0	.	20.0
V16-0293	19.9	.	17.9	.	19.8	20.2	20.9	.	19.9
V17-0437		.	19.1	.	19.4	20.4	21.4	.	20.1
Mean	18.8	.	18.3	.	19.2	19.5	20.5	.	19.4
LSD(0.05)	.	.	.	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	.	.	.	3.2

TABLE 25 - PROTEIN (%)†
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA
Ellis	34.8	.	35.8	34.1	35.8	34.4	32.8
AG 46X6	35.7	.	35.7	32.7	35.3	34.6	32.0
AG 48X9	35.4	.	36.2	33.4	36.3	34.1	31.6
AG49X9	35.2	.	34.4	32.2	26.3	33.0	30.6
DA13092-015F	35.3	.	35.3	34.8	34.8	34.3	35.6
DA13092-039F	35.3	.	35.0	33.6	35.1	34.3	34.3
DS1169-323	38.8	.	39.4	35.5	37.3	36.2	.
DS1260-260	35.9	.	35.9	34.5	36.1	35.0	35.7
R15-2422	38.2	.	38.4	34.8	38.2	36.1	33.3
R16-253	38.1	.	36.6	35.0	36.7	34.6	34.9
R16-259	36.8	.	37.3	34.6	36.2	33.7	34.9
S16-13165C	36.8	.	37.5	33.6	36.2	34.0	34.1
S16-7922C	36.1	.	37.2	35.3	36.0	33.9	34.7
S17-19933R	37.1	.	38.6	36.3	36.9	35.0	32.9
S17-2193C	33.8	.	33.8	31.8	35.1	32.7	35.8
S18-3709R	36.0	.	37.2	33.3	37.9	35.0	31.5
S18-6097C	35.5	.	37.7	35.3	36.4	35.7	34.4
TN18-4047	34.0	.	35.9	33.2	34.4	34.8	34.8
TN18-4110	35.7	.	36.3	35.1	37.3	34.1	.
TN18-5001	34.6	.	35.0	32.4	34.6	33.3	31.3
V15-0057DI	34.9	.	36.6	33.3	35.5	34.5	35.8
V16-0262DI	36.3	.	35.6	33.2	36.0	33.9	32.5
V16-0293	34.8	.	34.3	32.2	35.8	33.5	33.0
V17-0437	34.0	.	34.4	32.5	35.3	33.4	31.2
Mean	35.8	.	36.2	33.9	35.6	34.3	33.5
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

†Protein percentage reported on a 13% moisture basis beginning in 2015.

TABLE 25 - PROTEIN (%)† (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	36.1	.	35.2	.	36.5	35.8	36.9	.	35.3
AG 46X6	35.0	.	37.2	.	35.6	33.7	38.0	.	35.0
AG 48X9	35.1	.	36.6	.	34.7	33.1	38.7	.	35.0
AG49X9	35.2	.	36.2	.	34.2	34.0	38.1	.	33.6
DA13092-015F	39.8	.	34.6	.	36.2	33.6	37.7	.	35.6
DA13092-039F	37.7	.	34.7	.	34.2	33.5	38.2	.	35.1
DS1169-323	34.4	.	36.9	.	38.3	38.1	39.2	.	37.2
DS1260-260	36.2	.	35.1	.	35.8	.	37.8	.	35.7
R15-2422	36.1	.	37.6	.	36.4	37.3	42.1	.	37.1
R16-253	35.5	.	36.0	.	36.1	36.3	40.1	.	36.3
R16-259	35.9	.	35.6	.	36.3	34.7	40.7	.	36.0
S16-13165C	35.2	.	36.9	.	36.6	36.0	39.5	.	36.0
S16-7922C	37.0	.	35.4	.	36.0	35.6	38.0	.	35.9
S17-19933R	34.2	.	36.8	.	37.5	35.9	37.9	.	36.3
S17-2193C	34.7	.	35.3	.	35.1	33.5	38.4	.	34.5
S18-3709R	35.5	.	36.7	.	35.3	35.0	40.6	.	35.8
S18-6097C	34.6	.	35.8	.	36.4	34.9	39.3	.	36.0
TN18-4047	34.8	.	34.8	.	35.3	33.8	37.3	.	34.8
TN18-4110	34.0	.	35.9	.	36.0	36.3	37.2	.	35.6
TN18-5001	33.3	.	34.5	.	35.9	33.2	34.3	.	33.9
V15-0057DI	36.2	.	34.9	.	35.3	35.5	35.8	.	35.3
V16-0262DI	33.5	.	35.9	.	35.3	35.1	38.7	.	35.1
V16-0293	32.8	.	37.4	.	34.9	34.4	39.2	.	34.7
V17-0437	.	.	35.2	.	35.1	33.8	38.0	.	34.3
Mean	35.3	.	35.9	.	35.8	34.9	38.4	.	35.4
LSD(0.05)	.	.	.	.	.	.	.	.	1.0
CV(%)	.	.	.	.	.	.	.	.	3.3

TABLE 26 - ESTIMATED MEAL PROTEIN (%)†
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA
Ellis	46.7	.	48.0	45.4	48.2	46.4	44.1
AG 46X6	48.0	.	48.7	44.4	48.1	46.4	43.6
AG 48X9	48.2	.	49.2	45.5	49.6	46.3	43.1
AG49X9	47.7	.	47.2	44.2	38.0	45.2	41.8
DA13092-015F	47.3	.	47.3	46.6	46.7	46.1	48.3
DA13092-039F	47.1	.	46.7	45.1	47.1	46.1	45.7
DS1169-323	51.7	.	51.6	47.2	49.5	48.1	.
DS1260-260	47.9	.	47.7	45.7	48.3	46.6	46.9
R15-2422	51.6	.	51.3	46.8	52.6	48.5	44.2
R16-253	50.4	.	49.1	46.9	49.2	47.0	46.6
R16-259	49.7	.	50.1	46.4	49.2	45.9	46.8
S16-13165C	49.8	.	50.4	45.4	49.2	46.0	45.8
S16-7922C	49.0	.	49.8	47.5	49.2	45.8	46.5
S17-19933R	50.0	.	51.3	48.4	49.8	47.2	44.5
S17-2193C	46.1	.	45.8	43.3	47.5	44.4	47.6
S18-3709R	48.8	.	50.6	45.3	51.4	47.5	42.9
S18-6097C	47.8	.	50.4	47.1	49.2	48.0	46.4
TN18-4047	45.9	.	48.0	44.7	46.6	46.7	46.4
TN18-4110	47.9	.	49.1	47.1	50.6	46.1	.
TN18-5001	47.2	.	47.4	44.2	47.4	45.2	42.4
V15-0057DI	47.1	.	49.0	45.1	48.0	46.4	47.9
V16-0262DI	49.4	.	48.3	45.2	48.9	46.1	44.0
V16-0293	47.6	.	46.9	43.9	48.8	45.6	44.3
V17-0437	46.5	.	46.7	44.4	48.0	45.3	42.5
Mean	48.3	.	48.8	45.7	48.4	46.4	45.1
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

TABLE 26 - ESTIMATED MEAL PROTEIN (%)† (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	48.6	.	46.3	.	48.6	47.7	49.7	.	47.2
AG 46X6	47.5	.	49.2	.	48.0	44.8	52.1	.	47.3
AG 48X9	47.4	.	48.6	.	47.3	44.9	53.3	.	47.6
AG49X9	46.8	.	48.3	.	46.6	46.4	51.7	.	45.8
DA13092-015F	52.6	.	46.1	.	48.4	45.6	50.6	.	47.8
DA13092-039F	49.4	.	46.1	.	46.5	45.1	51.1	.	46.9
DS1169-323	45.6	.	48.8	.	50.5	50.3	52.9	.	49.4
DS1260-260	48.0	.	46.7	.	47.0	.	51.2	.	47.5
R15-2422	48.0	.	50.0	.	48.7	49.9	57.8	.	49.9
R16-253	47.6	.	47.7	.	48.0	48.7	55.5	.	48.8
R16-259	48.1	.	47.4	.	48.5	47.1	56.8	.	48.7
S16-13165C	47.4	.	48.6	.	49.2	48.5	54.4	.	48.6
S16-7922C	49.2	.	47.2	.	48.9	47.6	51.9	.	48.4
S17-19933R	46.2	.	48.9	.	50.4	48.6	51.4	.	48.8
S17-2193C	46.8	.	47.4	.	46.9	45.9	53.2	.	46.8
S18-3709R	47.4	.	49.1	.	48.2	47.7	57.3	.	48.7
S18-6097C	46.5	.	47.7	.	48.7	47.1	53.0	.	48.4
TN18-4047	46.4	.	46.5	.	47.6	45.7	50.2	.	46.8
TN18-4110	45.9	.	48.0	.	48.8	48.7	50.3	.	48.0
TN18-5001	44.8	.	46.2	.	48.3	45.6	47.5	.	46.0
V15-0057DI	48.6	.	46.5	.	47.9	47.9	48.4	.	47.5
V16-0262DI	45.2	.	48.2	.	47.7	47.8	53.9	.	47.7
V16-0293	44.5	.	49.4	.	47.3	46.8	53.9	.	47.2
V17-0437	.	.	47.3	.	47.4	46.2	52.6	.	46.6
Mean	47.3	.	47.8	.	48.1	47.1	52.5	.	47.8
LSD(0.05)	.	.	.	.	.	.	.	.	1.2
CV(%)	.	.	.	.	.	.	.	.	3.1

SUMMARY OF SEED FATTY ACIDS (%)
UNIFORM TEST IV-S-LATE 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
Ellis	10.6	3.8	25.2	53.3	7.2
AG 46X6	11.5	3.8	21.4	56.5	6.9
S17-19933R	6.8	3.1	79.8	5.6	4.6
TN18-4110	7.3	2.8	81.2	6.2	2.6
Mean	9.0	3.4	51.9	30.4	5.3
LSD(0.05)	0.4	0.2	3.8	3.2	0.6
CV(%)	5.6	7.3	8.9	12.6	14.1

†Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(A)
Ellis	10.0	8.8	10.5	11.0	10.3	10.6	11.0
AG 46X6	12.0	11.1	11.1	11.7	11.7	11.2	11.2
S17-19933R	6.3	6.5	7.2	6.4	6.6	7.0	7.1
TN18-4110	6.4	6.9	7.5	6.7	7.1	8.7	7.2
Mean	8.7	8.3	9.1	9.0	8.9	9.4	9.1
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

SEED STEARIC ACID (%)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(A)
Ellis	4.0	3.7	3.1	4.0	4.4	4.1	3.5
AG 46X6	4.1	3.6	3.8	3.8	4.2	3.8	3.6
S17-19933R	3.4	3.2	3.1	3.4	3.1	3.0	3.1
TN18-4110	2.3	3.1	2.6	2.8	3.0	2.9	2.5
Mean	3.4	3.4	3.2	3.5	3.7	3.5	3.2
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

SEED PALMITIC ACID (%) (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Test Mean
Ellis	11.3	10.8	10.6	11.0	10.8	10.6
AG 46X6	11.3	11.5	12.2	11.4	11.3	11.5
S17-19933R	7.1	6.7	6.7	7.8	6.8	6.8
TN18-4110	7.3	7.1	6.9	7.6	8.3	7.3
Mean	9.2	9.0	9.1	9.4	9.3	9.0
LSD(0.05)	.	.	.	.	.	0.4
CV(%)	.	.	.	.	.	5.6

SEED STEARIC ACID (%) (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Test Mean
Ellis	3.6	4.2	3.6	3.5	3.8	3.8
AG 46X6	3.8	3.8	4.0	3.6	3.7	3.8
S17-19933R	3.0	3.2	3.0	3.2	2.9	3.1
TN18-4110	2.6	2.8	2.9	2.9	3.3	2.8
Mean	3.3	3.5	3.4	3.3	3.4	3.4
LSD(0.05)	.	.	.	.	.	0.2
CV(%)	.	.	.	.	.	7.3

SEED OLEIC ACID (%)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(A)
Ellis	24.4	34.1	31.8	20.8	33.3	19.0	25.9
AG 46X6	23.8	21.8	21.9	19.6	20.9	18.1	20.6
S17-19933R	84.8	79.6	79.7	81.7	79.5	77.4	79.1
TN18-4110	83.4	85.3	84.3	85.8	84.8	60.8	84.4
Mean	54.1	55.2	54.4	52.0	54.6	43.8	52.5
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

SEED LINOLEIC ACID (%)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(A)
Ellis	54.7	47.8	47.5	56.4	45.1	57.7	52.4
AG 46X6	54.5	57.7	56.6	57.7	55.6	58.6	57.5
S17-19933R	3.4	6.0	5.1	4.0	5.5	6.7	5.2
TN18-4110	3.7	2.8	3.6	2.7	3.0	23.0	3.7
Mean	29.1	28.6	28.2	30.2	27.3	36.5	29.7
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

SEED LINOLENIC ACID (%)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(A)
Ellis	6.8	5.5	7.1	7.8	7.0	8.5	7.3
AG 46X6	5.6	5.9	6.6	7.2	7.6	8.3	7.1
S17-19933R	2.2	4.8	4.8	4.5	5.3	5.9	5.5
TN18-4110	4.2	1.9	2.1	2.0	2.1	4.5	2.1
Mean	4.7	4.5	5.2	5.4	5.5	6.8	5.5
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

SEED OLEIC ACID (%) (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Test Mean
Ellis	19.0	22.1	19.7	19.1	33.1	25.2
AG 46X6	17.5	26.3	16.9	19.7	29.3	21.4
S17-19933R	79.9	80.5	82.1	70.1	83.4	79.8
TN18-4110	84.5	84.3	86.0	73.0	77.7	81.2
Mean	50.2	53.3	51.2	45.5	55.9	51.9
LSD(0.05)	.	.	.	.	.	3.8
CV(%)	.	.	.	.	.	8.9

SEED LINOLEIC ACID (%) (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Test Mean
Ellis	58.5	55.3	59.0	58.2	46.6	53.3
AG 46X6	59.4	51.7	59.5	58.9	50.1	56.5
S17-19933R	5.0	4.3	4.3	13.9	3.4	5.6
TN18-4110	3.5	3.4	2.3	13.5	8.6	6.2
Mean	31.6	28.7	31.3	36.1	27.2	30.4
LSD(0.05)	.	.	.	.	.	3.2
CV(%)	.	.	.	.	.	12.6

SEED LINOLENIC ACID (%) (continued)
UNIFORM GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Test Mean
Ellis	7.6	7.5	7.1	8.1	5.7	7.2
AG 46X6	8.0	6.8	7.5	6.5	5.6	6.9
S17-19933R	5.0	5.3	3.9	4.9	3.6	4.6
TN18-4110	2.1	2.4	1.9	3.0	2.2	2.6
Mean	5.7	5.5	5.1	5.7	4.3	5.3
LSD(0.05)	.	.	.	.	.	0.6
CV(%)	.	.	.	.	.	14.1

TABLE 27 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP IV-S-EARLY 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG45X8	Commercial check	check		RRX	
2	AG38X8	Commercial check	check		RRX	
3	LD15-3818	Commercial check	check		CONV	
4	R18-14229	S09-13635 x R12-712	L. Mozzoni		CONV	
5	R18-14793	S10-7543 x R13-354	L. Mozzoni		CONV	
6	R18-3048	S08-17361 x R11-1617	L. Mozzoni		CONV	
7	S13-3851C	Commercial check	check		CONV	
8	S17-10809R	S13-10592 x S13-13360	P. Chen		RR1	SCN, SC, RN
9	S17-1695C	S11-16653 x S13-3851	P. Chen		CONV	SC, Salt
10	S17PR-499R	S12-3858(4) x S13-16692HO	P. Chen		RR1	SCN, SC, RKN, Salt, HOLN
11	S18-1098R	S13-10590 x S14-7233GT	P. Chen		RR1	
12	S18-3949R	S13-10590 x S14-15164GT	P. Chen		RR1	SCN, RN
13	S18-6470C	S11-17025 x S13-4214	P. Chen		CONV	SCN, RN
14	S19-3530RY	S15-2702RY x S15-3772RY	P. Chen		RR2	
15	SA17-30465	F3:5 U09-311114 x LG10-2699	Scaboo	F5	CONV	
16	SA18-12111	LD07-3395bf x SA13-1363	Scaboo	F5	CONV	SCN
17	SA18-13417	U11-616086 x S13-9169	Scaboo	F5	CONV	
18	SA18-7258	LD11-11299 x SA14-5743	Scaboo	F5	CONV	
19	SA18-7490	SA13-5761 x LD11-2170	Scaboo	F5	CONV	SCN
20	SA18-8568	LD11-11299 x SA13-1310	Scaboo	F5	CONV	
21	SA18-9109	SA13-2692 x K13-1515	Scaboo	F5	CONV	SCN
22	TN18-4005	S09-9943 x 13-531-261 BC1F3	Pantalone		CONV	HO
23	TN18-4006	S09-9943 x 13-531-261 BC1F3	Pantalone		CONV	HO
24	TN19-4004	LG11-6760 x TN15-4038	Pantalone		CONV	
25	TN19-4012	LG11-6760 x TN15-4038	Pantalone		CONV	
26	TN19-4714R1	S12-2418 x S12-8223	Pantalone		RR1	
27	TN19-4734R1	S12-2336 x S12-8223	Pantalone		RR1	
28	V17-2379R	S09-6201 x V11-3163	Zhang	F4	RR1	

† Conv= Conventional(non-transgenic),LL= Liberty Link®, RR1= Roundup Ready®, RR2= Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high oleic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 28 - GENERAL SUMMARY OF PERFORMANCE
PRELIMINARY TEST IV-S-EARLY 2021

STRAIN/ VARIETY	SEED YIELD†	RANK	AVG. RANK	MAT. INDEX	LOD	HT	SCN Cyst Score (1-5)‡ Race 2	Race 3	Race 5	SC RATING	SC SCORE
AG45X8	72.3	1	7	0	1.7	32	.	4	.	R	1
AG38X8	60.1	13	12	-6	1.4	26	.	3	.	R	1
LD15-3818	59.3	16	13	-4	1.2	25	.	3	.	R	1
R18-14229	66.6	7	9	0	1.9	33	.	4	.	R	1
R18-14793	56.2	18	17	-4	1.8	26	.	3	.	R	1
R18-3048	68.8	3	9	6	2.3	37	.	4	.	R	1
S13-3851C	71.1	2	5	0	1.6	27	.	4	.	R	1
S17-10809R	65.2	8	8	3	2.9	33	.	3	.	MS	4
S17-1695C	64.9	10	9	0	1.5	29	.	4	.	R	1
S17PR-499R	49.7	26	22	-3	1.6	31	.	2	.	R	1
S18-1098R	58.4	17	17	0	2.0	31	.	3	.	SS	3
S18-3949R	67.8	5	9	5	1.7	32	.	2	.	SS	3
S18-6470C	59.5	14	16	-3	2.4	29	.	1	.	R	1
S19-3530RY	67.6	6	7	-3	1.4	29	.	4	.	SS	3
SA17-30465	51.8	25	21	-4	1.4	24	.	5	.	R	1
SA18-12111	44.6	28	23	-7	1.6	25	.	5	.	R	1
SA18-13417	52.2	24	21	-5	2.4	31	.	2	.	R	1
SA18-7258	45.6	27	24	-7	1.2	24	.	2	.	R	1
SA18-7490	53.1	22	21	-4	1.3	25	.	5	.	R	1
SA18-8568	59.4	15	15	-4	1.4	26	.	5	.	R	1
SA18-9109	54.1	21	19	-7	1.2	25	.	3	.	R	1
TN18-4005	53.0	23	20	-2	1.4	28	.	3	.	R	1
TN18-4006	65.0	9	10	2	2.0	31	.	3	.	R	1
TN19-4004	54.7	20	19	-2	1.3	29	.	1	.	R	1
TN19-4012	56.0	19	17	-2	1.3	28	.	2	.	R	1
TN19-4714R1	61.7	12	14	1	1.6	34	.	2	.	R	1
TN19-4734R1	67.8	4	10	0	1.4	30	.	3	.	R	1
V17-2379R	63.1	11	11	2	2	35	.	2	.	R	1
Mean	59.6	.	.	-2	1.7	29	.	.	.		.
LSD(0.05)	10.8	.	.	3	0.5	3	.	.	.		.
CV(%)	16.5	.	.	182	31.6	10	.	.	.		.

† Data not included in the test mean: Knoxville,TN

‡The race 3 SCN population used in these tests was typed as HG (*Heterodera glycines*) Type 0.

TABLE 29 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST IV-S-EARLY 2021

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
AG45X8	2.8	15.4	34.5	19.2	46.4			
AG38X8	2.9	15.9	35.3	19.7	47.8			
LD15-3818	3.5	15.1	34.4	21.4	47.6			
R18-14229	2.1	15.4	35.2	19.1	47.3	P	G	Br
R18-14793	2.6	13.7	36.1	18.8	48.3	P	T	Tn
R18-3048	2.1	16.5	33.7	20.1	45.9	P	T	Br
S13-3851C	2.6	16.1	34.5	20.3	47.0	P	Lt	T
S17-10809R	2.2	14.4	34.3	20.4	46.8	W	T	Tn
S17-1695C	2.5	16.7	34.1	19.8	46.3	W	Lt	
S17PR-499R	2.6	14.9	37.3	19.7	50.5	P	T	Bl
S18-1098R	2.7	14.1	35.1	19.5	47.4	P	T	Bl
S18-3949R	2.7	14.9	33.4	21.0	45.9	W	T	Bl
S18-6470C	2.9	14.4	34.9	19.8	47.3	W	Lt	Tn
S19-3530RY	2.5	16.1	32.9	21.4	45.5	W	Lt	
SA17-30465	2.6	15.6	32.9	21.1	45.3	W	G	
SA18-12111	2.7	13.3	31.3	21.7	43.4	P	G	
SA18-13417	2.8	13.0	34.8	20.6	47.6	P	G	
SA18-7258	2.8	14.3	33.3	21.6	46.2	W	G	
SA18-7490	2.8	14.9	34.7	21.2	47.8	P	G	
SA18-8568	2.2	13.7	34.1	20.8	46.8	P	G	
SA18-9109	2.3	12.6	32.5	21.4	44.9	P	G	
TN18-4005	2.4	16.6	36.5	19.4	49.3			
TN18-4006	2.1	16.7	36.8	19.0	49.3			
TN19-4004	2.2	22.2	35.4	18.6	47.3			
TN19-4012	2.2	13.4	32.5	20.4	44.4			
TN19-4714R1	2.0	14.8	37.8	18.0	50.1			
TN19-4734R1	1.8	14.6	36.9	17.8	48.7			
V17-2379R	2.9	13.8	35.7	19.3	48.1	P	G	
Mean	2.5	15.1	34.7	20.0	47.1			
LSD(0.05)	0.6	4.8	1.2	0.7	1.4			
CV(%)	26.3	40.9	3.3	3.2	2.7			

§ Protein percentage and oil percentage are reported on a 13% moisture basis beginning in 2015.

TABLE 30 - SEED YIELD (BUSHELS PER ACRE)
PRELIMINARY GROUP IV-S-EARLY 2021 †

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR *	Knoxville, TN	Orange, VA	Portageville, MO(B) *	Stuttgart, AR*	Test Mean
AG45X8	66.1	44.1	88.2	49.1	67.4	73.9	89.0	72.3
AG38X8	71.8	37.7	71.5	31.3	58.3	69.2	50.4	60.1
LD15-3818	68.8	51.4	52.4	26.3	54.0	43.2	82.0	59.3
R18-14229	59.6	50.9	74.3	53.0	69.6	66.8	81.5	66.6
R18-14793	61.9	46.8	65.0	28.9	53.4	52.7	54.7	56.2
R18-3048	49.0	50.3	83.4	62.9	74.7	67.4	94.0	68.8
S13-3851C	72.5	50.5	67.5	47.3	79.8	63.5	101.0	71.1
S17-10809R	62.8	52.7	68.3	53.2	88.2	56.0	86.3	65.2
S17-1695C	69.2	54.1	66.0	40.4	80.2	60.0	75.3	64.9
S17PR-499R	49.2	45.4	48.7	36.5	70.6	48.0	57.1	49.7
S18-1098R	55.9	43.4	57.9	40.7	76.0	64.2	69.0	58.4
S18-3949R	61.2	47.0	71.0	43.9	79.4	61.9	97.9	67.8
S18-6470C	60.3	40.6	67.5	37.5	68.9	54.9	74.2	59.5
S19-3530RY	70.2	51.3	70.3	53.5	82.2	55.8	90.0	67.6
SA17-30465	59.4	41.4	42.3	36.8	64.1	49.2	66.8	51.8
SA18-12111	63.3	28.4	35.4	39.0	56.3	30.8	65.1	44.6
SA18-13417	56.5	41.0	53.4	27.9	70.0	47.3	62.5	52.2
SA18-7258	59.8	37.0	34.7	29.4	69.5	26.5	70.0	45.6
SA18-7490	51.1	33.2	50.8	29.9	55.4	44.0	86.1	53.1
SA18-8568	66.5	39.8	56.6	42.9	67.0	49.7	84.5	59.4
SA18-9109	68.6	37.8	46.1	33.3	55.9	36.1	82.0	54.1
TN18-4005	47.8	48.6	51.3	42.9	58.7	46.4	70.8	53.0
TN18-4006	62.0	49.0	66.7	52.1	84.0	57.9	89.4	65.0
TN19-4004	59.9	47.0	50.7	39.8	43.9	46.1	69.8	54.7
TN19-4012	62.8	48.1	51.4	43.3	43.9	41.7	76.0	56.0
TN19-4714R1	52.1	44.4	63.3	60.5	74.1	59.0	89.8	61.7
TN19-4734R1	56.3	47.0	72.8	64.5	69.8	66.8	96.2	67.8
V17-2379R	63.9	51.6	62.9	58.0	83.7	53.9	83.1	63.1
Mean	61.0	45.0	60.4	43.0	67.8	53.3	78.4	59.6
LSD(0.05)	13.1	9.2	7.0	19.4	22.8	9.1	24.2	10.8
LSD(0.10)	10.9	7.7	5.8	16.1	18.9	7.5	20.1	9.1
CV(%)	9.8	10.0	5.7	21.9	16.4	8.3	15.1	16.5

† Data not included in the test mean: Knoxville,TN

* Locations with obvious damage consistent with exposure to the herbicide Dicamba. The Dicamba resistant checks (all the AG lines) may have had a yield advantage.

TABLE 31 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Orange, VA	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG45X8	10/1	9/25	10/1	9/27	.	10/3	9/27	9/29
AG38X8	-1	-14	-8	-2	.	-5	-4	-6
LD15-3818	-1	-14	-6	2	.	-4	-2	-4
R18-14229	2	-2	-2	2	.	0	0	0
R18-14793	1	-11	-10	1	.	-5	-3	-4
R18-3048	9	8	6	5	.	9	3	6
S13-3851C	-1	0	-1	3	.	2	-1	0
S17-10809R	7	2	4	5	.	2	1	3
S17-1695C	2	-2	-2	1	.	0	-1	0
S17PR-499R	2	-10	-8	4	.	-3	-4	-3
S18-1098R	3	-5	-2	5	.	-1	-2	0
S18-3949R	6	2	3	7	.	11	1	5
S18-6470C	1	-10	-8	4	.	-1	-2	-3
S19-3530RY	-4	-9	-4	-1	.	-2	-1	-3
SA17-30465	1	-11	-7	-2	.	-3	-1	-4
SA18-12111	1	-14	-9	-3	.	-15	-2	-7
SA18-13417	4	-11	-9	-2	.	-10	-2	-5
SA18-7258	-1	-16	-10	-3	.	-11	-2	-7
SA18-7490	0	-11	-4	-2	.	-4	-1	-4
SA18-8568	0	-14	-9	1	.	-3	-1	-4
SA18-9109	-2	-11	-10	-3	.	-13	-2	-7
TN18-4005	0	-4	-8	-1	.	-2	-1	-2
TN18-4006	4	2	1	2	.	3	1	2
TN19-4004	2	-5	-6	0	.	-1	-2	-2
TN19-4012	3	-5	-4	-1	.	-4	-1	-2
TN19-4714R1	5	2	-3	1	.	0	0	1
TN19-4734R1	0	2	-1	1	.	1	-1	0
V17-2379R	8	-2	0	3	.	2	0	2
Mean	2	-6	-4	1	.	-2	-1	-2
LSD(0.05)	5	3	3	1	.	3	2	3
CV(%)	125	29	36	67	,	76	92	182

TABLE 32 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Orange, VA	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG45X8	32	30	32	29	35	36	32	32
AG38X8	31	26	26	24	29	28	22	26
LD15-3818	31	28	21	22	32	20	26	25
R18-14229	37	36	32	28	37	28	31	33
R18-14793	33	33	26	19	28	22	26	26
R18-3048	41	39	35	27	46	33	41	37
S13-3851C	31	29	26	19	32	21	29	27
S17-10809R	39	31	30	31	39	28	32	33
S17-1695C	34	33	25	24	35	28	28	29
S17PR-499R	34	34	27	29	36	26	28	31
S18-1098R	35	31	25	28	40	28	28	31
S18-3949R	38	33	30	26	37	30	33	32
S18-6470C	33	29	27	25	37	25	30	29
S19-3530RY	28	30	26	28	34	27	31	29
SA17-30465	34	22	21	20	31	19	23	24
SA18-12111	34	24	22	22	28	18	28	25
SA18-13417	35	33	27	27	39	22	34	31
SA18-7258	31	24	23	21	28	17	25	24
SA18-7490	32	27	21	23	24	22	29	25
SA18-8568	33	28	25	23	29	21	28	26
SA18-9109	30	28	21	24	29	19	29	25
TN18-4005	32	35	25	25	34	22	26	28
TN18-4006	36	35	28	30	36	23	31	31
TN19-4004	34	33	25	27	34	23	27	29
TN19-4012	35	30	25	25	31	21	30	28
TN19-4714R1	37	37	32	30	38	28	33	34
TN19-4734R1	33	29	29	27	36	27	32	30
V17-2379R	40	35	31	32	41	28	35	35
Mean	34	30	26	25	34	24	29	29
LSD(0.05)	6	4	4	7	5	5	6	3
CV(%)	9	6	7	13	8	9	10	10

TABLE 33 - PLANT LODGING (1-5)
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Orange, VA	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG45X8	2.3	2.0	1.5	2.3	1.0	2.0	1.0	1.7
AG38X8	1.8	2.0	1.0	2.3	1.0	1.0	1.0	1.4
LD15-3818	1.3	1.5	1.0	2.0	1.0	1.0	1.0	1.2
R18-14229	2.5	3.0	1.0	2.5	1.0	2.0	1.5	1.9
R18-14793	2.3	2.5	2.0	2.3	1.0	1.0	1.5	1.8
R18-3048	1.8	4.0	2.0	2.3	2.0	2.0	2.0	2.3
S13-3851C	1.5	1.5	1.0	2.0	1.5	2.0	1.5	1.6
S17-10809R	3.5	3.0	2.0	2.8	2.5	3.5	3.0	2.9
S17-1695C	1.8	1.5	1.5	2.0	1.0	2.0	1.0	1.5
S17PR-499R	1.8	2.0	1.0	2.3	1.0	1.5	1.5	1.6
S18-1098R	2.0	2.0	2.5	2.3	1.0	2.5	1.5	2.0
S18-3949R	2.5	2.0	1.0	2.3	1.0	2.0	1.5	1.7
S18-6470C	2.3	3.0	1.5	2.5	4.0	1.5	2.0	2.4
S19-3530RY	1.5	1.5	1.0	2.5	1.0	1.5	1.0	1.4
SA17-30465	1.8	1.0	1.0	2.3	1.5	1.0	1.5	1.4
SA18-12111	2.0	2.0	1.0	2.0	1.0	1.0	2.5	1.6
SA18-13417	2.3	2.5	1.0	3.8	1.0	2.0	4.0	2.4
SA18-7258	1.0	1.0	1.0	2.0	1.0	1.0	1.5	1.2
SA18-7490	1.5	1.0	1.0	2.0	1.0	1.0	1.5	1.3
SA18-8568	1.0	2.0	1.0	2.0	1.0	1.0	1.5	1.4
SA18-9109	1.3	1.0	1.0	2.0	1.0	1.0	1.0	1.2
TN18-4005	1.8	2.0	1.0	2.3	1.0	1.0	1.0	1.4
TN18-4006	2.5	2.5	1.5	3.0	1.0	1.5	2.0	2.0
TN19-4004	2.0	1.0	1.0	2.3	1.0	1.0	1.0	1.3
TN19-4012	1.8	1.0	1.0	2.3	1.0	1.0	1.0	1.3
TN19-4714R1	2.5	2.0	1.0	2.3	1.0	1.0	1.5	1.6
TN19-4734R1	1.8	1.0	1.0	2.3	1.0	2.0	1.0	1.4
V17-2379R	3.0	3.0	2.0	3.0	1.0	2.5	2.5	2.4
Mean	1.9	1.9	1.3	2.3	1.2	1.6	1.6	1.7
LSD(0.05)	0.8	0.7	0.6	0.5	1.1	0.7	1.0	0.5
CV(%)	19.7	18.1	23.2	11.0	42.2	22.6	30.3	31.6

TABLE 34 - SEED QUALITY (1-5)
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Orange, VA	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG45X8	2.0	3.0	3.0	4.0	1.0	2.5	4.0	2.8
AG38X8	1.0	3.5	3.5	3.0	1.5	2.5	5.0	2.9
LD15-3818	2.0	3.5	5.0	4.5	2.0	3	5.0	3.5
R18-14229	2.0	2.5	2.5	2.0	1.0	2.0	3.0	2.1
R18-14793	2.0	2.5	3.0	3.0	1.5	2.0	4.5	2.6
R18-3048	3.0	2.5	3.0	1.0	1.0	1.5	3.5	2.1
S13-3851C	1.0	2.0	3.0	3.5	1.0	3.0	4.5	2.6
S17-10809R	2.0	2.0	2.5	2.5	1.0	2.5	3.0	2.2
S17-1695C	1.0	3.0	3.0	2.5	1.0	2.5	4.5	2.5
S17PR-499R	1.0	3.0	3.5	3.0	2.0	2.0	3.5	2.6
S18-1098R	2.0	3.0	4.0	3.0	1.0	1.5	4.5	2.7
S18-3949R	3.0	2.5	3.5	2.5	1.0	3.0	4.0	2.7
S18-6470C	1.0	3.0	4.0	2.5	3.5	2.5	3.5	2.9
S19-3530RY	1.0	3.0	3.5	2.5	1.0	1.5	4.5	2.5
SA17-30465	2.0	2.5	4.0	2.0	1.0	2.0	4.5	2.6
SA18-12111	2.0	3.0	4.0	2.0	1.5	2.5	4.0	2.7
SA18-13417	1.0	3.0	4.0	3.5	1.0	2.0	4.5	2.8
SA18-7258	2.0	3.5	4.0	3.0	1.5	1.5	4.0	2.8
SA18-7490	1.0	3.5	4.0	2.5	1.5	2.5	4.5	2.8
SA18-8568	1.0	2.5	3.5	2.0	1.0	1.5	4.0	2.2
SA18-9109	1.0	3.0	3.0	2.5	1.0	2.5	3.0	2.3
TN18-4005	1.0	3.0	4.0	1.5	1.0	2.0	4.0	2.4
TN18-4006	2.0	2.0	3.0	1.5	1.0	2.0	3.5	2.1
TN19-4004	1.0	2.0	4.0	2.0	1.5	1.0	4.0	2.2
TN19-4012	1.0	2.5	4.0	1.5	1.0	2.0	3.5	2.2
TN19-4714R1	2.0	2.5	2.0	1.5	1.0	1.0	4.0	2.0
TN19-4734R1	2.0	2.0	2.5	1.0	1.5	1.5	2.5	1.8
V17-2379R	2.0	3.0	4.5	1.5	2.0	2.0	5.0	2.9
Mean	1.6	2.8	3.5	2.4	1.3	2.1	4.0	2.5
LSD(0.05)	.	0.9	1.0	0.0	1.6	1	1.2	0.6
CV(%)	.	16.7	13.6	1.0	58.6	25.2	14.2	26.3

TABLE 35 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Orange, VA	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG45X8	13.9	14.2	14.9	17.9	17.5	14.6	14.8	15.4
AG38X8	16.1	14.6	16.0	16.9	18.0	15.7	15.1	15.9
LD15-3818	14.8	14.6	15.3	14.0	17.5	15.5	14.9	15.1
R18-14229	13.8	14.0	13.9	17.0	19.0	15.2	14.8	15.4
R18-14793	12.3	12.4	13.7	14.4	17.0	13.8	12.4	13.7
R18-3048	13.0	15.6	17.2	16.0	20.5	15.9	16.4	16.5
S13-3851C	14.0	15.5	15.8	18.2	18.0	15.7	15.5	16.1
S17-10809R	12.3	12.8	13.4	15.8	18.5	12.9	14.5	14.4
S17-1695C	14.7	15.1	16.5	17.9	20.5	16.3	15.5	16.7
S17PR-499R	12.3	14.8	15.5	16.1	16.0	14.8	14.2	14.9
S18-1098R	10.9	13.6	13.5	15.3	17.5	13.7	13.7	14.1
S18-3949R	12.0	14.2	15.1	16.4	16.5	14.9	14.7	14.9
S18-6470C	12.6	13.3	14.0	16.0	16.5	13.9	14.2	14.4
S19-3530RY	12.3	14.3	16.1	18.5	20.5	14.4	15.5	16.1
SA17-30465	13.6	14.2	15.4	15.4	18.5	16.1	15.6	15.6
SA18-12111	12.6	11.9	13.5	13.8	16.5	13.2	12.3	13.3
SA18-13417	12.7	12.2	13.5	14.1	12.0	13.8	13.6	13.0
SA18-7258	14.2	12.8	14.1	14.2	17.0	14.7	13.9	14.3
SA18-7490	14.9	12.9	14.5	16.4	17.5	14.7	14.4	14.9
SA18-8568	13.9	12.4	13.4	14.2	15.5	13.9	13.3	13.7
SA18-9109	11.6	11.8	12.9	13.2	14.5	11.5	13.0	12.6
TN18-4005	14.4	16.2	16.2	19.0	18.5	16.1	15.6	16.6
TN18-4006	15.7	15.5	16.0	18.4	20.0	16.0	15.9	16.7
TN19-4004	11.8	12.1	13.4	13.8	74.0	12.9	13.4	22.2
TN19-4012	12.4	12.6	13.6	13.4	16.0	12.9	12.9	13.4
TN19-4714R1	12.7	13.8	14.3	16.6	18.0	13.0	15.3	14.8
TN19-4734R1	11.5	12.7	15.5	15.0	16.5	14.9	15.1	14.6
V17-2379R	11.5	13.1	14.0	14.2	16.0	13.6	13.7	13.8
Mean	13.2	13.7	14.7	15.8	19.4	14.4	14.4	15.1
LSD(0.05)	.	0.8	1.2	0.2	32.0	1.3	1.3	4.8
CV(%)	.	3.0	3.9	0.7	80.3	4.4	4.3	40.9

TABLE 36 - OIL (%)†
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Orange, VA	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG45X8	19.3	19.2	18.7	19.7	19.4	19.2	19.1	19.2
AG38X8	19.4	19.5	19.7	19.8	20.3	18.1	21.1	19.7
LD15-3818	21.5	21.4	21.0	21.8	.	20.7	22.1	21.4
R18-14229	19.5	18.8	19.3	19.3	18.6	18.6	19.9	19.1
R18-14793	19.1	19.4	18.2	19.2	18.2	18.5	.	18.8
R18-3048	19.6	21.5	19.4	20.1	20.0	19.6	20.1	20.1
S13-3851C	20.9	19.5	20.1	20.9	20.2	20.1	20.3	20.3
S17-10809R	20.4	19.9	20.5	20.8	20.1	21.2	19.9	20.4
S17-1695C	20.5	20.0	19.0	20.6	19.5	18.6	20.7	19.8
S17PR-499R	19.9	19.6	19.3	20.2	18.6	19.4	21.1	19.7
S18-1098R	20.5	17.1	19.9	19.8	19.5	19.3	20.6	19.5
S18-3949R	21.2	21.4	20.8	21.3	20.5	20.4	21.4	21.0
S18-6470C	20.2	19.9	18.9	20.2	19.6	19.5	20.4	19.8
S19-3530RY	20.8	22.2	20.9	22.2	20.0	21.7	22.0	21.4
SA17-30465	21.7	21.6	20.5	21.5	20.7	20.4	21.5	21.1
SA18-12111	21.6	22.5	21.3	22.5	20.5	20.7	22.7	21.7
SA18-13417	20.6	21.7	19.8	20.6	20.0	19.8	21.4	20.6
SA18-7258	21.5	21.9	21.7	22.5	21.3	20.2	22.3	21.6
SA18-7490	21.4	21.6	20.9	21.8	20.6	20.9	21.0	21.2
SA18-8568	20.9	21.6	20.4	21.2	20.4	19.9	21.4	20.8
SA18-9109	21.1	21.6	21.3	21.7	21.1	21.2	21.5	21.4
TN18-4005	20.1	19.1	18.9	19.4	19.7	19.2	19.6	19.4
TN18-4006	20.1	19.8	19.3	20.5	19.1	18.7	15.4	19.0
TN19-4004	18.9	18.2	18.8	18.8	18.7	18.2	18.8	18.6
TN19-4012	20.8	20.2	20.2	20.8	20.0	20.3	20.4	20.4
TN19-4714R1	18.1	17.2	17.7	18.3	18.4	18.6	17.9	18.0
TN19-4734R1	17.4	17.2	16.3	20.3	18.2	17.8	17.5	17.8
V17-2379R	19.7	19.1	19.0	20.2	18.4	19.4	19.3	19.3
Mean	20.2	20.1	19.7	20.6	19.7	19.7	20.3	20.0
LSD(0.05)	.	.	.	.	.	.	.	0.7
CV(%)	.	.	.	.	.	.	.	3.2

† Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 37 - PROTEIN (%)†
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Orange, VA	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG45X8	33.6	35.8	33.9	36.4	32.1	34.4	35.3	34.5
AG38X8	35.4	36.1	35.1	37.1	31.6	38.2	33.7	35.3
LD15-3818	32.9	35.7	33.7	37.9	.	33.7	33.8	34.4
R18-14229	34.0	37.4	34.1	36.8	34.6	35.1	34.5	35.2
R18-14793	34.3	37.0	36.8	37.1	35.5	35.4	.	36.1
R18-3048	33.8	34.4	33.8	33.7	31.6	34.1	34.8	33.7
S13-3851C	32.9	36.9	33.7	36.2	32.5	35.0	34.0	34.5
S17-10809R	32.9	35.8	33.2	37.6	32.9	31.7	35.8	34.3
S17-1695C	32.0	35.5	34.0	36.8	32.6	35.0	32.9	34.1
S17PR-499R	35.9	39.2	37.4	38.9	36.5	37.3	36.1	37.3
S18-1098R	31.6	39.4	34.0	36.4	34.1	34.8	35.5	35.1
S18-3949R	32.6	34.1	32.3	35.8	32.2	33.3	33.6	33.4
S18-6470C	33.2	36.4	35.0	37.6	33.6	34.4	34.3	34.9
S19-3530RY	32.2	34.3	31.7	34.4	33.1	30.7	33.9	32.9
SA17-30465	31.1	33.6	33.1	34.0	32.2	33.8	32.2	32.9
SA18-12111	29.7	32.0	31.5	32.4	31.6	31.2	30.6	31.3
SA18-13417	33.1	33.6	35.4	37.4	32.8	35.4	36.1	34.8
SA18-7258	31.9	34.0	32.7	36.2	30.9	33.9	33.3	33.3
SA18-7490	33.3	35.6	33.7	37.8	34.0	33.3	35.2	34.7
SA18-8568	33.2	34.1	34.3	35.3	32.9	34.6	34.1	34.1
SA18-9109	32.6	33.2	32.1	34.3	30.6	31.9	32.7	32.5
TN18-4005	34.7	38.6	36.7	38.1	35.1	36.3	36.3	36.5
TN18-4006	34.8	38.0	36.0	36.4	34.7	36.4	41.2	36.8
TN19-4004	33.9	37.1	35.6	36.3	34.4	34.5	36.0	35.4
TN19-4012	30.7	35.0	32.5	33.6	31.7	31.6	32.5	32.5
TN19-4714R1	36.2	40.1	37.5	39.4	36.3	35.5	39.4	37.8
TN19-4734R1	36.8	39.6	38.6	32.1	35.3	37.0	38.7	36.9
V17-2379R	33.9	37.0	34.9	37.0	34.9	35.0	37.0	35.7
Mean	33.3	36.0	34.4	36.2	33.3	34.4	34.9	34.7
LSD(0.05)	.	.	.	.	.	.	.	1.2
CV(%)	.	.	.	.	.	.	.	3.3

† Protein percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 38 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Orange, VA	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG45X8	45.3	48.2	45.2	49.3	43.3	46.2	47.4	46.4
AG38X8	47.7	48.7	47.5	50.3	43.1	50.7	46.5	47.8
LD15-3818	45.5	49.4	46.4	52.7	.	46.2	47.1	47.6
R18-14229	45.9	50.0	45.9	49.5	46.2	46.8	46.8	47.3
R18-14793	46.0	49.9	48.9	49.9	47.1	47.2	.	48.3
R18-3048	45.6	47.6	45.6	45.8	42.9	46.1	47.3	45.9
S13-3851C	45.3	49.8	45.8	49.8	44.3	47.6	46.3	47.0
S17-10809R	44.9	48.6	45.4	51.6	44.7	43.8	48.6	46.8
S17-1695C	43.8	48.2	45.6	50.4	44.0	46.8	45.1	46.3
S17PR-499R	48.7	53.0	50.3	53.0	48.7	50.3	49.7	50.5
S18-1098R	43.2	51.6	46.2	49.2	46.0	46.9	48.6	47.4
S18-3949R	44.9	47.1	44.3	49.5	44.0	45.4	46.4	45.9
S18-6470C	45.2	49.4	46.9	51.2	45.4	46.5	46.8	47.3
S19-3530RY	44.1	47.9	43.5	48.1	44.9	42.6	47.3	45.5
SA17-30465	43.2	46.6	45.3	47.0	44.1	46.1	44.6	45.3
SA18-12111	41.2	44.8	43.5	45.4	43.2	42.7	43.1	43.4
SA18-13417	45.3	46.6	48.0	51.1	44.6	47.9	49.9	47.6
SA18-7258	44.2	47.3	45.4	50.8	42.8	46.2	46.5	46.2
SA18-7490	46.0	49.4	46.3	52.5	46.5	45.7	48.4	47.8
SA18-8568	45.7	47.2	46.9	48.7	44.9	47.0	47.1	46.8
SA18-9109	44.9	46.1	44.4	47.6	42.2	44.0	45.2	44.9
TN18-4005	47.2	51.9	49.2	51.4	47.5	48.8	49.1	49.3
TN18-4006	47.3	51.5	48.5	49.8	46.6	48.7	52.9	49.3
TN19-4004	45.4	49.3	47.7	48.6	45.9	45.8	48.1	47.3
TN19-4012	42.1	47.7	44.3	46.0	43.1	43.0	44.4	44.4
TN19-4714R1	48.0	52.6	49.6	52.4	48.4	47.3	52.2	50.1
TN19-4734R1	48.4	51.9	50.2	43.8	46.9	48.9	50.9	48.7
V17-2379R	45.9	49.8	46.9	50.4	46.4	47.1	49.9	48.1
Mean	45.4	49.0	46.6	49.5	45.1	46.5	47.6	47.1
LSD(0.05)	.	.	.	.	.	.	.	1.4
CV(%)	.	.	.	.	.	.	.	2.7

† Estimated meal protein percentage is reported on a 13% moisture basis.

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST IV-S-EARLY 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AG45X8	10.4	3.9	23.1	55.1	7.5
AG38X8	11.5	4.2	25.2	52.9	6.2
S17PR-499R	7.7	3.4	79.2	7.1	2.5
TN18-4005	7.6	3.3	80.9	4.9	3.3
TN18-4006	7.1	3.2	83.4	3.2	3.1
Mean	8.9	3.6	58.3	24.6	4.5
LSD(0.05)	0.5	0.2	5.3	4.5	0.9
CV(%)	5.3	5.3	8.2	16.7	18.0

† Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
AG45X8	10.6	9.9	10.8	10.8	10.0	10.6	10.0	10.4
AG38X8	11.7	10.9	11.0	11.9	11.8	11.3	12.0	11.5
S17PR-499R	7.8	6.8	8.5	7.4	7.7	8.4	7.7	7.7
TN18-4005	7.4	7.3	7.6	6.8	8.7	7.3	8.2	7.6
TN18-4006	6.7	6.3	7.5	7.5	6.9	7.8	6.9	7.1
Mean	8.9	8.2	9.1	8.9	9.0	9.1	9.0	8.9
LSD(0.05)	.	.	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	.	.	5.3

SEED STEARIC ACID (%)
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
AG45X8	4.5	3.8	3.6	4.0	3.8	3.9	3.7	3.9
AG38X8	4.8	3.9	3.9	4.8	3.9	4.0	4.1	4.2
S17PR-499R	3.6	3.6	3.3	3.6	3.2	3.6	3.2	3.4
TN18-4005	3.5	3.1	3.1	3.1	3.5	3.5	3.2	3.3
TN18-4006	3.4	3.1	3.1	3.5	3.1	3.4	3.1	3.2
Mean	3.9	3.5	3.4	3.8	3.5	3.7	3.5	3.6
LSD(0.05)	.	.	.	.	.	.	.	0.2
CV(%)	.	.	.	.	.	.	.	5.3

SEED OLEIC ACID (%)
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
AG45X8	23.8	26.0	19.0	22.9	22.6	23.3	24.2	23.1
AG38X8	23.2	30.7	24.1	24.4	20.6	28.7	24.8	25.2
S17PR-499R	79.8	83.2	80.0	78.7	81.0	68.5	82.9	79.2
TN18-4005	84.7	85.8	85.6	82.4	66.9	84.9	75.7	80.9
TN18-4006	85.6	87.3	84.7	82.7	86.1	71.1	86.3	83.4
Mean	59.4	62.6	58.7	58.2	55.4	55.3	58.8	58.3
LSD(0.05)	.	.	.	.	.	.	.	5.3
CV(%)	.	.	.	.	.	.	.	8.2

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
AG45X8	53.6	53.9	58.4	54.3	55.9	54.6	54.9	55.1
AG38X8	53.8	49.5	54.5	52.5	56.6	50.5	53.0	52.9
S17PR-499R	6.9	4.9	6.4	4.5	6.1	16.6	4.5	7.1
TN18-4005	1.4	1.3	0.5	3.2	17.0	1.5	9.5	4.9
TN18-4006	1.2	0.5	1.4	4.3	0.5	13.7	0.7	3.2
Mean	23.4	22.0	24.2	23.8	27.2	27.4	24.5	24.6
LSD(0.05)	.	.	.	.	.	.	.	4.5
CV(%)	.	.	.	.	.	.	.	16.7

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP IV-S-EARLY 2021

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Keiser, AR	Knoxville, TN	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
AG45X8	7.6	6.4	8.3	8.0	7.7	7.6	7.1	7.5
AG38X8	6.5	5.1	6.4	6.4	7.1	5.5	6.1	6.2
S17PR-499R	1.9	1.6	1.9	5.8	2.0	3.0	1.7	2.5
TN18-4005	2.9	2.6	3.1	4.6	3.9	2.8	3.4	3.3
TN18-4006	3.1	2.7	3.4	2.0	3.4	4.0	3.0	3.1
Mean	4.4	3.7	4.6	5.4	4.8	4.6	4.3	4.5
LSD(0.05)	.	.	.	.	.	.	.	0.9
CV(%)	.	.	.	.	.	.	.	18.0

TABLE 39 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP IV-S-LATE 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	Ellis	Commercial check	check		CONV	
2	AG 46X6	Commercial check	check		RRX	
3	AG 48X9	Commercial check	check		RRX	
4	AG49X9	Commercial check	check		RRX	
5	DA1539-109F	DB04-10836 x R10-5086	Gillen		CONV	
6	DA1541-102F	(DA10x36-14F) x (DA10x30-09F)	Gillen		CONV	
7	DS1061-25	R99-1613F x JTN 5203	Rusty Smith	F5	CONV	reniform nematode resistant
8	DS72-6	(DT98-9102 x PI 587982A) x PI 424546A	Rusty Smith	F5	CONV	water efficient; exotic
9	K18-4240	LG11-6208 / R10-2436	Schapaugh		CONV	
10	K18-4783	K12-2333 / K12-1348	Schapaugh		CONV	
11	K18-6434	N10-7404 / K11/2363T	Schapaugh		CONV	
12	R13-14635RR:0010	LEO2939-04S809 x R04-572	L. Mozzoni		RR1	
13	R18-14572	S10-7543 x R13-354	L. Mozzoni		CONV	
14	R18-14753	S10-7543 x R13-354	L. Mozzoni		CONV	
15	S17-13496C	Ellis x S11-20124	P. Chen		CONV	SCN, SC, RN, RKN
16	S17-17644C	R09-430 x S11-20124	P. Chen		CONV	SCN, SC, RN, RKN, Salt
17	S17-1931C	S11-16653 x S13-8585	P. Chen		CONV	SC, RKN
18	S17-2066C	S11-20124 x S13-11940	P. Chen		CONV	SCN, SC
19	S18-3722R	S14-2088 x S14-15164GT	P. Chen		RR1	SCN, RN
20	S18-5884C	S12-4718 x S13-1955	P. Chen		CONV	SCN, RN, Salt
21	S18PR-190C	S11-16653 BC-2-102	P. Chen		CONV	SCN, RN, RKN, HOLN
22	TN15-4011	TN09-016 x S05-11482	Pantalone		CONV	
23	TN19-4053	TN11-5095 x HM11-W192	Pantalone		CONV	>48% meal protein
24	TN20-4043	TN14-5017 x S11-17025	Pantalone		CONV	
25	TN20-4050	TN14-5017 x S11-17025	Pantalone		CONV	
26	TN20-4051	TN14-5017 x S11-17025	Pantalone		CONV	
27	V16-0248DI	R99-1613F x R05-4114	Zhang	F4	CONV	
28	V17-0334	R05-3239 x R09-1223	Zhang	F4	CONV	
29	V17-0432	R05-3239 x TN09-008	Zhang	F4	CONV	
30	V17-0460	JTN-5203 x Hanover (SCN)	Zhang	F4	CONV	
31	V17-0476	V10-1687 x R05-3239	Zhang	F4	CONV	
32	V17-2350R	S09-6201 x V11-3163	Zhang	F4	RR1	

† Conv= Conventional(non-transgenic),LL= Liberty Link®, RR1= Roundup Ready®, RR2= Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high oleic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 40 - GENERAL SUMMARY OF PERFORMANCE
PRELIMINARY TEST IV-S-LATE 2021

STRAIN/ VARIETY	SEED YIELD†	RANK	AVG. RANK	MAT. INDEX	LOD	HT	SCN Cyst Score (1-5)‡ Race 2	Race 3	Race 5	SC RATING	SC SCORE
Ellis	58.4	30	21	0	1.1	21	.	5	.	R	1
AG 46X6	70.7	4	10	-2	1.6	32	.	5	.	R	1
AG 48X9	76.4	1	6	-3	1.6	35	.	4	.	R	1
AG49X9	72.8	2	12	-3	1.6	32	.	5	.	R	1
DA1539-109F	67.6	9	12	-2	2.6	28	.	5	.	R	1
DA1541-102F	68.9	7	11	0	1.4	21	.	5	.	R	1
DS1061-25	61.4	23	20	-7	1.6	36	.	5	.	R	1
DS72-6	54.4	32	28	-5	3.0	29	.	5	.	MS	4
K18-4240	61.7	22	19	0	1.3	27	.	4	.	R	1
K18-4783	58.0	31	24	-4	1.1	20	.	2	.	R	1
K18-6434	61.7	21	18	-5	1.4	21	.	3	.	R	1
R13-14635RR:0010	68.5	8	12	-2	1.8	36	.	1	.	R	1
R18-14572	65.3	15	14	-4	2.1	33	.	2	.	R	1
R18-14753	62.3	20	20	-6	2.3	32	.	5	.	R	1
S17-13496C	66.4	12	16	-3	2.6	30	.	3	.	R	1
S17-17644C	69.4	6	12	-1	2.5	29	.	2	.	R	1
S17-1931C	65.4	14	15	-4	2.3	41	.	5	.	R	1
S17-2066C	71.9	3	8	-1	1.7	28	.	4	.	R	1
S18-3722R	67.0	11	13	-3	1.5	35	.	5	.	R	1
S18-5884C	70.2	5	9	-2	2.0	25	.	1	.	SS	3
S18PR-190C	67.6	10	13	-2	1.3	25	.	1	.	R	1
TN15-4011	59.9	27	22	-3	1.4	20	.	2	.	MS	4
TN19-4053	62.7	17	19	-1	2.3	39	.	3	.	R	1
TN20-4043	58.8	29	22	-2	1.4	22	.	1	.	MS	4
TN20-4050	62.4	18	17	-1	1.1	22	.	1	.	MS	4
TN20-4051	65.4	13	14	-1	1.5	23	.	1	.	MS	4
V16-0248DI	59.0	28	24	-5	1.2	21	.	4	.	R	1
V17-0334	62.4	19	19	-5	1.1	22	.	5	.	R	1
V17-0432	60.2	25	22	-3	1.1	21	.	2	.	MS	4
V17-0460	63.3	16	17	-3	1.1	22	.	3	.	S	5
V17-0476	61.1	24	20	-2	1.4	24	.	4	.	R	1
V17-2350R	59.9	26	21	-4	1.6	34	.	4	.	R	1
Mean	64.4	.	.	-3	1.7	28	.	.	.		.
LSD(0.05)	9.1	.	.	2	0.6	3	.	.	.		.
CV(%)	14.8	.	.	-85	44	12	.	.	.		.

† Data not included in the test mean: Jackson,TN, and Orange,VA,

‡The race 3 SCN population used in these tests was typed as HG (*Heterodera glycines*) Type 0.

TABLE 41 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST IV-S-LATE 2021

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
Ellis	2.0	13.2	34.9	18.8	46.8			
AG 46X6	2.3	17.1	34.9	19.7	47.2			
AG 48X9	2.2	15.4	33.8	20.3	46.0			
AG49X9	2.0	15.6	33.7	20.1	45.9			
DA1539-109F	1.6	15.1	37.0	17.6	48.8	P	G	
DA1541-102F	1.6	12.9	36.1	18.4	48.1	P	G	
DS1061-25	1.9	13.3	34.3	20.1	46.7	P	Tw	Tn
DS72-6	1.9	15.6	36.1	18.0	47.8	W	G	Tn
K18-4240	2.1	14.7	35.4	19.9	48.0			
K18-4783	2.1	12.9	32.8	19.9	44.5			
K18-6434	2.4	14.0	33.6	19.7	45.5			
R13-14635RR:0010	1.9	14.2	35.0	19.0	46.9	W	G	Tn
R18-14572	2.1	14.7	35.6	19.1	47.8	P	G	Tn
R18-14753	2.3	14.8	35.6	19.1	47.9	P	Lt	Tn
S17-13496C	1.8	13.4	34.7	19.9	47.1	W	G	Tn
S17-17644C	1.9	14.1	34.0	19.4	45.9	W	T	Tn
S17-1931C	2.5	14.6	35.4	18.6	47.3	W	G	Tn
S17-2066C	1.7	14.7	34.3	18.8	45.9	W	T	Tn
S18-3722R	2.2	14.4	33.0	20.5	45.1	W	T	Bl
S18-5884C	1.9	14.5	34.0	19.0	45.6	W	Lt	Tn
S18PR-190C	1.7	15.0	35.6	19.9	48.4	P	G	Tn
TN15-4011	2.4	14.2	33.1	20.2	45.1			
TN19-4053	2.2	16.8	36.3	18.9	48.7			
TN20-4043	2.0	14.5	35.2	19.4	47.5			
TN20-4050	1.8	12.9	34.6	19.5	46.8			
TN20-4051	1.8	13.0	34.5	19.4	46.5			
V16-0248DI	1.7	13.8	36.5	18.7	48.9	P	G	
V17-0334	2.1	15.6	34.8	19.4	46.8	P	T	
V17-0432	1.9	15.8	34.8	19.2	46.8	P	T	
V17-0460	1.8	14.1	34.8	19.2	46.8	W	T	
V17-0476	1.9	15.1	36.9	18.9	49.5	P	T	
V17-2350R	2.3	14.7	36.7	18.8	49.1	W	G	
Mean	2.0	14.5	34.9	19.3	47.1			
LSD(0.05)	0.5	1.0	0.9	0.5	1.1			
CV(%)	29.3	8.0	2.6	2.4	2.3			

§ Protein percentage and oil percentage are reported on a 13% moisture basis beginning in 2015.

TABLE 42 - SEED YIELD (BUSHELS PER ACRE)
PRELIMINARY GROUP IV-S-LATE 2021 †

STRAIN/ VARIETY	Jackson, TN	Keiser, AR *	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B) *	Starkville, MS	Stoneville, MS *	Stuttgart, AR *	Test Mean
Ellis	38.5	61.3	42.8	58.6	66.3	32.7	74.8	60.2	78.3	58.4
AG 46X6	38.6	91.8	46.6	60.2	74.8	78.8	48.1	73.3	96.2	70.7
AG 48X9	35.0	88.7	61.2	55.6	76.3	73.8	83.4	72.7	99.3	76.4
AG49X9	38.3	89.7	52.5	54.6	64.3	83.6	59.0	69.0	101.4	72.8
DA1539-109F	33.6	68.9	61.2	56.3	73.4	54.2	69.7	77.6	85.2	67.6
DA1541-102F	30.4	70.2	65.6	50.4	62.5	58.0	77.6	69.7	90.3	68.9
DS1061-25	30.1	67.3	61.3	54.0	70.7	47.8	62.1	60.2	77.0	61.4
DS72-6	26.5	54.0	49.7	41.2	46.5	51.8	63.1	52.7	68.6	54.4
K18-4240	33.7	69.0	53.2	53.9	70.5	61.9	47.4	60.2	86.4	61.7
K18-4783	35.4	56.0	56.5	53.1	70.6	47.2	49.0	67.9	76.4	58.0
K18-6434	34.4	68.5	66.0	47.6	75.1	58.3	38.7	72.2	81.0	61.7
R13-14635RR:0010	33.9	67.2	59.6	57.2	76.6	60.6	78.4	66.7	90.0	68.5
R18-14572	37.5	66.5	52.3	57.6	66.0	51.7	67.6	70.7	90.8	65.3
R18-14753	32.2	65.3	53.1	52.1	56.5	55.6	54.2	67.7	88.0	62.3
S17-13496C	38.2	77.8	63.9	53.7	67.4	68.2	56.7	65.7	79.2	66.4
S17-17644C	34.2	81.6	55.2	57.6	73.4	71.0	72.5	68.7	79.0	69.4
S17-1931C	32.1	69.1	53.9	55.4	83.9	63.4	69.1	65.0	81.8	65.4
S17-2066C	36.3	76.6	70.6	54.8	74.1	76.3	65.0	73.6	86.8	71.9
S18-3722R	34.1	68.8	63.2	52.9	74.5	69.1	46.6	79.4	89.2	67.0
S18-5884C	40.4	63.5	68.5	57.2	61.6	63.0	69.5	81.4	88.4	70.2
S18PR-190C	41.3	65.0	48.8	55.8	83.3	59.1	85.9	67.3	91.1	67.6
TN15-4011	30.5	58.3	60.2	53.2	60.2	41.1	61.2	64.4	81.0	59.9
TN19-4053	32.2	70.8	68.5	47.8	73.7	52.0	63.8	55.4	80.6	62.7
TN20-4043	27.1	57.0	57.8	53.4	59.5	34.0	73.0	53.7	82.7	58.8
TN20-4050	28.5	55.8	60.3	58.1	73.8	37.1	79.0	61.3	86.1	62.4
TN20-4051	35.4	50.7	73.6	56.9	60.5	34.4	85.0	69.1	88.0	65.4
V16-0248DI	32.4	59.0	63.3	51.0	67.9	40.2	59.7	63.2	76.6	59.0
V17-0334	38.7	56.6	61.9	51.4	90.5	54.3	61.5	69.1	81.8	62.4
V17-0432	30.9	57.8	59.3	53.7	85.5	42.8	68.9	58.5	80.7	60.2
V17-0460	26.4	61.8	63.7	53.4	65.5	42.2	67.6	65.4	89.0	63.3
V17-0476	29.8	56.0	73.5	51.9	70.2	30.6	62.7	67.2	85.5	61.1
V17-2350R	29.5	62.6	59.1	54.4	77.6	49.3	47.3	69.9	76.8	59.9
Mean	33.6	66.7	59.6	53.9	70.4	54.5	64.6	66.8	84.8	64.4
LSD(0.05)	11.0	7.5	16.7	3.7	27.7	11.8	17.7	8.3	10.6	9.1
LSD(0.10)	9.1	6.3	13.9	3.0	23.0	9.8	14.7	6.9	8.8	7.6
CV(%)	16.0	5.5	13.5	3.3	19.3	10.6	13.4	6.0	6.1	14.8

† Data not included in the test mean: Jackson,TN, Orange,VA,

* Locations with obvious damage consistent with exposure to the herbicide Dicamba. The Dicamba resistant checks (all the AG lines) may have had a yield advantage.

TABLE 43 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Starkville, MS	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	10/7	10/10	10/6	10/13	.	10/8	.	9/22	10/4	10/6
AG 46X6	-7	-7	-1	-3	.	2	.	3	-4	-2
AG 48X9	-3	-9	2	-3	.	-3	.	.	-3	-3
AG49X9	-6	-8	1	-3	.	-2	.	1	-3	-3
DA1539-109F	-5	-3	0	2	.	-3	.	.	-3	-2
DA1541-102F	-4	-2	0	1	.	0	.	.	1	0
DS1061-25	-12	-13	1	-4	.	-7	.	-5	-7	-7
DS72-6	-10	-11	3	-3	.	-4	.	-4	-6	-5
K18-4240	-5	-4	3	-1	.	2	.	3	0	0
K18-4783	-8	-4	1	-2	.	-5	.	-4	-4	-4
K18-6434	-8	-8	2	-5	.	-6	.	-5	-5	-5
R13-14635RR:0010	-5	-6	2	0	.	-4	.	.	-1	-2
R18-14572	-8	-11	4	-2	.	-6	.	.	-5	-4
R18-14753	-12	-10	3	-5	.	-6	.	-3	-6	-6
S17-13496C	-10	-5	2	0	.	-1	.	-3	-3	-3
S17-17644C	-6	-5	4	0	.	2	.	1	-4	-1
S17-1931C	-10	-10	5	-1	.	-4	.	.	-4	-4
S17-2066C	-5	-5	2	0	.	1	.	.	-3	-1
S18-3722R	-8	-9	3	-5	.	5	.	.	-6	-3
S18-5884C	-2	-8	0	-2	.	0	.	.	-3	-2
S18PR-190C	-5	-6	3	-2	.	-2	.	-2	-5	-2
TN15-4011	-10	-6	2	-2	.	1	.	-2	-5	-3
TN19-4053	-4	-6	3	0	.	-3	.	3	-2	-1
TN20-4043	-8	-3	2	-1	.	-4	.	-2	-1	-2
TN20-4050	-3	-2	3	0	.	1	.	.	-3	-1
TN20-4051	-4	-5	4	0	.	0	.	.	-2	-1
V16-0248DI	-10	-6	0	-3	.	-6	.	-4	-4	-5
V17-0334	-10	-4	1	-4	.	-6	.	-6	-7	-5
V17-0432	-10	-6	2	-2	.	-1	.	-5	-2	-3
V17-0460	-8	-4	5	0	.	-4	.	-2	-4	-3
V17-0476	-6	-1	2	-1	.	0	.	-2	-4	-2
V17-2350R	-10	-8	3	-5	.	-6	.	1	-2	-4
Mean	-7	-6	2	-2	.	-2	.	-2	-3	-3
LSD(0.05)	5	4	1	3	.	5	.	.	2	2
CV(%)	35	29	18	99	.	104	.	.	36	85

TABLE 44 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Starkville, MS	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	20	14	15	31	33	13	.	21	19	21
AG 46X6	33	35	26	34	34	34	.	32	32	32
AG 48X9	38	35	29	34	39	37	.	36	32	35
AG49X9	29	34	25	34	32	36	.	34	32	32
DA1539-109F	29	25	29	29	37	17	.	32	25	28
DA1541-102F	22	16	21	25	30	14	.	24	21	21
DS1061-25	38	34	31	37	41	29	.	42	35	36
DS72-6	33	27	28	33	38	23	.	27	29	29
K18-4240	30	25	27	32	33	23	.	25	26	27
K18-4783	20	12	20	26	28	13	.	23	22	20
K18-6434	20	13	21	26	33	14	.	22	21	21
R13-14635RR:0010	37	35	32	38	40	30	.	42	36	36
R18-14572	38	28	30	35	38	27	.	37	35	33
R18-14753	34	31	31	34	37	28	.	34	31	32
S17-13496C	32	23	29	40	35	23	.	34	28	30
S17-17644C	29	22	29	33	37	20	.	33	28	29
S17-1931C	44	35	39	45	47	36	.	46	39	41
S17-2066C	28	21	28	35	35	20	.	32	27	28
S18-3722R	38	33	35	36	40	31	.	37	30	35
S18-5884C	27	21	26	34	30	17	.	27	23	25
S18PR-190C	27	17	25	32	31	17	.	29	23	25
TN15-4011	21	15	23	25	29	13	.	20	19	20
TN19-4053	37	38	35	38	45	37	.	47	39	39
TN20-4043	23	19	19	29	31	13	.	21	22	22
TN20-4050	22	16	21	31	35	13	.	23	21	22
TN20-4051	25	15	22	31	33	14	.	25	20	23
V16-0248DI	23	14	22	24	31	13	.	21	19	21
V17-0334	22	12	22	29	35	13	.	23	19	22
V17-0432	20	13	21	29	31	14	.	19	20	21
V17-0460	20	19	20	27	34	13	.	25	21	22
V17-0476	23	15	26	29	37	11	.	27	21	24
V17-2350R	35	31	34	39	42	27	.	33	28	34
Mean	28	23	26	32	35	21	.	30	26	28
LSD(0.05)	5	4	6	5	5	3	.	5	6	3
CV(%)	9	9	10	8	7	8	.	8	11	12

TABLE 45 - PLANT LODGING (1-5)
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Starkville, MS	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	1.0	1.0	2.0	1.0	1.0	1.0	.	1.0	1.0	1.1
AG 46X6	2.5	1.5	2.3	1.0	1.0	2.0	.	1.3	1.5	1.6
AG 48X9	2.5	1.0	2.3	1.0	1.0	2	.	2.0	1.0	1.6
AG49X9	2.0	1.0	2.3	1.0	1.0	2.0	.	1.5	2.0	1.6
DA1539-109F	3.0	1.0	3.3	1.5	5.0	1.0	.	2.1	4.0	2.6
DA1541-102F	1.0	1.0	2.0	1.0	2.5	1.5	.	1.0	1.0	1.4
DS1061-25	2.0	1.0	2.0	1.0	1.0	1.0	.	3.5	1.0	1.6
DS72-6	4.0	1.0	2.8	1.5	4.5	4.0	.	2.5	3.5	3.0
K18-4240	1.5	1.0	2.0	1.0	1.0	1.5	.	1.0	1.0	1.3
K18-4783	1.0	1.0	2.0	1.0	1.0	1.0	.	0.9	1.0	1.1
K18-6434	1.5	1.0	2.5	1.0	2.5	1.0	.	1.0	1.0	1.4
R13-14635RR:0010	3.0	1.0	2.0	1.0	1.0	2.0	.	2.5	1.5	1.8
R18-14572	2.5	1.0	2.8	1.0	2.0	1.5	.	3.0	3.0	2.1
R18-14753	2.0	1.0	3.0	1.0	3.5	2.5	.	3.0	2.5	2.3
S17-13496C	3.0	1.0	3.0	3.0	4.5	1.5	.	3.0	2.0	2.6
S17-17644C	2.5	1.0	3.0	2.5	3.0	1.0	.	4.5	2.5	2.5
S17-1931C	2.5	1.5	2.5	1.0	2.0	3.0	.	3.5	2.5	2.3
S17-2066C	1.0	1.0	2.5	2.0	3.0	1.5	.	1.5	1.0	1.7
S18-3722R	2.0	1.0	2.3	1.0	1.0	2.0	.	2.0	1.0	1.5
S18-5884C	3.0	1.0	2.5	1.5	4.5	1.0	.	1.5	1.0	2.0
S18PR-190C	2.5	1.0	2.3	1.0	1.0	1.0	.	1.0	1.0	1.3
TN15-4011	2.5	1.0	2.3	1.0	1.5	1.0	.	1.0	1.0	1.4
TN19-4053	3.0	2.5	2.5	1.0	1.0	2.5	.	3.0	2.5	2.3
TN20-4043	1.0	1.0	2.0	1.0	3.5	1.0	.	1.0	1.0	1.4
TN20-4050	1.0	1.0	2.0	1.0	1.0	1.0	.	1.1	1.0	1.1
TN20-4051	1.0	1.0	2.0	1.0	4.0	1.0	.	1.0	1.0	1.5
V16-0248DI	1.0	1.0	2.3	1.0	1.0	1.0	.	1.0	1.0	1.2
V17-0334	1.0	1.0	2.0	1.0	1.0	1.0	.	1.0	1.0	1.1
V17-0432	1.0	1.0	2.0	1.0	1.0	1.0	.	1.0	1.0	1.1
V17-0460	1.0	1.0	2.0	1.0	1.0	1.0	.	1.0	1.0	1.1
V17-0476	1.0	1.0	2.5	1.0	2.0	1	.	1.0	1.5	1.4
V17-2350R	2.0	1.5	2.5	1.0	1.0	1.0	.	2.0	1.5	1.6
Mean	1.9	1.1	2.3	1.2	2.0	1.5	.	1.8	1.5	1.7
LSD(0.05)	1.5	0.5	0.5	0.7	1.7	0.7	.	0.8	0.7	0.6
CV(%)	37.4	22.9	10.4	29.8	40.8	22.3	.	20.0	22.4	44.1

TABLE 46 - SEED QUALITY (1-5)
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Starkville, MS	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	2.5	3.0	1.0	1.0	1.0	2.0	.	.	3.0	2.0
AG 46X6	2.5	2.5	2.5	2.0	1.5	1.5	.	.	3.5	2.3
AG 48X9	2.5	3.0	1.5	2.0	1.5	3	.	.	2.5	2.2
AG49X9	2.0	2.5	1.5	1.0	1.0	2.5	.	.	3.0	2.0
DA1539-109F	2.0	2.0	1.0	2.0	1.0	1.0	.	.	2.5	1.6
DA1541-102F	2.0	2.0	1.5	2.0	1.0	1.5	.	.	1.5	1.6
DS1061-25	2.0	2.0	1.5	2.0	1.5	2.0	.	.	2.5	1.9
DS72-6	2.5	1.5	1.5	2.0	1.5	2.0	.	.	2.5	1.9
K18-4240	2.0	2.5	2.0	1.0	1.0	2.5	.	.	3.5	2.1
K18-4783	2.0	3.0	1.5	2.0	1.0	2.5	.	.	2.5	2.1
K18-6434	2.5	3.0	2.0	2.0	1.5	2.0	.	.	3.5	2.4
R13-14635RR:0010	2.0	2.0	1.5	2.0	1.0	2.0	.	.	3.0	1.9
R18-14572	2.5	1.5	3.5	2.0	1.0	1.5	.	.	3.0	2.1
R18-14753	2.0	2.5	2.5	2.0	1.0	3.0	.	.	3.0	2.3
S17-13496C	2.0	2.0	2.0	2.0	1.0	1.0	.	.	2.5	1.8
S17-17644C	2.5	2.5	1.5	1.0	1.0	1.5	.	.	3.0	1.9
S17-1931C	2.5	1.5	2.0	2.0	2.5	3.0	.	.	4.0	2.5
S17-2066C	2.0	1.5	1.0	2.0	1.5	2.0	.	.	2.0	1.7
S18-3722R	2.5	1.5	2.0	2.0	1.0	3.0	.	.	3.5	2.2
S18-5884C	2.5	2.0	2.0	2.0	1.0	1.5	.	.	2.5	1.9
S18PR-190C	2.0	2.0	1.5	2.0	1.0	1.5	.	.	2.0	1.7
TN15-4011	2.5	2.0	2.5	2.0	1.5	2.5	.	.	3.5	2.4
TN19-4053	2.0	2.0	1.5	2.0	2.0	3.0	.	.	3.0	2.2
TN20-4043	2.0	2.5	1.5	1.0	2.0	2.0	.	.	3.0	2.0
TN20-4050	2.0	1.5	1.5	2.0	1.5	1.5	.	.	2.5	1.8
TN20-4051	2.0	2.0	1.5	2.0	1.0	2.0	.	.	2.0	1.8
V16-0248DI	2.0	1.5	2.0	2.0	1.5	1.0	.	.	2.0	1.7
V17-0334	2.0	3.5	1.5	2.0	1.5	1.0	.	.	3.5	2.1
V17-0432	2.0	2.0	1.5	2.0	2.0	1.5	.	.	2.5	1.9
V17-0460	2.0	2.0	1.0	1.0	2.0	2.0	.	.	2.5	1.8
V17-0476	2.0	2.5	1.0	2.0	1.5	2	.	.	2.5	1.9
V17-2350R	2.5	2.0	3.0	2.0	1.5	1.0	.	.	4.0	2.3
Mean	2.2	2.2	1.7	1.8	1.4	1.9	.	.	2.8	2.0
LSD(0.05)	0.9	1.0		.	1.3	1.0	.	.	1.3	0.5
CV(%)	19.8	22.3	0.0	.	46.0	26.8	.	.	22.7	29.3

TABLE 47 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Starkville, MS	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	13.6	13.4	12.9	12.9	17.0	12.5	.	10.4	13.0	13.2
AG 46X6	17.0	16.9	19.5	17.3	18.0	16.8	.	16.4	15.9	17.1
AG 48X9	16.2	14.6	17.2	13.6	19.0	14.2	.	12.8	15.0	15.4
AG49X9	14.8	15.3	18.1	15.6	16.5	15.4	.	14.6	14.9	15.6
DA1539-109F	13.2	14.4	19.1	15.4	18.0	14.4	.	11.1	14.9	15.1
DA1541-102F	12.0	12.0	14.9	15.1	17.0	12.4	.	8.8	11.6	12.9
DS1061-25	13.2	12.8	15.4	13.7	16.5	11.9	.	10.7	12.6	13.3
DS72-6	15.7	14.6	16.1	14.4	19.0	15.8	.	11.8	16.8	15.6
K18-4240	14.6	14.2	16.3	15.1	18.0	14.1	.	11.6	14.0	14.7
K18-4783	12.2	12.4	12.9	13.2	15.0	11.8	.	16.4	11.6	12.9
K18-6434	13.7	15.1	14.4	14.1	17.0	14.7	.	8.5	13.8	14.0
R13-14635RR:0010	14.0	13.9	13.9	15.1	18.0	13.3	.	11.3	14.7	14.2
R18-14572	15.2	13.3	18.0	14.9	17.5	12.8	.	11.6	14.2	14.7
R18-14753	14.2	14.1	17.7	13.6	17.5	14.3	.	11.7	14.7	14.8
S17-13496C	12.0	13.2	16.6	11.9	18.5	12.4	.	9.2	12.3	13.4
S17-17644C	12.5	13.6	17.9	13.0	17.5	13.8	.	10.0	13.5	14.1
S17-1931C	13.6	14.2	16.8	14.7	18.0	13.6	.	12.0	14.3	14.6
S17-2066C	13.7	14.3	16.8	13.9	18.0	14.7	.	11.8	14.3	14.7
S18-3722R	13.8	13.2	17.3	13.1	18.0	14.5	.	11.7	13.5	14.4
S18-5884C	13.9	13.0	17.4	12.9	18.0	14.4	.	12.1	14.3	14.5
S18PR-190C	14.0	14.3	17.1	13.5	19.0	14.8	.	11.8	15.3	15.0
TN15-4011	12.7	14.0	16.4	13.2	18.0	14.0	.	11.3	13.7	14.2
TN19-4053	16.0	17.4	18.6	16.3	19.5	15.3	.	13.0	17.8	16.8
TN20-4043	12.8	14.4	16.1	14.4	20.5	12.1	.	11.7	14.1	14.5
TN20-4050	12.3	12.4	13.9	12.9	17.5	12.5	.	10.2	12.0	12.9
TN20-4051	12.1	12.6	14.5	14.2	16.5	12.3	.		11.9	13.0
V16-0248DI	11.9	13.9	17.0	15.3	17.0	13.0	.	11.2	12.1	13.8
V17-0334	16.0	14.8	16.5	14.5	19.5	15.3	.	12.7	15.2	15.6
V17-0432	15.3	14.7	16.5	15.9	21.0	16.1	.	10.7	15.4	15.8
V17-0460	12.9	14.0	15.3	16.4	17.5	13.3	.	11.7	12.7	14.1
V17-0476	13.9	15.1	18.7	15.2	17.0	15.4	.	10.8	14.5	15.1
V17-2350R	14.1	13.8	16.9	13.1	19.0	12.7	.	13.5	14.3	14.7
Mean	13.8	14.0	16.5	14.3	17.9	13.9	.	11.7	14.0	14.5
LSD(0.05)	1.4	1.5	0.3	.	3.8	1.6	.	.	1.0	1.0
CV(%)	5.1	5.1	0.8	.	10.3	5.7	.	.	3.5	8.0

TABLE 48 - OIL (%)†
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Starkville, MS	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	18.5	18.6	18.9	18.9	18.6	19.3	.	18.9	18.8	18.8
AG 46X6	20.0	19.1	20.4	20.3	19.4	19.8	,	19.3	19.0	19.7
AG 48X9	19.8	19.9	20.5	20.2	20.3	21.0	,	20.1	20.4	20.3
AG49X9	20.4	20.4	20.9	20.6	19.3	20.3	,	19.3	19.6	20.1
DA1539-109F	16.6	17.4	18.0	17.9	19.8	17.2	,	16.9	17.4	17.6
DA1541-102F	18.1	18.3	18.4	19.1	19.5	18.1	,	17.8	18.2	18.4
DS1061-25	20.0	20.2	20.1	20.2	20.4	20.6	,	19.4	.	20.1
DS72-6	17.8	19.2	17.4	18.6	18.2	17.3	,	17.7	17.7	18.0
K18-4240	20.5	19.5	20.3	20.5	19.3	19.5	,	19.4	20.0	19.9
K18-4783	20.7	19.4	20.3	20.1	19.0	20.3	,	19.6	20.0	19.9
K18-6434	19.9	19.8	20.0	19.2	19.2	19.6	,	19.4	20.1	19.7
R13-14635RR:001	18.9	18.7	19.1	19.3	18.5	19.5	,	19.1	18.9	19.0
R18-14572	19.0	18.9	19.8	19.2	18.9	19.2	,	19.3	18.9	19.1
R18-14753	18.9	19.2	19.5	18.9	19.4	19.2	,	18.8	19.1	19.1
S17-13496C	19.5	19.6	20.5	19.4	19.8	20.2	,	19.7	20.5	19.9
S17-17644C	19.0	19.2	19.8	19.7	18.9	19.4	,	19.9	.	19.4
S17-1931C	18.2	18.9	18.7	18.7	17.9	19.0	,	18.7	18.7	18.6
S17-2066C	18.6	18.7	19.0	18.7	18.4	18.4	,	19.3	19.2	18.8
S18-3722R	20.8	21.3	20.7	20.7	20.2	20.1	,	20.7	19.7	20.5
S18-5884C	18.7	18.8	19.3	19.6	17.9	19.0	,	19.2	19.3	19.0
S18PR-190C	20.0	20.1	20.0	19.5	19.4	19.7	,	20.7	19.8	19.9
TN15-4011	20.1	20.5	20.1	19.7	19.6	20.1	,	20.6	20.8	20.2
TN19-4053	18.5	19.1	19.0	19.2	18.9	20.0	,	18.0	18.8	18.9
TN20-4043	19.1	19.2	20.0	18.9	19.3	20.3	,	19.0	19.7	19.4
TN20-4050	19.4	19.9	19.5	19.7	19.1	19.9	,	19.0	19.6	19.5
TN20-4051	19.1	19.5	19.7	19.6	19.1	20.0	,		19.3	19.4
V16-0248DI	18.6	19.1	19.2	18.1	18.4	19.4	,	18.4	18.4	18.7
V17-0334	19.2	19.1	19.7	19.7	19.3	19.2	,	19.1	19.8	19.4
V17-0432	19.5	19.2	19.6	19.6	18.5	19.1	,	18.7	19.2	19.2
V17-0460	18.9	19.2	19.3	18.6	19.0	19.5	,	20.7	18.7	19.2
V17-0476	18.4	18.9	19.8	19.1	18.7	18.9	,	18.3	19.3	18.9
V17-2350R	18.1	18.9	19.3	19.2	18.6	20.0	,	18.3	18.1	18.8
Mean	19.2	19.3	19.6	19.4	19.1	19.5	.	19.1	19.2	19.3
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	.	.	.	.	2.4

† Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 49 - PROTEIN (%)†
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Starkville, MS	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	35.3	34.0	35.9	35.3	35.5	33.1	.	35.4	35.1	34.9
AG 46X6	35.6	34.5	35.2	34.0	33.5	34.4	,	35.6	36.5	34.9
AG 48X9	36.0	33.9	34.8	33.6	31.9	31.8	,	35.5	32.6	33.8
AG49X9	33.5	32.9	33.6	32.7	33.7	33.4	,	35.7	34.4	33.7
DA1539-109F	39.3	36.2	37.6	35.0	34.7	37.7	,	37.9	37.7	37.0
DA1541-102F	36.8	35.5	37.1	35.4	34.6	36.6	,	36.7	35.9	36.1
DS1061-25	36.4	32.7	35.6	34.5	32.6	32.3	,	35.9	.	34.3
DS72-6	37.7	33.0	35.6	34.7	35.0	37.1	,	37.6	38.0	36.1
K18-4240	35.7	35.3	36.6	34.2	35.0	35.6	,	35.6	34.9	35.4
K18-4783	31.9	31.9	34.0	31.9	32.5	30.8	,	36.2	33.2	32.8
K18-6434	33.1	32.7	34.8	34.7	32.3	33.4	,	34.3	33.8	33.6
R13-14635RR:001	36.0	34.5	35.8	34.5	34.1	33.3	,	36.4	35.3	35.0
R18-14572	36.9	34.8	37.1	35.3	34.7	34.3	,	36.1	35.5	35.6
R18-14753	37.0	34.8	36.8	35.2	33.0	35.2	,	37.5	35.7	35.6
S17-13496C	36.5	33.8	35.6	34.9	33.9	32.7	,	35.7	34.4	34.7
S17-17644C	35.4	33.6	34.4	32.7	32.1	34.8	,	34.6	.	34.0
S17-1931C	37.1	33.8	37.0	34.2	35.0	34.1	,	36.0	36.2	35.4
S17-2066C	35.6	33.8	34.2	34.2	32.1	35.2	,	34.8	34.5	34.3
S18-3722R	33.6	30.7	33.5	32.4	32.3	33.8	,	33.2	34.5	33.0
S18-5884C	35.0	33.5	33.8	32.4	34.6	33.8	,	35.0	34.1	34.0
S18PR-190C	36.2	34.4	37.3	35.2	34.9	35.7	,	35.6	35.9	35.6
TN15-4011	33.6	32.7	33.5	33.7	31.7	32.8	,	33.9	33.1	33.1
TN19-4053	38.3	35.4	37.5	35.7	34.3	33.7	,	38.3	37.5	36.3
TN20-4043	35.8	35.2	34.9	35.5	34.7	32.8	,	37.0	35.6	35.2
TN20-4050	35.7	32.8	35.3	33.8	33.8	34.6	,	36.8	34.4	34.6
TN20-4051	35.1	34.0	35.0	33.3	34.3	33.9	,		34.8	34.5
V16-0248DI	36.7	35.7	36.9	37.5	36.4	35.0	,	37.5	36.7	36.5
V17-0334	35.7	33.9	35.1	34.3	32.9	34.7	,	36.4	35.3	34.8
V17-0432	34.4	34.2	34.0	33.8	35.6	35.8	,	36.1	34.4	34.8
V17-0460	36.0	34.0	36.2	35.6	34.4	33.5	,	33.0	35.9	34.8
V17-0476	38.6	37.1	37.0	35.5	35.0	37.7	,	36.9	37.6	36.9
V17-2350R	38.4	35.1	38.1	35.4	36.0	33.1	,	38.6	39.0	36.7
Mean	35.9	34.1	35.6	34.4	34.0	34.3	.	36.0	35.4	34.9
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.9
CV(%)	.	.	.	.	.	.	.	.	.	2.6

† Protein percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 50 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Starkville, MS	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	47.0	45.4	48.2	47.3	47.4	44.6	.	47.4	47.0	46.8
AG 46X6	48.4	46.4	48.1	46.3	45.2	46.6	,	48.0	48.9	47.2
AG 48X9	48.8	46.0	47.6	45.7	43.5	43.7	,	48.3	44.5	46.0
AG49X9	45.8	44.9	46.2	44.7	45.3	45.6	,	48.0	46.5	45.9
DA1539-109F	51.3	47.6	49.8	46.3	47.0	49.5	,	49.6	49.6	48.8
DA1541-102F	48.9	47.2	49.4	47.6	46.7	48.5	,	48.5	47.7	48.1
DS1061-25	49.4	44.5	48.5	47.0	44.6	44.3	,	48.4	.	46.7
DS72-6	49.9	44.4	46.9	46.3	46.5	48.8	,	49.7	50.1	47.8
K18-4240	48.8	47.7	49.9	46.7	47.2	48.0	,	48.0	47.4	48.0
K18-4783	43.8	43.1	46.4	43.4	43.7	42.0	,	48.9	45.1	44.5
K18-6434	45.0	44.3	47.3	46.7	43.4	45.2	,	46.3	46.0	45.5
R13-14635RR:001	48.3	46.1	48.1	46.4	45.6	45.0	,	48.8	47.3	46.9
R18-14572	49.5	46.6	50.3	47.5	46.5	46.1	,	48.6	47.6	47.8
R18-14753	49.5	46.8	49.7	47.1	44.5	47.3	,	50.2	48.0	47.9
S17-13496C	49.4	45.6	48.7	47.1	45.9	44.6	,	48.3	47.0	47.1
S17-17644C	47.5	45.1	46.6	44.2	43.1	47.0	,	46.9	.	45.9
S17-1931C	49.3	45.3	49.5	45.7	46.3	45.8	,	48.1	48.4	47.3
S17-2066C	47.5	45.2	45.9	45.7	42.7	46.8	,	46.9	46.4	45.9
S18-3722R	46.2	42.3	46.0	44.4	44.1	46.0	,	45.5	46.8	45.1
S18-5884C	46.8	44.8	45.5	43.7	45.9	45.3	,	47.1	45.9	45.6
S18PR-190C	49.2	46.8	50.7	47.5	47.1	48.3	,	48.8	48.6	48.4
TN15-4011	45.8	44.7	45.6	45.6	42.8	44.6	,	46.5	45.5	45.1
TN19-4053	51.1	47.5	50.3	48.0	46.0	45.8	,	50.8	50.2	48.7
TN20-4043	48.1	47.4	47.4	47.6	46.8	44.7	,	49.6	48.1	47.5
TN20-4050	48.2	44.6	47.6	45.7	45.4	46.9	,	49.3	46.5	46.8
TN20-4051	47.1	45.9	47.4	45.0	46.1	46.0	,		46.8	46.5
V16-0248DI	49.1	48.0	49.6	49.7	48.4	47.2	,	49.9	48.9	48.9
V17-0334	48.0	45.5	47.4	46.4	44.3	46.6	,	48.9	47.8	46.8
V17-0432	46.5	46.0	46.0	45.7	47.4	48.1	,	48.2	46.3	46.8
V17-0460	48.3	45.7	48.7	47.5	46.1	45.2	,	45.2	48.0	46.8
V17-0476	51.5	49.7	50.1	47.7	46.7	50.5	,	49.1	50.7	49.5
V17-2350R	50.9	47.0	51.3	47.7	48.1	44.9	,	51.3	51.8	49.1
Mean	48.3	45.9	48.1	46.4	45.6	46.2	.	48.4	47.6	47.1
LSD(0.05)	.	.	.	.	.	.	.	.	.	1.1
CV(%)	.	.	.	.	.	.	.	.	.	2.3

† Estimated meal protein percentage is reported on a 13% moisture basis.

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST IV-S-LATE 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
Ellis	10.7	3.9	22.7	55.1	7.6
AG 46X6	11.4	3.8	19.5	58.0	7.3
S18PR-190C	6.8	3.0	80.1	7.9	2.2
Mean	9.7	3.6	40.8	40.3	5.7
LSD(0.05)	0.4	0.1	4.7	4.0	0.7
CV(%)	3.8	3.2	10.9	9.2	10.8

† Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	10.0	11.4	11.2	10.7	10.9	10.9	10.3	10.6	10.7
AG 46X6	10.8	11.3	11.8	11.8	10.8	11.2	11.8	11.7	11.4
S18PR-190C	6.8	7.0	7.3	7.0	.	6.9	6.5	6.4	6.8
Mean	9.2	9.9	10.1	9.8	10.9	9.7	9.5	9.6	9.7
LSD(0.05)	.	.	.	.	.	.	.	.	0.4
CV(%)	,	,	,	,	,	,	,	,	3.8

SEED STEARIC ACID (%)
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	3.6	3.7	3.9	4.4	3.6	3.8	4.2	3.8	3.9
AG 46X6	3.9	3.6	3.9	4.3	3.7	3.6	4.0	3.6	3.8
S18PR-190C	3.1	2.7	3.0	3.5	.	2.8	3.0	2.9	3.0
Mean	3.5	3.3	3.6	4.1	3.6	3.4	3.7	3.4	3.6
LSD(0.05)	.	.	.	.	.	.	.	.	0.1
CV(%)	,	,	,	,	,	,	,	,	3.2

SEED OLEIC ACID (%)
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	37.9	19.8	21.6	22.9	17.7	20.5	22.0	18.8	22.7
AG 46X6	21.1	20.3	21.8	21.8	19.2	19.0	16.7	16.2	19.5
S18PR-190C	80.4	81.9	72.8	78.8	.	81.3	83.1	82.5	80.1
Mean	46.5	40.7	38.8	41.2	18.5	40.3	40.6	39.2	40.8
LSD(0.05)	.	.	.	.	.	.	.	.	4.7
CV(%)	,	,	,	,	,	,	,	,	10.9

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	42.6	56.6	55.6	54.2	58.8	57.3	57.2	58.4	55.1
AG 46X6	57.7	58.0	55.6	54.4	58.4	59.1	60.0	60.8	58.0
S18PR-190C	7.5	6.4	14.1	8.4	.	6.8	5.5	6.4	7.9
Mean	36.0	40.3	41.8	39.0	58.6	41.1	40.9	41.9	40.3
LSD(0.05)	.	.	.	.	.	.	.	.	4.0
CV(%)	,	,	,	,	,	,	,	,	9.2

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP IV-S-LATE 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	5.9	8.4	7.6	7.8	9.0	7.5	6.4	8.3	7.6
AG 46X6	6.6	6.9	6.9	7.6	8.0	7.2	7.5	7.6	7.3
S18PR-190C	2.2	2.0	2.8	2.2	.	2.1	1.9	1.9	2.2
Mean	4.9	5.8	5.8	5.9	8.5	5.6	5.3	5.9	5.7
LSD(0.05)	.	.	.	.	.	.	.	.	0.7
CV(%)	,	,	,	,	,	,	,	,	10.8

TABLE 51 - PARENTAGE OF ENTRIES
UNIFORM GROUP V 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	Ellis	Commercial check	check		CONV	
2	AG53X9	Commercial check	check		RRX	
3	AG55X7	Commercial check	check		RRX	
4	TN09-008	Commercial check	check		CONV	
5	TN11-5140	Commercial check	check		CONV	
6	AG56X8	Commercial check	check		RRX	
7	DA13062-001F	(DA09x20-2-22-B4-B5) x (DA09x002-30-24-B4-B5)	Gillen		CONV	LN
8	DA13099-008F	(DA07x22-23) x 5002T	Gillen		CONV	diversity, 25% PI 587880A
9	DS49-142	(DT98-9102 x PI 603756) x Jake	Rusty Smith	F5	CONV	tolerant mature seed damage
10	N16-1296	Miller-BC(4)HOLN	Mian		CONV	HOLN
11	N16-8458	NC-Roy x LG01-5087-5	Fallen	F4	CONV	diversity
12	N16-8531	Osage x Holiday	Fallen	F4	CONV	protein
13	N16-8564	Osage x Holiday	Fallen	F4	CONV	protein
14	N17-2319	HR10-1-540 x R05-655	Mian		CONV	high oil
15	N17-2488	R05-655 x NC-Miller	Mian		CONV	high oil
16	N17-2496	R05-655 x NC-Miller	Mian		CONV	high oil
17	N17-2520	R09-4095 x NC-Miller	Mian		CONV	high oil
18	N17-551	LG09-7163 x R09-3789	Mian		CONV	high protein
19	NC-Miller	Variety	Mian		CONV	high oii
20	NDPJE-14-217	N07-14221 x Clifford	Fallen	F4	CONV	diversity
21	Osage	Public cultivar	Fallen		CONV	protein
22	R15-5695	V06-3392 x N02-417	L. Mozzoni		CONV	elevated oil
23	R17-283F	S13-16188 x R04-357	L. Mozzoni		CONV	HO
24	S16-14869C	S11-16653 x S11-20124	P. Chen		CONV	SCN, RKN, SC, Salt
25	S16-15896C	R10-230 x S11-20124	P. Chen		CONV	SCN, SC
26	S16-9478C	S11-20124 x S08-17361	P. Chen		CONV	SCN, SC, Salt
27	S17-1980C	S11-16653 x S13-8585	P. Chen		CONV	SC, Salt
28	S17CR-189C	[(S11-20124RR1(4) x TN10-5002) x (S11-20124(4) x S13-16750)]	P. Chen		CONV	SCN, SC, Salt, HOLN
29	S17CR-337R	[(S11-20124RR1(4) x TN10-5002) x (S11-20124(4) x S13-16750)]	P. Chen		RR1	SCN, Salt, HOLN
30	TN18-4049	NCC09-200719-1-37 x 2013-50,454	Pantalone		CONV	elevated meal protein
31	TN18-4127	Ellis(4) x TN13-5001LL x Ellis(4) x TN10-4037-HO-530-214HO	Pantalone		CONV	HOLN
32	V14-0079	Glenn x V05-2436	Zhang	F4	CONV	> 50% meal
33	V15-1815DI	Ozark x G08-PR-394	Zhang	F4	CONV	diversity, 12.5% PI 423912
34	V15-2261ST	Hanover x V09-0673	Zhang	F4	CONV	
35	V16-1485ST	S09-9943 x UA 5612	Zhang	F4	CONV	
36	V17-2361R	S09-6201 x V11-3163	Zhang	F4	RR1	
37	V17-2933R	V11-2149 x S08-9942RR	Zhang	F4	RR1	

† Conv= Conventional(non-transgenic), LL=Liberty Link®, RR1=Roundup Ready®, RR2=Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high olelic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 52 - GENERAL SUMMARY OF PERFORMANCE
UNIFORM TEST V 2021

STRAIN/ VARIETY	RANK	AVG. RANK	YIELD† 2021	YIELD† 20-21	YIELD† 19-21	PROTEIN‡ 2021	PROTEIN‡ 20-21	PROTEIN‡ 19-21	OIL‡ 2021	OIL‡ 20-21	OIL‡ 19-21
Ellis	26	19	61.4	57.5	58.0	35.4	35.2	35.4	18.5	18.5	18.6
AG53X9	7	15	68.3	.	.	35.4	.	.	18.6	.	.
AG55X7	3	11	70.2	.	.	35.4	.	.	19.3	.	.
TN09-008	29	23	59.6	57.4	.	33.6	33.2	.	19.3	19.2	.
TN11-5140	16	17	64.8	59.8	59.9	35.5	35.1	35.3	19.0	19.1	19.1
AG56X8	2	9	71.3	.	.	35.4	.	.	18.6	.	.
DA13062-001F	17	17	64.3	.	.	35.6	.	.	18.8	.	.
DA13099-008F	8	13	68.0	62.0	.	35.0	34.9	.	19.4	19.3	.
DS49-142	37	32	51.4	.	.	36.7	.	.	18.5	.	.
N16-1296	20	21	63.0	.	.	34.5	.	.	20.7	.	.
N16-8458	34	29	55.5	.	.	36.7	.	.	17.4	.	.
N16-8531	36	29	54.2	54.5	54.0	37.2	36.8	37.0	18.0	18.1	18.1
N16-8564	25	20	61.6	58.4	57.9	36.1	36.0	36.3	18.9	18.7	18.9
N17-2319	35	29	55.5	.	.	35.7	.	.	20.0	.	.
N17-2488	32	29	56.6	.	.	34.1	.	.	20.5	.	.
N17-2496	12	17	65.6	.	.	33.5	.	.	20.4	.	.
N17-2520	27	22	61.3	58.8	.	34.2	34.5	.	21.0	20.6	.
N17-551	33	27	55.8	.	.	36.5	.	.	19.1	.	.
NC-Miller	19	20	63.2	.	.	33.3	.	.	20.4	.	.
NDPJE-14-217	11	16	66.1	61.4	.	35.5	35.3	.	19.2	19.1	.
Osage	22	18	62.5	59.8	.	38.1	37.7	.	18.0	17.9	.
R15-5695	13	17	65.5	.	61.0	35.0	.	35.2	20.1	.	20.2
R17-283F	28	22	61.1	.	.	38.1	.	.	18.9	.	.
S16-14869C	1	6	72.2	67.1	.	34.8	34.4	.	19.4	19.3	.
S16-15896C	5	9	69.0	.	.	36.3	.	.	18.4	.	.
S16-9478C	6	12	68.7	.	.	35.0	.	.	19.5	.	.
S17-1980C	14	17	65.4	.	.	35.4	.	.	19.1	.	.
S17CR-189C	4	11	69.7	.	.	35.5	.	.	19.7	.	.
S17CR-337R	9	12	67.8	.	.	35.4	.	.	19.7	.	.
TN18-4049	15	16	65.0	.	.	35.1	.	.	19.1	.	.
TN18-4127	31	25	57.0	.	.	35.9	.	.	18.7	.	.
V14-0079	21	18	62.7	59.5	59.6	36.8	36.5	36.8	19.4	19.2	19.3
V15-1815DI	10	13	67.4	61.4	.	34.9	34.8	.	19.9	19.7	.
V15-2261ST	23	21	62.1	59.7	.	36.9	36.5	.	19.0	19.0	.
V16-1485ST	30	23	59.2	.	.	35.9	.	.	18.2	.	.
V17-2361R	24	21	61.8	.	.	37.5	.	.	18.3	.	.
V17-2933R	18	18	64.1	.	.	33.5	.	.	20.2	.	.
Mean	.	.	63.2	.	.	35.6	.	.	19.2	.	.
LSD(0.05)	.	.	5.2	.	.	0.7	.	.	0.4	.	.
CV(%)	.	.	13.8	.	.	2.4	.	.	2.6	.	.

†Data not included in the test mean: 2020 Belle Mina and Bossier City; 2021 Bossier City and Jackson. Certain field trials had damage consistent with Dicamba exposure, which may have resulted in an unfair yield advantage for check lines with dicamba resistance.

‡ Protein percentage and oil percentage reported on a 13% moisture basis beginning in 2015.

TABLE 53 - GENERAL SUMMARY OF PERFORMANCE -Part 2
UNIFORM TEST V 2021

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
Ellis	47.2	0	1	23	1.9	12.8			
AG53X9	47.3	0	2	31	2.1	14.9			
AG55X7	47.7	0	1	26	2.0	13.6			
TN09-008	45.2	1	1	26	2.2	16.5			
TN11-5140	47.7	7	1	30	1.9	15.3			
AG56X8	47.2	1	1	32	2.1	16.1			
DA13062-001F	47.7	0	2	29	1.8	12.8	S	T	T
DA13099-008F	47.2	0	1	25	1.8	15.8	P	T	T
DS49-142	48.9	-2	3	35	2.0	14.6	P	Lt	Br
N16-1296	47.3	3	1	27	1.8	17.4	P	T	
N16-8458	48.3	8	2	26	1.4	11.9	P	G	
N16-8531	49.3	-1	1	23	1.7	13.0	P	G	
N16-8564	48.4	1	1	23	1.9	13.4	P	G	
N17-2319	48.6	0	1	23	1.7	15.7	P	G	
N17-2488	46.5	1	1	24	2.1	17.5	P	G	
N17-2496	45.8	3	1	27	1.7	15.7	P	G	
N17-2520	47.1	3	2	28	2.1	19.2	P	T	
N17-551	49.0	-2	1	23	2.0	16.0	P	T	
NC-Miller	45.5	4	1	25	2.1	17.1	P	G	
NDPJE-14-217	47.8	1	2	26	1.8	16.2	P	T	
Osage	50.5	-1	1	24	1.9	13.7	P	G	
R15-5695	47.6	3	1	27	2.0	16.6	P	T	Tn
R17-283F	51.0	3	1	29	1.7	15.0	W	G	Tn
S16-14869C	47.0	0	3	31	1.8	15.6	W	T	Tn
S16-15896C	48.3	0	2	29	2.0	14.3	W	G	Tn
S16-9478C	47.2	0	2	30	1.9	14.8	W	T	Tn
S17-1980C	47.5	1	2	37	2.4	15.7	W	G	Tn
S17CR-189C	48.1	0	3	32	1.8	14.5	W	T	Bl
S17CR-337R	47.9	0	3	31	1.9	14.3	W	T	Bl
TN18-4049	47.2	1	1	27	1.8	15.2			
TN18-4127	48.0	0	1	23	2.2	12.9			
V14-0079	49.6	1	1	23	1.9	14.8	P	G	
V15-1815DI	47.3	0	1	27	1.9	16.7	P	G	
V15-2261ST	49.5	1	1	27	2.1	14.5	P	G	
V16-1485ST	47.7	9	3	39	1.8	15.2	P	G	
V17-2361R	49.8	0	2	37	2.9	15.9	P	G	
V17-2933R	45.6	-1	2	38	2.0	13.3	P	LT	
Mean	47.8	1	2	28	1.9	15.1			
LSD(0.05)	0.9	2	0	2	0.3	0.8			
CV(%)	2.1	256	39	13	26.0	10.0			

† Estimated meal protein content was added to the annual report in 2018.

TABLE 54 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST V 2021

STRAIN/	SCN Cyst Score (1-5 Scale)†			RKN Gall Score (1-5 Scale)*			SC	SC
VARIETY	Race 2	Race 3	Race 5	PRK	SRK	JRK	RATING	SCORE
Ellis	.	5	.	1.5	1.0	1.5	R	1
AG53X9	.	2	.	5.0	3.5	5.0	R	1
AG55X7	.	3	.	5.0	1.0	5.0	R	1
TN09-008	.	1	.	5.0	5.0	5.0	R	1
TN11-5140	.	3	.	5.0	1.0	4.5	R	1
AG56X8	.	1	.	5.0	1.0	3.5	R	1
DA13062-001F	.	5	.	4.5	5.0	5.0	R	1
DA13099-008F	.	4	.	5.0	4.5	3.5	R	1
DS49-142	.	3	.	1.3	1.3	1.5	MS	4
N16-1296	.	5	.	4.3	5.0	5.0	R	1
N16-8458	.	5	.	5.0	5.0	5.0	R	1
N16-8531	.	.	.	4.7	5.0	3.3	MS	4
N16-8564	.	3	.	5.0	5.0	5.0	MS	4
N17-2319	.	5	.	5.0	5.0	5.0	MR	2
N17-2488	.	2	.	5.0	4.5	5.0	R	1
N17-2496	.	4	.	5.0	5.0	5.0	R	1
N17-2520	.	5	.	5.0	5.0	4.3	R	1
N17-551	.	4	.	5.0	5.0	5.0	R	1
NC-Miller	.	5	.	5.0	1.0	5.0	R	1
NDPJE-14-217	.	4	.	5.0	1.0	5.0	SS	3
Osage	.	3	.	5.0	5.0	4.3	SS	3
R15-5695	.	3	.	5.0	3.3	5.0	R	1
R17-283F	.	5	.	4.8	5.0	3.3	R	1
S16-14869C	.	3	.	4.0	1.0	1.8	R	1
S16-15896C	.	5	.	5.0	5.0	1.5	R	1
S16-9478C	.	1	.	5.0	2.5	4.5	R	1
S17-1980C	.	3	.	5.0	5.0	4.8	R	1
S17CR-189C	.	2	.	3.3	1.0	1.0	R	1
S17CR-337R	.	1	.	1.0	1.5	1.0	MS	4
TN18-4049	.	3	.	5.0	5.0	4.0	R	1
TN18-4127	.	4	.	2.3	1.0	1.3	R	1
V14-0079	.	4	.	1.3	5.0	1.5	S	5
V15-1815DI	.	3	.	5.0	3.5	5.0	SS	3
V15-2261ST	.	3	.	5.0	5.0	5.0	R	1
V16-1485ST	.	4	.	5.0	5.0	5.0	SS	3
V17-2361R	.	3	.	4.8	5.0	5.0	R	1
V17-2933R	.	4	.	5.0	5.0	5.0	R	1

†The race 2, 3, and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7, HG Type 0, and HG Type 2.5.7, respectively. Results for race 2 and 5 were omitted. See Materials and Methods.
*The root-knot nematode (RKN) species used in these tests were Meloidogyne incognita (southern root knot = SRK), M. arenaria (peanut root knot = PRK), and M. javanica (Javanese root-knot = JRK;)MR = mixed reaction.

TABLE 55 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST V 2021 †

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR*	Knoxville, TN	McCune, KS	Orange, VA	Plymouth, NC
Ellis	57.9	62.7	44.2	47.0	44.3	56.4	73.8	51.8
AG53X9	66.6	61.1	50.7	83.4	47.9	57.7	64.0	49.7
AG55X7	64.3	64.4	45.2	79.7	62.2	50.1	80.2	50.0
TN09-008	63.7	59.7	38.8	53.0	54.8	50.6	69.3	45.5
TN11-5140	63.6	77.7	38.8	76.3	60.1	47.8	65.3	51.7
AG56X8	71.5	70.0	40.8	86.9	62.7	46.6	84.1	55.1
DA13062-001F	68.4	57.1	42.4	62.7	55.0	49.9	73.7	51.7
DA13099-008F	61.3	69.7	40.8	65.8	60.0	54.5	85.3	58.0
DS49-142	52.9	39.7	41.0	58.1	46.3	45.0	39.4	37.0
N16-1296	65.7	68.5	41.1	62.4	53.6	47.2	79.3	50.2
N16-8458	60.3	70.7	37.0	56.9	51.5	43.9	72.6	.
N16-8531	51.2	45.2	33.9	51.6	50.8	54.3	51.1	46.7
N16-8564	59.4	77.9	32.5	51.2	42.9	53.2	65.1	55.9
N17-2319	58.2	55.7	35.0	46.9	49.6	51.8	63.6	34.2
N17-2488	56.1	72.5	35.9	54.9	56.4	43.7	56.5	41.4
N17-2496	58.2	60.7	37.2	64.9	69.5	46.9	86.1	48.4
N17-2520	64.9	59.1	36.3	59.1	51.1	51.3	52.5	44.6
N17-551	54.8	55.6	41.5	36.9	60.6	45.3	54.1	50.4
NC-Miller	61.6	64.4	42.4	62.8	54.0	43.7	71.6	50.9
NDPJE-14-217	64.2	66.6	38.1	60.3	64.2	46.0	69.3	49.7
Osage	63.8	52.5	49.6	57.3	56.2	53.8	73.6	51.9
R15-5695	63.8	75.2	47.8	73.9	52.3	50.6	70.5	50.2
R17-283F	67.9	46.9	48.0	68.6	53.8	46.6	67.3	43.1
S16-14869C	68.6	65.4	47.5	81.2	64.3	53.6	85.7	44.2
S16-15896C	69.0	58.4	51.4	68.9	63.3	52.4	79.4	53.1
S16-9478C	69.4	69.8	45.2	78.2	54.4	50.5	79.3	46.8
S17-1980C	64.9	67.5	47.3	75.5	51.1	55.3	74.1	44.8
S17CR-189C	70.4	61.2	35.0	79.1	62.2	55.9	73.9	49.6
S17CR-337R	67.7	61.1	33.8	70.4	57.5	54.7	89.6	51.2
TN18-4049	61.2	76.5	35.3	68.7	63.6	49.9	82.3	50.3
TN18-4127	52.8	70.8	40.5	35.8	55.3	47.6	69.4	55.4
V14-0079	64.7	60.3	36.1	52.3	59.8	52.6	86.1	50.6
V15-1815DI	74.6	82.3	35.7	67.3	61.3	47.3	78.2	53.2
V15-2261ST	68.9	71.0	46.4	56.6	57.7	47.2	83.8	51.5
V16-1485ST	61.1	70.7	38.4	61.1	69.2	50.5	56.1	43.7
V17-2361R	67.5	55.0	44.7	64.5	64.0	52.6	74.3	39.0
V17-2933R	61.8	47.0	47.4	68.2	54.4	52.6	77.5	46.3
Mean	63.3	63.5	41.2	63.5	56.7	50.3	71.8	48.5
LSD(0.05)	6.0	19.0	11.1	6.6	12.9	4.6	20.7	8.5
LSD(0.10)	5.0	15.9	9.3	5.5	10.8	3.8	17.3	7.1
CV(%)	5.8	18.4	16.5	6.4	14.0	5.6	14.2	10.7

†Data not included in the test mean: Bossier City and Jackson

* Locations with obvious damage consistent with exposure to the herbicide Dicamba.

TABLE 55 - SEED YIELD (BUSHELS PER ACRE) (continued)
UNIFORM TEST V 2021 †

STRAIN/ VARIETY	Portageville, MO(A)*	Portageville, MO(B)*	Springfield, TN	Starkville, MS	Stoneville, MS*	Suffolk, VA	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	44.2	43.8	60.5	64.5	75.3	65.2	74.6	101.4	61.4
AG53X9	84.6	76.4	54.1	56.1	80.4	65.2	70.0	98.4	68.3
AG55X7	77.2	73.8	63.6	58.0	78.1	73.0	78.6	94.6	70.2
TN09-008	48.8	36.7	64.7	65.3	67.8	66.2	60.6	87.4	59.6
TN11-5140	67.1	53.9	68.3	57.4	68.2	58.1	68.6	99.9	64.8
AG56X8	79.7	64.5	65.7	62.7	71.7	73.2	78.3	96.3	71.3
DA13062-001F	53.7	60.9	62.6	60.0	68.9	73.7	65.8	92.9	64.3
DA13099-008F	65.1	57.8	67.9	59.9	75.9	62.4	86.7	92.9	68.0
DS49-142	45.2	46.7	58.7	51.9	.	47.8	48.4	81.7	51.4
N16-1296	57.8	66.4	56.4	54.1	63.8	58.0	72.6	94.8	63.0
N16-8458	57.1	40.3	55.8	18.7	59.4	65.7	64.3	91.2	55.5
N16-8531	57.3	45.1	55.7	46.7	72.0	48.8	39.7	85.9	54.2
N16-8564	54.4	53.8	61.5	53.7	74.7	61.9	70.2	104.3	61.6
N17-2319	41.3	41.0	55.9	44.5	61.3	62.7	72.9	92.4	55.5
N17-2488	60.9	46.2	55.8	43.9	68.1	54.7	63.1	89.6	56.6
N17-2496	60.8	60.2	72.6	42.6	69.6	71.7	72.5	95.6	65.6
N17-2520	66.0	52.4	55.9	55.5	66.6	58.9	79.2	97.6	61.3
N17-551	43.0	39.0	60.3	46.9	67.9	60.7	59.2	100.2	55.8
NC-Miller	59.6	59.9	65.8	49.2	72.7	67.2	71.9	94.6	63.2
NDPJE-14-217	64.9	56.6	61.0	56.8	70.6	71.6	90.0	99.8	66.1
Osage	55.5	46.4	64.4	53.8	70.7	62.5	62.7	102.8	62.5
R15-5695	61.3	68.3	64.0	52.5	66.9	72.1	74.9	95.8	65.5
R17-283F	65.2	65.2	69.1	55.1	60.5	58.6	57.8	73.7	61.1
S16-14869C	73.7	68.4	70.3	68.8	77.9	76.7	75.5	102.7	72.2
S16-15896C	69.4	68.9	61.4	62.1	75.6	76.3	57.6	108.9	69.0
S16-9478C	75.6	65.4	60.0	62.9	71.6	71.5	74.9	101.6	68.7
S17-1980C	72.7	67.8	61.0	59.4	68.2	64.8	59.0	97.0	65.4
S17CR-189C	72.6	76.0	61.7	59.9	.	65.4	69.8	103.2	69.7
S17CR-337R	62.1	68.4	59.3	61.8	.	72.0	65.2	97.3	67.8
TN18-4049	62.9	51.0	60.7	45.9	69.1	69.0	75.7	101.6	65.0
TN18-4127	42.5	35.8	54.1	52.7	71.5	57.5	70.3	98.1	57.0
V14-0079	49.2	52.5	65.3	52.7	66.2	70.4	53.1	103.8	62.7
V15-1815DI	65.2	58.0	66.1	54.5	68.0	81.5	71.5	97.2	67.4
V15-2261ST	59.1	45.6	53.6	54.4	63.2	64.2	66.0	99.3	62.1
V16-1485ST	62.5	.	67.2	48.2	51.0	60.4	45.9	97.6	59.2
V17-2361R	66.8	52.7	49.0	51.5	68.5	60.5	60.2	95.0	61.8
V17-2933R	60.2	62.2	48.4	60.9	70.5	66.4	67.7	100.7	64.1
Mean	61.2	56.3	61.0	54.2	69.2	65.3	67.4	96.4	63.2
LSD(0.05)	10.9	9.9	11.6	9.9	6.0	10.6	16.9	12.6	5.2
LSD(0.10)	9.1	8.3	9.7	8.2	5.0	8.8	14.1	10.5	4.3
CV(%)	10.9	10.8	11.7	11.2	5.3	10.0	15.4	8.0	13.8

TABLE 56 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Plymouth, NC	Portageville, MO(A)
Ellis	9/29	10/13	10/1	10/10	10/11	10/13	10/1	10/7
AG53X9	2	0	5	-1	1	-1	2	3
AG55X7	2	0	3	-2	2	-1	0	1
TN09-008	0	-1	1	0	3	0	4	7
TN11-5140	9	0	11	4	3	5	13	8
AG56X8	2	0	6	0	3	1	2	4
DA13062-001F	0	0	6	-1	4	0	0	3
DA13099-008F	-2	0	2	0	4	0	-1	3
DS49-142	-2	-2	2	-2	-1	0	-1	0
N16-1296	5	0	8	3	1	1	7	7
N16-8458	14	1	18	4	2	5	-8	15
N16-8531	-2	0	0	-2	1	0	-1	0
N16-8564	5	0	3	1	0	0	2	1
N17-2319	0	0	2	-1	0	0	0	1
N17-2488	0	0	4	1	0	2	2	5
N17-2496	0	-1	9	2	2	4	4	5
N17-2520	5	1	8	1	3	3	5	8
N17-551	-5	-1	0	-1	0	-4	-2	0
NC-Miller	5	0	6	3	7	0	3	3
NDPJE-14-217	2	1	0	-1	3	0	1	4
Osage	0	-1	2	1	0	0	0	1
R15-5695	2	1	11	3	2	0	3	4
R17-283F	7	-1	8	3	0	4	7	7
S16-14869C	5	0	3	-1	-1	0	0	2
S16-15896C	2	-1	0	0	-1	0	0	3
S16-9478C	2	0	4	-1	1	0	1	5
S17-1980C	5	0	4	-3	-1	0	3	3
S17CR-189C	0	-1	1	-2	2	0	-1	4
S17CR-337R	0	-1	1	-1	3	0	-1	3
TN18-4049	0	-1	6	1	1	0	4	1
TN18-4127	0	0	0	0	2	-4	-1	0
V14-0079	0	1	0	-3	2	0	2	0
V15-1815DI	0	0	2	-1	0	-1	1	1
V15-2261ST	2	0	3	0	5	0	2	1
V16-1485ST	12	1	14	6	3	11	16	15
V17-2361R	0	-1	3	-2	2	-3	-1	4
V17-2933R	0	-1	3	-3	1	-1	1	2
Mean	2	0	4	0	2	1	2	4
LSD(0.05)	.	1	4	2	1	2	3	3
CV(%)	0	582	51	1884	35	156	70	59

TABLE 56 - RELATIVE MATURITY (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	*Portageville, MO(B)*	*Springfield, TN*	*Stoneville, MS*	*Tallassee, AL*	*Warsaw, VA*	*Test Mean*
Ellis	10/9	10/13	9/24	10/9	10/8	10/7
AG53X9	-1	0	3	-7	-3	0
AG55X7	2	-2	0	-4	-2	0
TN09-008	3	-1	0	-3	-4	1
TN11-5140	9	3	5	3	20	7
AG56X8	8	-1	1	-5	-2	1
DA13062-001F	3	-3	1	-8	-7	0
DA13099-008F	2	-2	-1	-6	-1	0
DS49-142	-3	-2	-1	-8	-5	-2
N16-1296	5	-1	8	-3	6	3
N16-8458	12	3	.	5	18	8
N16-8531	-3	-1	1	3	-5	-1
N16-8564	1	1	2	0	3	1
N17-2319	-1	-1	2	-3	6	0
N17-2488	0	0	2	0	2	1
N17-2496	3	3	3	-4	12	3
N17-2520	5	0	6	-1	-2	3
N17-551	-1	-3	-2	-7	-3	-2
NC-Miller	2	0	5	1	20	4
NDPJE-14-217	-2	-2	1	-3	7	1
Osage	-3	0	-1	-5	0	-1
R15-5695	5	-1	4	0	3	3
R17-283F	6	1	4	-6	8	3
S16-14869C	2	-2	-2	-6	0	0
S16-15896C	0	1	-1	-5	-3	0
S16-9478C	2	-2	-1	-1	-5	0
S17-1980C	0	0	3	-3	6	1
S17CR-189C	1	-1	-2	-6	-2	0
S17CR-337R	2	-1	0	-3	-2	0
TN18-4049	0	1	2	-7	3	1
TN18-4127	-3	0	0	3	3	0
V14-0079	0	0	1	-2	6	1
V15-1815DI	0	1	-1	-5	4	0
V15-2261ST	-3	0	2	-6	7	1
V16-1485ST	13	3	11	0	14	9
V17-2361R	-2	0	1	-5	9	0
V17-2933R	0	-1	-1	-2	-6	-1
Mean	2	0	2	-3	3	1
LSD(0.05)	4	2	2	8	9	2
CV(%)	139	326	59	167	198	256

TABLE 57 - PLANT HEIGHT (INCHES)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Plymouth, NC
Ellis	23	31	20	14	16	28	33	24
AG53X9	30	35	30	28	24	31	35	32
AG55X7	22	25	25	22	25	28	33	26
TN09-008	26	26	24	15	27	29	34	27
TN11-5140	27	34	28	22	27	35	37	32
AG56X8	32	29	29	30	29	32	38	28
DA13062-001F	28	30	31	20	28	35	34	30
DA13099-008F	25	25	23	16	24	29	36	26
DS49-142	33	38	37	30	36	35	42	37
N16-1296	27	33	24	18	23	30	37	29
N16-8458	24	29	25	24	22	29	33	27
N16-8531	23	23	21	21	21	26	34	23
N16-8564	20	28	22	15	17	28	31	25
N17-2319	25	26	22	13	22	25	29	23
N17-2488	25	28	22	18	22	23	28	22
N17-2496	28	28	25	19	25	28	36	27
N17-2520	27	31	26	18	23	31	30	28
N17-551	25	28	25	13	23	28	26	27
NC-Miller	25	29	22	17	20	27	29	29
NDPJE-14-217	30	28	27	17	24	30	34	26
Osage	25	24	24	17	22	28	30	25
R15-5695	27	29	24	20	23	31	36	29
R17-283F	31	32	29	18	30	34	36	27
S16-14869C	29	33	31	22	32	35	36	32
S16-15896C	26	31	30	21	28	34	33	29
S16-9478C	31	30	30	25	29	35	34	29
S17-1980C	38	38	36	33	32	38	42	43
S17CR-189C	30	37	34	22	30	35	37	35
S17CR-337R	27	36	33	22	29	37	37	32
TN18-4049	29	28	22	21	26	31	36	27
TN18-4127	20	26	23	17	17	26	34	26
V14-0079	22	28	23	13	20	25	32	24
V15-1815DI	29	29	27	16	25	30	35	28
V15-2261ST	31	28	27	17	27	30	34	28
V16-1485ST	45	45	34	32	38	39	37	43
V17-2361R	41	45	39	29	33	41	44	37
V17-2933R	40	38	38	33	35	39	44	36
Mean	28	31	27	21	26	31	35	29
LSD(0.05)	4	4	4	4	4	4	5	4
CV(%)	8	8	8	12	10	7	8	7

TABLE 57 - PLANT HEIGHT (INCHES) (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Suffolk, VA	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	12	12	26	.	.	27	31	33	23
AG53X9	38	29	27	.	.	30	34	37	31
AG55X7	27	23	25	.	.	25	34	30	26
TN09-008	16	14	30	.	.	30	35	31	26
TN11-5140	22	22	33	.	.	32	34	39	30
AG56X8	36	28	29	.	.	37	35	36	32
DA13062-001F	15	20	30	.	.	33	33	35	29
DA13099-008F	14	15	27	.	.	25	33	28	25
DS49-142	27	26	36	.	.	37	34	43	35
N16-1296	18	18	28	.	.	30	36	31	27
N16-8458	22	18	24	.	.	25	33	29	26
N16-8531	15	16	23	.	.	23	31	30	24
N16-8564	16	14	25	.	.	22	29	31	23
N17-2319	12	12	24	.	.	25	35	30	23
N17-2488	15	16	24	.	.	26	32	29	24
N17-2496	17	17	30	.	.	33	31	34	27
N17-2520	19	21	27	.	.	31	38	39	28
N17-551	15	5	27	.	.	24	23	29	23
NC-Miller	19	16	25	.	.	29	32	35	25
NDPJE-14-217	19	9	24	.	.	34	29	30	26
Osage	17	15	27	.	.	30	26	29	24
R15-5695	19	19	27	.	.	31	35	34	27
R17-283F	20	20	32	.	.	35	31	35	29
S16-14869C	23	21	38	.	.	33	32	37	31
S16-15896C	19	19	32	.	.	31	29	38	29
S16-9478C	21	20	28	.	.	36	33	34	30
S17-1980C	34	30	32	.	.	45	39	46	38
S17CR-189C	21	20	35	.	.	37	35	35	32
S17CR-337R	17	20	34	.	.	36	35	42	31
TN18-4049	19	15	27	.	.	31	35	36	28
TN18-4127	13	11	23	.	.	22	32	29	23
V14-0079	16	13	23	.	.	27	28	28	23
V15-1815DI	16	15	27	.	.	33	30	35	27
V15-2261ST	16	13	25	.	.	32	30	36	27
V16-1485ST	33	32	31	.	.	50	49	42	39
V17-2361R	31	28	30	.	.	46	39	43	38
V17-2933R	34	34	31	.	.	47	36	44	38
Mean	21	19	28	.	.	32	33	35	28
LSD(0.05)	4	6	4	.	.	5	6	6	2
CV(%)	13	20	9	.	.	9	11	11	13

TABLE 58 - PLANT LODGING (1-5)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Plymouth, NC
Ellis	1.0	1.0	1.0	1.0	1.7	1.0	1.5	1.0
AG53X9	1.3	1.0	1.3	1.7	2.3	1.0	1.0	1.5
AG55X7	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0
TN09-008	1.0	1.0	1.0	1.0	2.3	1.0	1.0	1.3
TN11-5140	1.3	1.3	1.3	1.0	2.0	1.0	1.0	1.5
AG56X8	2.0	1.0	2.0	1.0	2.0	1.0	1.0	1.3
DA13062-001F	2.0	3.0	1.7	1.0	2.7	1.3	1.5	1.8
DA13099-008F	1.3	1.0	1.0	1.0	2.0	1.0	1.0	1.0
DS49-142	3.0	2.0	4.3	4.0	4.0	1.7	5.0	2.0
N16-1296	1.7	1.3	1.0	1.0	1.7	1.0	1.0	1.0
N16-8458	2.3	1.0	2.7	1.0	2.2	1.0	3.5	1.5
N16-8531	1.0	1.0	1.0	1.0	1.8	1.0	1.0	1.0
N16-8564	1.0	1.0	1.0	1.0	1.5	1.0	2.0	1.0
N17-2319	1.0	1.0	1.0	1.0	2.2	1.0	1.0	1.0
N17-2488	1.0	1.0	1.0	1.0	1.8	1.0	1.0	1.0
N17-2496	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0
N17-2520	2.0	1.0	1.7	1.0	2.2	1.7	3.0	1.3
N17-551	1.0	1.0	1.0	1.0	2.3	1.0	1.0	1.0
NC-Miller	1.3	1.0	1.0	1.0	2.0	1.0	1.5	1.3
NDPJE-14-217	2.0	1.3	1.7	1.0	2.5	1.0	1.5	1.3
Osage	1.3	1.0	1.0	1.0	2.2	1.0	2.0	1.0
R15-5695	2.0	1.0	1.3	1.0	2.2	1.0	1.0	1.0
R17-283F	2.0	1.0	1.3	1.0	2.3	1.0	1.5	1.3
S16-14869C	3.0	3.3	3.0	1.0	3.5	2.7	4.5	1.5
S16-15896C	2.7	2.3	2.7	1.0	3.2	2.3	3.5	1.3
S16-9478C	2.3	3.0	3.0	1.0	3.5	2.0	1.5	1.3
S17-1980C	3.0	1.7	2.7	2.3	2.8	1.0	2.0	2.3
S17CR-189C	2.7	3.3	4.3	2.0	3.3	2.3	4.0	1.8
S17CR-337R	3.0	3.3	3.3	1.7	3.2	2.0	4.0	1.5
TN18-4049	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0
TN18-4127	1.0	1.0	1.0	1.0	1.8	1.0	1.0	1.3
V14-0079	1.0	1.0	1.0	1.0	1.8	1.0	1.0	1.0
V15-1815DI	1.0	1.0	1.0	1.0	2.0	1.0	1.5	1.0
V15-2261ST	1.0	1.0	1.3	1.0	2.0	1.0	1.0	1.0
V16-1485ST	1.7	1.0	3.7	2.7	3.0	1.0	1.0	2.0
V17-2361R	2.3	1.0	3.0	2.0	2.2	1.3	1.0	1.3
V17-2933R	3.0	1.0	3.3	2.3	3.2	1.0	1.5	1.5
Mean	1.7	1.4	1.8	1.3	2.4	1.2	1.7	1.3
LSD(0.05)	0.7	0.5	0.8	0.4	0.5	0.4	1.4	0.4
CV(%)	26.1	22.1	26.1	20.8	13.2	19.2	40.1	15.8

TABLE 58 - PLANT LODGING (1-5) (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Suffolk, VA	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	1.0	1.0	1.0	.	1.0	1.2	1.0	1.1	1.1
AG53X9	1.7	1.0	1.0	.	2.0	1.5	2.3	1.4	1.5
AG55X7	1.0	1.3	1.0	.	1.0	1.2	1.0	1.1	1.1
TN09-008	1.0	1.0	1.0	.	1.0	1.2	1.0	1.8	1.2
TN11-5140	1.0	1.0	1.0	.	1.0	1.7	1.0	2.4	1.3
AG56X8	1.7	1.3	1.0	.	1.0	1.5	1.0	1.3	1.3
DA13062-001F	1.0	1.0	1.0	.	1.5	1.8	1.0	2.8	1.7
DA13099-008F	1.0	1.0	1.0	.	1.0	1.2	1.0	2.0	1.2
DS49-142	3.3	3.7	1.5	.	1.5	3.7	4.3	3.9	3.2
N16-1296	1.0	1.0	1.0	.	1.0	1.5	1.3	2.3	1.3
N16-8458	1.0	1.0	1.0	.	1.0	1.5	2.0	2.8	1.7
N16-8531	1.0	1.0	1.0	.	1.0	1.3	1.0	1.2	1.1
N16-8564	1.0	1.0	1.0	.	1.0	1.3	1.0	1.5	1.2
N17-2319	1.0	1.0	1.0	.	1.0	1.0	1.0	1.3	1.1
N17-2488	1.0	1.0	1.0	.	1.0	1.0	1.0	1.2	1.1
N17-2496	1.0	1.0	1.0	.	1.0	1.8	2.0	1.7	1.2
N17-2520	1.0	1.0	1.0	.	1.0	2.0	1.0	3.8	1.6
N17-551	1.0	1.0	1.0	.	1.0	1.3	1.0	1.4	1.1
NC-Miller	1.0	1.0	1.0	.	1.0	1.5	1.0	1.4	1.2
NDPJE-14-217	1.0	1.0	1.0	.	2.0	1.8	1.0	1.9	1.5
Osage	1.0	1.0	1.0	.	1.0	1.8	1.0	1.7	1.3
R15-5695	1.0	1.0	1.0	.	1.0	1.7	1.7	2.2	1.3
R17-283F	1.0	1.0	1.0	.	2.0	1.8	1.0	1.9	1.4
S16-14869C	1.0	1.0	1.3	.	3.0	2.7	2.7	4.1	2.5
S16-15896C	1.0	1.0	1.0	.	2.5	1.5	1.0	3.3	2.0
S16-9478C	1.0	1.7	1.2	.	2.5	2.0	1.0	3.6	2.0
S17-1980C	2.3	3.0	1.0	.	3.5	3.0	2.5	3.6	2.4
S17CR-189C	1.0	1.3	1.7	.	4.0	3.0	2.3	3.2	2.7
S17CR-337R	1.0	1.0	1.7	.	3.5	2.2	2.3	3.3	2.5
TN18-4049	1.0	1.0	1.0	.	1.0	1.2	1.0	1.8	1.1
TN18-4127	1.0	1.0	1.0	.	1.0	1.0	1.0	1.3	1.1
V14-0079	1.0	1.0	1.0	.	1.0	1.3	1.0	1.1	1.1
V15-1815DI	1.0	1.0	1.0	.	1.0	1.5	1.0	2.7	1.2
V15-2261ST	1.0	1.0	1.0	.	1.0	1.2	1.0	1.3	1.1
V16-1485ST	2.7	2.7	1.0	.	5.0	3.0	4.7	2.9	2.5
V17-2361R	2.0	1.3	1.0	.	2.0	2.7	3.0	2.5	1.9
V17-2933R	3.0	2.0	1.0	.	2.0	2.3	3.3	2.9	2.2
Mean	1.3	1.3	1.1	.	1.6	1.8	1.6	2.2	1.6
LSD(0.05)	0.4	0.6	0.2	.	0.6	0.5	1.2	0.9	0.4
CV(%)	21.3	27.3	11.8	.	17.6	19.1	47.1	24.3	38.8

TABLE 59 - SEED QUALITY (1-5)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	*Belle Mina, AL*	*Bossier City, LA*	*Jackson, TN*	*Keiser, AR*	*Knoxville, TN*	*McCune, KS*	*Orange, VA*	*Plymouth, NC*
Ellis	3.0	1.0	2.0	2.0	1.5	2.0	1.5	.
AG53X9	3.3	1.0	2.0	2.3	2.0	2.0	1.5	.
AG55X7	3.3	1.0	2.0	2.7	1.5	2.0	1.0	.
TN09-008	3.0	1.0	2.0	2.7	1.5	2.0	1.5	.
TN11-5140	3.7	1.0	1.7	1.7	1.0	1.0	1.5	.
AG56X8	3.3	1.0	2.0	2.7	1.5	2.0	1.0	.
DA13062-001F	2.3	1.0	2.0	2.3	1.0	2.0	1.0	.
DA13099-008F	1.7	1.0	2.0	2.5	1.5	2.0	1.0	.
DS49-142	3.0	1.0	2.0	2.3	2.0	2.0	1.0	.
N16-1296	3.7	1.0	1.7	2.0	1.0	2.0	1.0	.
N16-8458	2.7	1.0	1.3	1.0	1.0	2.0	1.0	.
N16-8531	2.0	1.0	1.7	2.0	1.5	1.0	1.0	.
N16-8564	2.0	1.0	2.0	2.7	1.0	2.0	1.5	.
N17-2319	2.7	1.0	1.7	1.7	1.0	2.0	1.0	.
N17-2488	3.3	1.0	2.3	3.0	1.5	2.0	1.0	.
N17-2496	3.0	1.0	1.3	1.5	1.0	2.0	2.0	.
N17-2520	3.0	1.0	2.0	3.0	1.0	2.0	1.5	.
N17-551	3.3	1.0	2.0	2.0	1.5	2.0	1.0	.
NC-Miller	2.3	1.0	1.7	3.0	1.5	2.0	1.5	.
NDPJE-14-217	2.3	1.0	2.0	2.7	1.0	2.0	1.5	.
Osage	3.3	1.0	1.7	3.0	1.0	2.0	1.5	.
R15-5695	3.7	1.0	2.0	2.0	1.0	2.0	1.0	.
R17-283F	4.0	1.0	2.0	1.5	1.0	1.0	1.0	.
S16-14869C	3.0	1.0	2.0	1.0	1.0	2.0	1.0	.
S16-15896C	3.0	1.0	2.0	2.5	1.5	1.0	1.5	.
S16-9478C	3.0	1.0	2.3	2.0	1.5	2.0	1.0	.
S17-1980C	3.0	1.0	2.7	3.0	2.0	2.0	1.0	.
S17CR-189C	3.0	1.0	2.3	2.0	1.5	1.0	1.0	.
S17CR-337R	3.0	1.0	2.3	2.0	2.0	2.0	1.0	.
TN18-4049	2.3	1.0	2.0	2.3	1.0	2.0	1.0	.
TN18-4127	3.0	1.0	1.7	3.0	2.0	2.0	2.0	.
V14-0079	2.0	1.0	2.0	2.7	1.5	2.0	1.0	.
V15-1815DI	2.3	1.0	2.0	2.0	1.5	2.0	1.5	.
V15-2261ST	3.0	1.0	2.7	2.0	2.0	2.0	1.0	.
V16-1485ST	2.7	1.0	2.0	2.3	1.0	1.0	1.0	.
V17-2361R	3.0	1.0	3.0	3.7	2.5	2.0	3.0	.
V17-2933R	2.3	1.0	2.0	2.0	2.0	2.0	2.0	.
Mean	2.9	1.0	2.0	2.3	1.4	1.8	1.3	.
LSD(0.05)	1.0	.	0.6	0.8	.	.	0.9	.
CV(%)	20.2	0.0	18.0	20.2	0.0	.	34.7	.

TABLE 59 - SEED QUALITY (1-5) (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Suffolk, VA	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	2.0	1.3	2.0	.	.	1.7	3.0	.	1.9
AG53X9	2.0	2.0	2.5	.	.	2.0	3.0	.	2.1
AG55X7	2.0	2.3	1.5	.	.	2.0	2.7	.	2.0
TN09-008	2.7	2.7	1.5	.	.	3.0	2.7	.	2.2
TN11-5140	2.0	3.0	1.5	.	.	1.7	3.0	.	1.9
AG56X8	2.0	3.0	1.0	.	.	2.7	2.7	.	2.1
DA13062-001F	2.0	1.7	1.5	.	.	1.7	3.0	.	1.8
DA13099-008F	2.0	2.3	1.5	.	.	2.0	2.7	.	1.8
DS49-142	2.0	2.3	1.5	.	.	2.0	3.0	.	2.0
N16-1296	2.0	2.7	1.0	.	.	1.3	2.3	.	1.8
N16-8458	2.0	1.0	1.0	.	.	1.0	2.0	.	1.4
N16-8531	2.0	1.7	1.5	.	.	2.0	2.7	.	1.7
N16-8564	2.0	2.0	2.0	.	.	2.0	2.7	.	1.9
N17-2319	2.0	2.0	1.5	.	.	2.0	2.3	.	1.7
N17-2488	2.0	2.7	2.5	.	.	2.0	2.0	.	2.1
N17-2496	2.0	2.0	1.0	.	.	2.0	2.0	.	1.7
N17-2520	3.0	2.0	1.5	.	.	3.0	2.0	.	2.1
N17-551	2.0	2.3	2.5	.	.	2.0	2.7	.	2.0
NC-Miller	2.0	3.3	2.0	.	.	2.7	2.0	.	2.1
NDPJE-14-217	2.0	1.3	1.0	.	.	2.7	2.7	.	1.8
Osage	2.0	2.0	1.5	.	.	2.0	2.0	.	1.9
R15-5695	2.3	1.7	2.5	.	.	2.3	2.3	.	2.0
R17-283F	2.0	1.3	1.5	.	.	2.0	2.0	.	1.7
S16-14869C	2.0	2.0	2.0	.	.	2.0	2.0	.	1.8
S16-15896C	3.0	2.0	2.0	.	.	2.0	2.0	.	2.0
S16-9478C	2.0	2.0	2.5	.	.	1.7	2.0	.	1.9
S17-1980C	2.7	3.0	3.0	.	.	2.7	2.3	.	2.4
S17CR-189C	2.0	2.7	1.0	.	.	2.0	2.0	.	1.8
S17CR-337R	2.3	2.0	1.5	.	.	2.0	2.0	.	1.9
TN18-4049	2.3	2.7	1.5	.	.	2.0	2.0	.	1.8
TN18-4127	2.7	3.0	2.0	.	.	1.7	2.0	.	2.2
V14-0079	3.0	1.7	1.5	.	.	2.0	2.0	.	1.9
V15-1815DI	2.0	2.3	1.0	.	.	3.0	2.0	.	1.9
V15-2261ST	2.7	1.7	2.5	.	.	3.0	2.0	.	2.1
V16-1485ST	3.0	.	1.0	.	.	2.0	2.0	.	1.8
V17-2361R	3.0	4.0	3.0	.	.	3.0	3.7	.	2.9
V17-2933R	2.3	2.0	1.5	.	.	1.3	3.3	.	2.0
Mean	2.2	2.2	1.7	.	.	2.1	2.4	.	1.9
LSD(0.05)	0.4	0.7	.	.	.	0.5	0.6	.	0.3
CV(%)	11.9	20.4	0.0	.	.	15.3	16.2	.	25.6

TABLE 60 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	*Belle Mina, AL*	*Bossier City, LA*	*Jackson, TN*	*Keiser, AR*	*Knoxville, TN*	*McCune, KS*	*Orange, VA*	*Plymouth, NC*
Ellis	11.6	9.8	11.8	13.3	14.2	13.3	14.5	10.6
AG53X9	12.7	14.0	14.2	14.7	17.5	14.2	16.0	12.8
AG55X7	13.4	9.0	12.1	13.6	15.7	13.0	14.5	11.5
TN09-008	16.5	13.0	15.4	16.3	17.7	15.0	18.5	13.4
TN11-5140	14.7	16.0	13.0	15.6	15.6	14.6	16.5	13.8
AG56X8	16.5	16.0	14.8	16.2	17.8	15.8	17.0	13.2
DA13062-001F	13.9	12.0	11.8	12.6	12.9	11.6	14.0	9.8
DA13099-008F	15.0	13.0	15.0	17.2	17.8	14.3	17.5	12.3
DS49-142	14.4	12.0	14.5	13.7	16.1	15.0	15.5	11.5
N16-1296	16.2	18.0	14.8	18.1	18.9	17.2	20.5	14.6
N16-8458	13.0	11.0	11.1	11.3	11.7	10.9	14.5	.
N16-8531	12.0	12.0	12.1	12.3	14.9	13.1	15.5	10.7
N16-8564	14.2	14.0	11.6	13.4	11.6	13.1	15.5	11.1
N17-2319	14.7	17.0	14.3	15.6	16.6	18.3	18.0	11.9
N17-2488	17.7	16.0	16.1	17.1	17.6	19.0	18.5	14.5
N17-2496	14.4	15.0	13.8	15.0	17.4	16.1	17.0	12.0
N17-2520	19.5	16.0	16.7	18.2	19.7	16.9	20.5	16.6
N17-551	15.4	16.0	13.6	16.7	17.8	16.0	17.0	12.4
NC-Miller	17.5	16.0	15.2	17.1	18.1	14.9	18.0	13.3
NDPJE-14-217	16.0	16.0	13.4	15.0	18.6	15.7	19.0	13.2
Osage	12.6	13.0	12.4	13.7	15.0	12.3	16.0	10.3
R15-5695	16.5	14.0	15.8	16.6	18.6	15.6	20.0	13.5
R17-283F	15.6	13.0	14.0	14.9	13.9	12.8	17.0	12.1
S16-14869C	15.4	15.0	14.1	15.7	19.1	12.5	18.0	11.5
S16-15896C	14.9	13.0	12.3	14.4	14.8	11.7	15.5	11.1
S16-9478C	14.3	13.0	13.6	14.9	16.3	13.2	17.5	10.9
S17-1980C	16.4	15.0	14.5	15.0	17.7	14.4	19.0	12.6
S17CR-189C	14.6	11.0	12.2	14.2	17.9	12.6	15.5	11.6
S17CR-337R	15.1	10.0	12.3	13.2	16.9	12.6	16.5	11.9
TN18-4049	14.6	14.0	13.4	15.1	16.6	14.1	17.5	11.9
TN18-4127	14.3	9.0	11.4	13.5	14.8	11.9	13.0	10.7
V14-0079	14.8	11.0	11.1	14.8	17.5	13.8	18.0	12.4
V15-1815DI	17.6	17.0	15.0	16.7	17.5	13.9	18.0	12.9
V15-2261ST	15.0	13.0	13.8	14.6	15.9	13.4	17.5	11.5
V16-1485ST	16.9	14.0	13.9	13.0	15.1	14.2	19.0	13.5
V17-2361R	16.2	11.0	14.3	14.4	16.6	14.3	18.0	12.7
V17-2933R	14.6	13.0	13.0	12.3	14.6	12.8	14.0	10.5
Mean	15.1	13.5	13.6	14.9	16.4	14.2	17.0	12.2
LSD(0.05)	2.7	.	0.8	1.4	0.2	.	2.1	1.3
CV(%)	10.9	.	3.5	5.4	0.9	.	6.0	5.1

TABLE 60 - SEED SIZE (GRAMS PER 100 SEED) (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Suffolk, VA	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	13.0	11.7	15.4	.	11.6	14.1	15.5	.	12.8
AG53X9	15.2	13.7	17.5	.	11.7	15.2	19.0	.	14.9
AG55X7	14.0	12.4	16.7	.	11.4	14.6	17.4	.	13.6
TN09-008	17.0	16.6	19.7	.	12.7	18.5	18.9	.	16.5
TN11-5140	15.5	15.6	17.6	.	12.9	16.8	18.4	.	15.3
AG56X8	16.6	16.1	18.4	.	13.0	17.2	18.1	.	16.1
DA13062-001F	13.6	13.0	14.6	.	9.9	13.3	16.5	.	12.8
DA13099-008F	16.6	16.9	18.7	.	12.5	15.9	17.7	.	15.8
DS49-142	14.3	14.0	17.2	.	12.6	15.8	17.4	.	14.6
N16-1296	17.9	18.2	20.1	.	14.4	17.6	20.0	.	17.4
N16-8458	12.9	10.9	14.7	.	10.0	13.4	13.5	.	11.9
N16-8531	13.3	13.2	15.9	.	12.0	14.5	13.0	.	13.0
N16-8564	13.4	13.6	16.5	.	12.0	14.5	15.6	.	13.4
N17-2319	15.7	15.7	18.8	.	12.3	17.2	17.0	.	15.7
N17-2488	18.4	16.9	20.8	.	15.6	17.8	20.4	.	17.5
N17-2496	16.4	17.0	20.1	.	12.4	15.9	17.5	.	15.7
N17-2520	21.3	19.6	22.9	.	15.3	20.7	22.0	.	19.2
N17-551	16.7	15.3	19.7	.	12.9	16.1	19.4	.	16.0
NC-Miller	17.1	18.2	22.0	.	15.6	17.7	18.9	.	17.1
NDPJE-14-217	16.0	15.6	20.1	.	12.1	18.5	18.2	.	16.2
Osage	13.5	12.7	16.9	.	11.6	15.2	17.4	.	13.7
R15-5695	17.1	16.2	20.8	.	12.9	16.9	17.0	.	16.6
R17-283F	15.7	15.8	16.9	.	13.8	16.0	18.7	.	15.0
S16-14869C	15.6	15.3	19.1	.	11.8	17.3	16.6	.	15.6
S16-15896C	15.5	14.0	16.6	.	12.0	15.2	17.9	.	14.3
S16-9478C	16.0	14.9	17.4	.	11.2	15.5	16.9	.	14.8
S17-1980C	15.7	15.6	17.5	.	13.0	16.4	17.1	.	15.7
S17CR-189C	15.1	14.3	17.5	.	10.8	15.1	17.5	.	14.5
S17CR-337R	14.7	14.4	16.5	.	10.9	15.4	17.0	.	14.3
TN18-4049	15.1	14.4	20.6	.	11.4	15.9	18.0	.	15.2
TN18-4127	13.2	12.2	13.0	.	11.4	14.0	17.6	.	12.9
V14-0079	16.2	15.2	16.9	.	11.8	15.2	18.0	.	14.8
V15-1815DI	16.4	17.0	18.9	.	12.7	18.3	20.8	.	16.7
V15-2261ST	15.1	13.3	15.9	.	12.4	14.9	17.6	.	14.5
V16-1485ST	16.6		18.6	.	12.2	16.1	15.5	.	15.2
V17-2361R	15.4	13.4	17.5	.	13.1	17.5	26.0	.	15.9
V17-2933R	12.6	12.5	14.7	.	10.2	15.0	16.8	.	13.3
Mean	15.5	14.9	17.9	.	12.3	16.1	17.9	.	15.1
LSD(0.05)	0.9	1.3	0.3	.	.	0.8	6.6	.	0.8
CV(%)	3.7	5.3	0.9	.	.	3.1	22.6	.	10.0

TABLE 61 - OIL (%)†
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA
Ellis	19.3	.	17.9	18.1	19.1	18.8	18.7
AG53X9	18.2	.	18.7	18.7	18.8	18.8	19.1
AG55X7	19.3	.	18.6	19.5	19.2	19.6	19.3
TN09-008	19.6	.	19.0	19.7	19.2	20.0	18.9
TN11-5140	19.2	.	18.5	18.5	19.5	20.0	19.3
AG56X8	19.3	.	18.2	18.5	18.9	19.2	18.9
DA13062-001F	18.8	.	18.3	18.6	18.8	19.7	19.1
DA13099-008F	19.7	.	19.5	19.0	19.9	20.0	19.4
DS49-142	19.1	.	17.9	18.9	18.4	19.1	19.1
N16-1296	21.2	.	20.3	20.8	20.9	21.1	20.6
N16-8458	18.2	.	16.1	17.9	17.1	17.6	18.2
N16-8531	18.0	.	17.3	18.3	18.4	19.0	18.7
N16-8564	19.2	.	19.0	19.1	18.8	19.7	18.6
N17-2319	20.2	.	19.6	20.5	20.3	21.4	19.8
N17-2488	21.2	.	22.0	21.3	21.0	20.1	20.8
N17-2496	20.7	.	19.8	20.7	20.7	20.9	21.1
N17-2520	21.2	.	20.4	22.0	21.0	20.7	21.1
N17-551	19.7	.	18.0	18.9	19.8	19.0	19.3
NC-Miller	20.9	.	20.0	20.5	21.0	20.3	20.5
NDPJE-14-217	19.4	.	19.1	19.9	19.3	19.7	19.2
Osage	18.0	.	17.4	18.0	18.3	18.9	17.6
R15-5695	20.9	.	19.9	20.4	20.4	20.2	19.9
R17-283F	19.1	.	17.7	18.9	18.9	19.3	18.7
S16-14869C	19.9	.	19.1	19.2	19.3	19.5	19.8
S16-15896C	18.8	.	17.9	17.9	18.6	18.6	18.0
S16-9478C	19.7	.	19.1	19.5	19.7	20.4	19.4
S17-1980C	19.3	.	19.1	19.1	19.0	19.1	18.9
S17CR-189C	19.9	.	20.1	19.5	20.0	20.0	19.4
S17CR-337R	19.8	.	19.4	19.4	19.8	19.7	19.2
TN18-4049	19.1	.	18.3	19.0	19.5	19.5	19.2
TN18-4127	19.1	.	18.5	18.5	19.2	19.4	18.1
V14-0079	20.0	.	19.1	19.8	19.8	19.3	19.5
V15-1815DI	20.3	.	19.8	20.0	20.5	20.1	20.3
V15-2261ST	18.9	.	18.0	19.1	19.4	19.5	19.4
V16-1485ST	17.7	.	17.6	18.2	18.2	19.1	18.5
V17-2361R	18.2	.	18.2	18.5	18.7	19.3	18.6
V17-2933R	19.8	.	20.0	20.2	20.3	19.9	19.9
Mean	19.5	.	18.8	19.3	19.5	19.6	19.3
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

†Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 61 - OIL (%)† (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Plymouth, NC	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	17.9	18.5	.	17.8	.	18.8	18.7	.	18.5
AG53X9	18.2	18.6	.	17.4	.	18.8	19.4	.	18.6
AG55X7	19.4	18.7	.	18.8	.	19.5	20.0	.	19.3
TN09-008	19.2	19.0	.	18.4	.	19.2	19.6	.	19.3
TN11-5140	19.4	19.0	.	18.0	.	18.6	19.6	.	19.0
AG56X8	18.1	17.9	.	17.5	.	18.6	19.4	.	18.6
DA13062-001F	18.3	18.6	.	18.3	.	18.6	19.5	.	18.8
DA13099-008F	19.3	19.2	.	18.5	.	19.3	19.5	.	19.4
DS49-142	18.1	17.5	.	17.4	.	18.1	20.0	.	18.5
N16-1296	20.9	20.5	.	20.1	.	21.2	20.6	.	20.7
N16-8458		17.1	.	17.0	.	17.7	17.3	.	17.4
N16-8531	17.7	17.0	.	17.9	.	18.1	17.7	.	18.0
N16-8564	19.4	18.1	.	18.4	.	19.1	18.6	.	18.9
N17-2319	19.8	19.3	.	19.9	.	19.7	19.9	.	20.0
N17-2488	20.6	20.8	.	20.3	.	20.9	16.4	.	20.5
N17-2496	19.8	20.0	.	20.0	.	19.9	21.1	.	20.4
N17-2520	21.0	20.6	.	20.5	.	21.4	21.2	.	21.0
N17-551	18.6	18.5	.	18.8	.	19.0	20.9	.	19.1
NC-Miller	20.3	20.2	.	19.7	.	21.1	20.0	.	20.4
NDPJE-14-217	18.8	18.1	.	18.6	.	18.7	20.5	.	19.2
Osage	18.1	17.0	.	17.9	.	18.3	18.4	.	18.0
R15-5695	20.2	19.7	.	19.3	.	20.4	19.8	.	20.1
R17-283F	18.9	18.9	.	18.3	.	19.1	20.0	.	18.9
S16-14869C	19.5	18.7	.	19.1	.	19.4	19.8	.	19.4
S16-15896C	18.3	18.0	.	17.8	.	19.0	19.2	.	18.4
S16-9478C	20.1	18.7	.	18.9	.	19.8	19.5	.	19.5
S17-1980C	19.2	18.4	.	18.7	.	19.4	19.8	.	19.1
S17CR-189C	19.7	19.3	.	18.9	.	20.3	19.9	.	19.7
S17CR-337R	20.1	19.4	.	19.1	.	19.7	20.6	.	19.7
TN18-4049	19.3	18.1	.	18.9	.	19.5	19.9	.	19.1
TN18-4127	18.5	18.3	.	18.3	.	19.1	19.0	.	18.7
V14-0079	19.0	19.0	.	19.1	.	19.5	19.3	.	19.4
V15-1815DI	19.4	19.4	.	19.6	.	19.4	20.2	.	19.9
V15-2261ST	18.5	18.0	.	19.1	.	19.0	19.7	.	19.0
V16-1485ST	18.7	17.8	.	17.6	.	18.1	18.9	.	18.2
V17-2361R	18.4	17.0	.	18.2	.	17.7	18.3	.	18.3
V17-2933R	20.1	18.9	.	19.5	.	19.4	24.3	.	20.2
Mean	19.2	18.7	.	18.7	.	19.3	19.6	.	19.2
LSD(0.05)	.	.	.	.	.	.	.	.	0.4
CV(%)	.	.	.	.	.	.	.	.	2.6

TABLE 62 - PROTEIN (%)†
UNIFORM GROUP V 2021

STRAIN/ VARIETY	*Belle Mina, AL*	*Bossier City, LA*	*Jackson, TN*	*Keiser, AR*	*Knoxville, TN*	*McCune, KS*	*Orange, VA*
Ellis	34.9	.	36.6	35.0	35.3	34.6	33.0
AG53X9	36.1	.	36.0	34.1	36.5	35.4	32.5
AG55X7	35.7	.	36.2	34.7	35.6	34.7	33.5
TN09-008	32.8	.	34.1	32.3	33.8	33.1	32.0
TN11-5140	36.0	.	37.3	35.2	35.6	33.9	33.6
AG56X8	35.0	.	36.9	35.3	35.0	33.8	32.6
DA13062-001F	35.2	.	37.4	35.2	36.6	33.7	33.5
DA13099-008F	35.2	.	36.6	35.9	34.8	32.9	32.5
DS49-142	36.1	.	38.1	34.9	37.6	34.9	32.6
N16-1296	34.2	.	36.2	33.3	34.6	33.5	33.2
N16-8458	35.3	.	39.3	35.6	36.8	36.0	35.2
N16-8531	37.4	.	38.6	35.8	37.3	35.6	35.2
N16-8564	35.3	.	36.8	35.0	37.1	34.7	34.7
N17-2319	34.8	.	37.4	34.6	36.1	38.7	33.7
N17-2488	33.4	.	33.0	32.3	34.8	34.8	32.5
N17-2496	33.5	.	35.3	32.4	33.9	32.5	30.6
N17-2520	34.4	.	35.6	32.5	34.6	33.6	32.2
N17-551	35.6	.	38.7	36.5	36.5	36.3	33.1
NC-Miller	33.0	.	35.1	32.5	33.3	33.3	31.1
NDPJE-14-217	34.8	.	36.8	34.1	35.6	34.3	34.0
Osage	37.8	.	39.1	37.7	38.5	36.1	37.9
R15-5695	34.1	.	36.4	33.7	36.4	33.4	33.6
R17-283F	38.2	.	40.1	37.6	38.8	36.1	36.6
S16-14869C	35.2	.	36.4	34.4	34.0	32.9	32.8
S16-15896C	36.2	.	38.0	36.2	37.1	35.0	34.4
S16-9478C	35.2	.	36.4	34.6	36.1	32.7	32.3
S17-1980C	36.1	.	36.1	34.0	37.0	33.5	33.4
S17CR-189C	35.7	.	35.1	35.0	36.7	33.6	33.9
S17CR-337R	35.2	.	35.8	35.8	36.4	33.6	34.1
TN18-4049	35.0	.	37.9	34.6	35.1	33.7	32.8
TN18-4127	35.9	.	36.8	36.1	35.2	34.7	35.2
V14-0079	37.2	.	37.3	35.4	38.0	35.9	34.8
V15-1815DI	34.1	.	36.0	34.6	34.6	33.9	31.8
V15-2261ST	36.7	.	40.0	36.7	37.6	35.4	34.8
V16-1485ST	38.0	.	37.3	34.4	36.0	33.3	33.6
V17-2361R	38.1	.	39.0	35.2	38.5	34.8	35.8
V17-2933R	34.2	.	35.4	32.3	35.3	33.6	31.7
Mean	35.4	.	36.9	34.7	36.0	34.4	33.5
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

†Protein percentage reported on a 13% moisture basis beginning in 2015.

TABLE 62 - PROTEIN (%)† (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Plymouth, NC	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	36.9	34.6	.	36.0	.	36.0	36.3	.	35.4
AG53X9	36.1	35.0	.	36.2	.	35.1	36.8	.	35.4
AG55X7	35.0	35.7	.	35.8	.	35.4	37.4	.	35.4
TN09-008	34.3	32.4	.	34.0	.	34.8	35.6	.	33.6
TN11-5140	34.7	34.8	.	36.5	.	36.2	36.7	.	35.5
AG56X8	36.1	36.0	.	36.3	.	36.1	36.2	.	35.4
DA13062-001F	36.2	35.8	.	35.7	.	35.9	36.6	.	35.6
DA13099-008F	35.3	35.1	.	35.4	.	35.1	36.5	.	35.0
DS49-142	37.6	38.5	.	37.0	.	38.5	37.2	.	36.7
N16-1296	34.6	33.8	.	35.1	.	34.4	36.6	.	34.5
N16-8458		37.6	.	37.5	.	36.3	37.4	.	36.7
N16-8531	37.7	38.0	.	36.6	.	37.8	38.8	.	37.2
N16-8564	35.8	36.6	.	36.6	.	36.9	37.9	.	36.1
N17-2319	34.9	35.0	.	35.4	.	35.8	36.7	.	35.7
N17-2488	34.8	33.1	.	34.2	.	35.0	36.8	.	34.1
N17-2496	34.3	33.7	.	34.3	.	34.4	34.2	.	33.5
N17-2520	34.3	34.2	.	35.3	.	34.8	34.8	.	34.2
N17-551	37.8	36.4	.	36.7	.	37.6	36.2	.	36.5
NC-Miller	33.6	31.5	.	34.0	.	32.6	36.7	.	33.3
NDPJE-14-217	36.1	36.7	.	35.9	.	36.8	35.8	.	35.5
Osage	38.2	39.0	.	37.6	.	38.3	39.1	.	38.1
R15-5695	34.7	34.5	.	35.7	.	34.9	37.4	.	35.0
R17-283F	38.1	37.8	.	38.3	.	39.0	38.2	.	38.1
S16-14869C	35.0	34.7	.	33.9	.	36.5	37.4	.	34.8
S16-15896C	36.5	36.2	.	36.2	.	35.5	37.8	.	36.3
S16-9478C	33.8	35.1	.	35.2	.	35.2	37.8	.	35.0
S17-1980C	35.2	35.5	.	34.9	.	35.8	37.5	.	35.4
S17CR-189C	35.7	36.2	.	35.2	.	35.6	38.2	.	35.5
S17CR-337R	35.9	35.8	.	35.1	.	35.4	36.6	.	35.4
TN18-4049	35.3	35.5	.	34.7	.	34.6	37.2	.	35.1
TN18-4127	36.7	35.4	.	35.6	.	36.3	37.3	.	35.9
V14-0079	37.1	36.4	.	36.0	.	37.7	39.2	.	36.8
V15-1815DI	35.4	35.1	.	34.3	.	36.1	37.8	.	34.9
V15-2261ST	36.8	37.4	.	35.7	.	37.3	37.7	.	36.9
V16-1485ST	34.6	36.9	.	36.9	.	36.0	37.8	.	35.9
V17-2361R	37.1	37.1	.	38.0	.	39.2	39.3	.	37.5
V17-2933R	33.8	35.3	.	34.5	.	34.7	27.8	.	33.5
Mean	35.7	35.6	.	35.7	.	36.0	36.9	.	35.6
LSD(0.05)	.	.	.	.	.	.	.	.	0.7
CV(%)	.	.	.	.	.	.	.	.	2.4

TABLE 63 - ESTIMATED MEAL PROTEIN (%)†
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA
Ellis	46.9	.	48.4	46.5	47.4	46.3	44.1
AG53X9	48.0	.	48.2	45.5	48.9	47.4	43.6
AG55X7	48.0	.	48.4	46.9	47.9	46.8	45.2
TN09-008	44.4	.	45.7	43.6	45.5	45.0	43.0
TN11-5140	48.4	.	49.8	47.0	48.0	46.0	45.2
AG56X8	47.1	.	49.0	47.1	46.9	45.5	43.7
DA13062-001F	47.1	.	49.8	47.0	49.0	45.6	45.0
DA13099-008F	47.7	.	49.4	48.1	47.3	44.7	43.8
DS49-142	48.6	.	50.5	46.8	50.1	46.9	43.8
N16-1296	47.2	.	49.4	45.7	47.5	46.2	45.4
N16-8458	46.9	.	50.8	47.1	48.3	47.4	46.7
N16-8531	49.5	.	50.8	47.6	49.6	47.7	47.1
N16-8564	47.5	.	49.3	47.0	49.6	47.0	46.3
N17-2319	47.4	.	50.6	47.2	49.3	53.5	45.7
N17-2488	46.0	.	45.9	44.7	47.9	47.3	44.6
N17-2496	46.0	.	47.9	44.3	46.4	44.6	42.1
N17-2520	47.4	.	48.6	45.3	47.7	46.1	44.4
N17-551	48.2	.	51.3	48.8	49.5	48.7	44.6
NC-Miller	45.3	.	47.7	44.4	45.8	45.4	42.5
NDPJE-14-217	46.9	.	49.4	46.3	48.0	46.5	45.7
Osage	50.1	.	51.5	49.9	51.3	48.4	50.0
R15-5695	46.9	.	49.5	46.0	49.7	45.5	45.6
R17-283F	51.3	.	52.9	50.3	52.0	48.6	49.0
S16-14869C	47.8	.	49.0	46.3	45.8	44.4	44.4
S16-15896C	48.5	.	50.3	47.9	49.6	46.7	45.6
S16-9478C	47.7	.	48.8	46.7	48.8	44.7	43.6
S17-1980C	48.6	.	48.5	45.7	49.7	45.0	44.8
S17CR-189C	48.5	.	47.8	47.3	49.8	45.7	45.7
S17CR-337R	47.7	.	48.3	48.2	49.3	45.5	45.9
TN18-4049	47.0	.	50.4	46.4	47.3	45.5	44.1
TN18-4127	48.2	.	49.1	48.1	47.3	46.7	46.7
V14-0079	50.5	.	50.1	48.0	51.5	48.4	46.9
V15-1815DI	46.5	.	48.7	47.0	47.3	46.1	43.3
V15-2261ST	49.2	.	53.1	49.3	50.6	47.9	46.9
V16-1485ST	50.1	.	49.3	45.8	47.9	44.8	44.7
V17-2361R	50.6	.	51.8	47.0	51.5	46.9	47.7
V17-2933R	46.3	.	48.1	44.0	48.1	45.6	43.0
Mean	47.8	.	49.4	46.8	48.6	46.5	45.1
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

TABLE 63 - ESTIMATED MEAL PROTEIN (%)† (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Plymouth, NC	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Starkville, MS	Stoneville, MS	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	48.9	46.1	.	47.7	.	48.1	48.5	.	47.2
AG53X9	47.9	46.7	.	47.6	.	46.9	49.6	.	47.3
AG55X7	47.2	47.7	.	47.9	.	47.8	50.7	.	47.7
TN09-008	46.1	43.5	.	45.3	.	46.8	48.2	.	45.2
TN11-5140	46.7	46.7	.	48.3	.	48.4	49.6	.	47.7
AG56X8	47.9	47.6	.	47.8	.	48.2	48.9	.	47.2
DA13062-001F	48.1	47.9	.	47.5	.	47.9	49.4	.	47.7
DA13099-008F	47.5	47.2	.	47.2	.	47.3	49.3	.	47.2
DS49-142	49.9	50.8	.	48.7	.	51.2	50.6	.	48.9
N16-1296	47.6	46.3	.	47.8	.	47.4	50.1	.	47.3
N16-8458		49.2	.	49.1	.	47.8	49.2	.	48.3
N16-8531	49.8	49.8	.	48.5	.	50.2	51.2	.	49.3
N16-8564	48.3	48.6	.	48.7	.	49.6	50.7	.	48.4
N17-2319	47.3	47.1	.	48.0	.	48.5	49.7	.	48.6
N17-2488	47.7	45.4	.	46.6	.	48.1	47.8	.	46.5
N17-2496	46.5	45.8	.	46.7	.	46.7	47.0	.	45.8
N17-2520	47.1	46.8	.	48.2	.	48.1	48.0	.	47.1
N17-551	50.5	48.6	.	49.1	.	50.4	49.8	.	49.0
NC-Miller	45.8	43.0	.	46.0	.	44.9	49.8	.	45.5
NDPJE-14-217	48.3	48.8	.	48.0	.	49.2	48.9	.	47.8
Osage	50.7	51.1	.	49.8	.	50.9	52.0	.	50.5
R15-5695	47.3	46.6	.	48.1	.	47.6	50.7	.	47.6
R17-283F	51.1	50.6	.	50.9	.	52.4	51.9	.	51.0
S16-14869C	47.3	46.4	.	45.6	.	49.2	50.7	.	47.0
S16-15896C	48.6	47.9	.	47.9	.	47.7	50.9	.	48.3
S16-9478C	46.0	46.9	.	47.2	.	47.8	51.0	.	47.2
S17-1980C	47.3	47.3	.	46.7	.	48.3	50.9	.	47.5
S17CR-189C	48.4	48.8	.	47.1	.	48.5	51.8	.	48.1
S17CR-337R	48.8	48.3	.	47.1	.	48.0	50.1	.	47.9
TN18-4049	47.5	47.1	.	46.4	.	46.6	50.5	.	47.2
TN18-4127	48.9	47.1	.	47.4	.	48.8	50.0	.	48.0
V14-0079	49.8	48.8	.	48.3	.	50.9	52.8	.	49.6
V15-1815DI	47.7	47.3	.	46.3	.	48.6	51.4	.	47.3
V15-2261ST	49.0	49.6	.	47.9	.	50.1	50.9	.	49.5
V16-1485ST	46.2	48.7	.	48.7	.	47.8	50.7	.	47.7
V17-2361R	49.3	48.6	.	50.5	.	51.8	52.3	.	49.8
V17-2933R	46.0	47.3	.	46.6	.	46.7	39.9	.	45.6
Mean	48.0	47.6	.	47.8	.	48.5	49.9	.	47.8
LSD(0.05)	.	.	.	.	.	.	.	.	0.9
CV(%)	.	.	.	.	.	.	.	.	2.1

SUMMARY OF SEED FATTY ACIDS (%)
UNIFORM TEST V 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
Ellis	10.8	3.8	22.2	55.7	7.5
AG53X9	10.1	4.2	23.3	55.4	7.0
DA13062-001F	11.4	4.0	22.5	59.5	2.6
N16-1296	7.6	3.4	73.6	13.2	2.2
R17-283F	7.3	3.3	76.6	7.8	4.9
S17CR-189C	6.9	2.7	81.8	4.4	4.2
S17CR-337R	7.6	3.0	71.9	12.8	4.7
TN18-4127	7.2	2.7	80.5	6.8	2.7
Mean	8.6	3.4	56.6	26.9	4.5
LSD(0.05)	0.5	0.2	6.8	6.0	0.6
CV(%)	6.5	6.8	13.3	24.8	14.7

†Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(A)
Ellis	11.4	10.5	11.2	9.0	10.6	10.5	11.6
AG53X9	10.4	10.0	10.1	10.2	10.5	9.6	9.9
DA13062-001F	11.7	10.7	12.1	11.0	10.8	11.2	11.9
N16-1296	9.3	8.1	7.2	6.7	7.4	7.2	7.2
R17-283F	7.5	7.1	7.4	6.7	7.1	8.2	7.5
S17CR-189C	6.8	7.4		6.6	6.9	6.6	6.7
S17CR-337R	6.6	6.6	9.3	7.2	7.8	7.3	7.4
TN18-4127	6.6	6.8	7.7	6.8	6.9	7.5	7.0
Mean	8.8	8.4	9.3	8.0	8.5	8.5	8.7
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

SEED STEARIC ACID (%)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(A)
Ellis	4.0	3.5	3.8	3.4	4.7	3.4	3.5
AG53X9	4.5	4.2	3.9	4.7	4.7	4.1	4.0
DA13062-001F	3.9	3.8	3.8	4.1	4.6	3.8	3.7
N16-1296	3.7	3.5	4.0	3.2	3.9	3.0	3.3
R17-283F	3.2	3.2	3.5	3.4	3.7	3.2	3.3
S17CR-189C	3.5	2.8		2.6	3.1	2.7	2.6
S17CR-337R	3.6	3.1	3.4	2.8	3.4	2.6	2.6
TN18-4127	2.6	2.7	2.5	2.7	2.8	2.8	2.7
Mean	3.6	3.4	3.5	3.4	3.9	3.2	3.2
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

SEED PALMITIC ACID (%) (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
Ellis	11.4	10.8	10.6	10.8
AG53X9	9.8	10.4	10.2	10.1
DA13062-001F	11.7	11.3	11.3	11.4
N16-1296	8.0	7.5	7.4	7.6
R17-283F	7.2	6.9	7.3	7.3
S17CR-189C	6.7	6.8	7.1	6.9
S17CR-337R	9.4	7.3	7.0	7.6
TN18-4127	7.9	6.9	7.9	7.2
Mean	9.0	8.5	8.6	8.6
LSD(0.05)	.	.	.	0.5
CV(%)	.	.	.	6.5

SEED STEARIC ACID (%) (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
Ellis	3.6	4.2	3.8	3.8
AG53X9	4.0	4.3	4.0	4.2
DA13062-001F	3.8	4.2	3.9	4.0
N16-1296	3.3	3.2	3.4	3.4
R17-283F	3.2	3.3	3.5	3.3
S17CR-189C	2.6	2.6	2.3	2.7
S17CR-337R	3.0	2.9	2.7	3.0
TN18-4127	2.6	2.8	2.9	2.7
Mean	3.3	3.4	3.3	3.4
LSD(0.05)	.	.	.	0.2
CV(%)	.	.	.	6.8

SEED OLEIC ACID (%)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(A)
Ellis	18.6	18.3	20.1	50.8	20.7	17.7	17.5
AG53X9	27.1	23.2	19.1	24.9	23.7	20.9	19.6
DA13062-001F	22.2	23.5	21.5	23.1	22.9	21.8	21.2
N16-1296	55.9	70.2	75.9	86.0	74.0	74.8	78.7
R17-283F	54.9	79.6	80.4	82.1	78.9	65.7	80.2
S17CR-189C	82.2	73.6		84.0	81.7	80.8	82.9
S17CR-337R	83.5	81.8	43.7	76.4	69.1	79.7	82.4
TN18-4127	83.0	85.1	84.2	85.6	85.0	70.4	84.9
Mean	53.4	56.9	49.3	64.1	57.0	54.0	58.4
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

SEED LINOLEIC ACID (%)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(A)
Ellis	59.5	60.7	57.1	32.2	56.3	59.0	58.4
AG53X9	51.7	55.9	59.6	53.8	53.7	57.2	58.7
DA13062-001F	59.9	59.5	60.1	59.2	58.9	60.2	60.6
N16-1296	28.3	16.1	10.8	2.5	12.1	12.8	9.0
R17-283F	30.0	4.9	3.9	3.3	5.1	16.5	3.9
S17CR-189C	4.2	11.8		2.5	4.0	4.5	3.2
S17CR-337R	3.2	3.9	37.7	9.3	14.4	4.7	3.2
TN18-4127	3.5	3.0	3.3	2.9	3.2	15.5	3.2
Mean	30.0	27.0	33.2	20.7	26.0	28.8	25.0
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

SEED LINOLENIC ACID (%)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Keiser, AR	Knoxville, TN	McCune, KS	Orange, VA	Portageville, MO(A)
Ellis	6.4	7.0	7.9	4.5	7.6	9.4	8.9
AG53X9	6.3	6.7	7.3	6.4	7.3	8.2	7.9
DA13062-001F	2.4	2.5	2.5	2.6	2.8	3.0	2.6
N16-1296	2.9	2.0	2.2	1.6	2.6	2.1	1.8
R17-283F	4.4	5.2	4.8	4.5	5.2	6.4	5.1
S17CR-189C	3.3	4.5		4.3	4.4	5.3	4.6
S17CR-337R	3.2	4.6	5.9	4.2	5.3	5.7	4.6
TN18-4127	4.3	2.3	2.2	2.0	2.1	3.9	2.2
Mean	4.2	4.3	4.7	3.8	4.7	5.5	4.7
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

SEED OLEIC ACID (%) (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
Ellis	17.5	22.4	18.8	22.2
AG53X9	23.2	28.4	22.5	23.3
DA13062-001F	23.2	23.2	22.7	22.5
N16-1296	65.8	76.3	78.2	73.6
R17-283F	80.6	81.5	82.5	76.6
S17CR-189C	83.9	83.7	85.2	81.8
S17CR-337R	53.7	73.4	75.5	71.9
TN18-4127	70.4	84.9	71.5	80.5
Mean	52.3	59.2	57.1	56.6
LSD(0.05)	.	.	.	6.8
CV(%)	.	.	.	13.3

SEED LINOLEIC ACID (%) (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
Ellis	59.3	55.0	59.4	55.7
AG53X9	56.0	50.2	56.9	55.4
DA13062-001F	58.8	58.6	59.5	59.5
N16-1296	20.3	10.9	9.1	13.2
R17-283F	4.1	3.5	2.9	7.8
S17CR-189C	2.9	2.7	2.4	4.4
S17CR-337R	28.0	11.9	11.5	12.8
TN18-4127	15.9	3.3	14.6	6.8
Mean	30.6	24.5	27.0	26.9
LSD(0.05)	.	.	.	6.0
CV(%)	.	.	.	24.8

SEED LINOLENIC ACID (%) (continued)
UNIFORM GROUP V 2021

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Test Mean
Ellis	8.2	7.7	7.4	7.5
AG53X9	7.0	6.7	6.4	7.0
DA13062-001F	2.6	2.6	2.6	2.6
N16-1296	2.6	2.1	2.0	2.2
R17-283F	4.9	4.8	3.8	4.9
S17CR-189C	4.0	4.2	3.0	4.2
S17CR-337R	5.9	4.5	3.4	4.7
TN18-4127	3.2	2.1	3.1	2.7
Mean	4.8	4.3	4.0	4.5
LSD(0.05)	.	.	.	0.6
CV(%)	.	.	.	14.7

TABLE 64 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP V-EARLY 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	Ellis	Commercial check	check		CONV	
2	AG53X9	Commercial check	check		RRX	
3	AG55X7	Commercial check	check		RRX	
4	TN09-008	Commercial check	check		CONV	
5	DA1405-212-3F	DA09c003-45-182F x KB12-1#70-152	Gillen		CONV	HOLN
6	DA1405-221-1F	DA09c003-45-182F x KB12-1#70-152	Gillen		CONV	HOLN
7	DA1490-523F	S11-17025 x K12-1348	Gillen		CONV	
8	DA1539-1010F	DB04-10836 x R10-5086	Gillen		CONV	
9	DA1568-112F	S11-17025 x (DA09x12-06F)	Gillen		CONV	diversity, 25% PI340023
10	DA1585-564F	DS25-1 x DA14c034-03-14	Gillen		CONV	HO
11	K179229-8	K12-1355 / S14-17636	Schapaugh		CONV	
12	K18-3091	K12-1348 / R10-2346	Schapaugh		CONV	
13	K18-4100	K11-2363T / R10-2622	Schapaugh		CONV	
14	K18-4288	LG11-6208 / R10-2436	Schapaugh		CONV	
15	K18-5234	K12-1355 / K11-2363T	Schapaugh		CONV	
16	K18-6011	R10-2622 / K11-2363T	Schapaugh		CONV	
17	K18-6652	N10-7404 / R10-2622	Schapaugh		CONV	
18	N18-446	Osage x HR09-397	Mian		CONV	high protein
19	N17-2135	HR10-1-540 x R10-5828	Mian		CONV	high protein
20	N18-235	Ellis x R10-3536	Mian		CONV	high oil
21	N18-296	Jake x NLM09-77	Mian		CONV	high protein
22	N18-452	Osage x HR09-397	Mian		CONV	high protein
23	R18-14272	S09-13635 x R12-712	L. Mozzoni		CONV	
24	R18-14502	S09-13635 x R12-712	L. Mozzoni		CONV	
25	R18-3332	S09-10871 x R05-3239	L. Mozzoni		CONV	
26	R18-67F	[R10-230(4)xUARK-282HO] x [R10-230(4)xR09-1237LL]	L. Mozzoni		CONV	HOLN
27	S17-1263C	S11-16653 x S13-11434	P. Chen		CONV	SCN, SC, RN, RKN
28	S17-2509C	S11-20124 x S13-11940	P. Chen		CONV	SCN, SC, RN, RKN, Salt
29	S18-6013C	S12-4718 x S14-2088	P. Chen		CONV	SCN, RN, RKN
30	S18-6328C	S11-20124 x S13-4214	P. Chen		CONV	SCN, RN
31	S18-6350C	S11-20124 x S13-4214	P. Chen		CONV	SCN
32	S19-18135L	G13LL-44 x S12-4718C	P. Chen		LL	
33	S19-19741C	S11-16653 BC-7-73	P. Chen		CONV	HOLN
34	TN18-4051	NCC09-200719-1-37 x 2013-50,454	Pantalone		CONV	
35	TN18-4130	Ellis(4) x TN13-5001LL x Ellis(4) x TN10-4037-HO-530-214HO	Pantalone		CONV	HOLN
36	TN19-4074	TN14-4001 x TN14-4402	Pantalone		CONV	48% meal protein
37	TN19-4100	TN09-008 x Ellis	Pantalone		CONV	
38	TN19-4101	TN09-008 x Ellis	Pantalone		CONV	
39	TN19-5750R1	TN13-5538R1 (4) x TN13-5001LL x TN13-5538R1(4) x TN10-4037-HO-530-214	Pantalone		RR1	HOLN
40	V16-2451R2	JTN-5203 x RR2Y	Zhang	F4	RR1	
41	V16-2471R	JTN-4307 x V11-3098	Zhang	F4	RR1	
42	V17-2099DTR	V11-3522 x N92-8231	Zhang	F4	RR1	
43	V17-2131R	Monocacy x V11-3163	Zhang	F4	RR1	
44	V17-2460R	S10-11200 x V11-3163	Zhang	F4	RR1	
45	V17-2924R	V11-2149 x S08-9942RR	Zhang	F4	RR1	

† Conv= Conventional(non-transgenic),LL= Liberty Link®, RR1= Roundup Ready®, RR2= Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high oleic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 65 - GENERAL SUMMARY OF PERFORMANCE
PRELIMINARY TEST V-EARLY 2021

STRAIN/ VARIETY	SEED YIELD†	RANK	AVG. RANK	MAT. INDEX	LOD	HT	SCN Cyst Score (1-5)‡ Race 2	Race 3	Race 5	SC RATING	SC SCORE
Ellis	63.8	32	26	0	1.2	21	.	5	.	R	1
AG53X9	73.3	6	14	2	1.6	30	.	4	.	R	1
AG55X7	75.6	5	11	0	1.4	27	.	5	.	R	1
TN09-008	63.2	33	29	2	1.2	26	.	2	.	SS	3
DA1405-212-3F	64.3	28	26	0	1.5	27	.	4	.	R	1
DA1405-221-1F	60.5	40	31	-1	1.2	25	.	5	.	R	1
DA1490-523F	70.1	12	16	-1	1.9	28	.	2	.	SS	3
DA1539-1010F	71.2	10	15	1	1.4	25	.	4	.	R	1
DA1568-112F	68.6	16	20	0	1.6	28	.	5	.	R	1
DA1585-564F	55.7	45	38	-5	2.9	31	.	5	.	R	1
K179229-8	59.7	41	29	-4	1.6	24	.	4	.	R	1
K18-3091	65.8	22	25	-3	1.4	26	.	4	.	R	1
K18-4100	66.4	21	22	-1	1.3	24	.	4	.	R	1
K18-4288	67.0	18	24	0	1.4	25	.	4	.	R	1
K18-5234	58.7	42	27	0	1.2	21	.	5	.	R	1
K18-6011	58.5	43	32	-1	1.2	21	.	4	.	R	1
K18-6652	71.4	8	15	0	1.7	27	.	4	.	R	1
N18-446	65.0	25	25	-2	1.5	24	.	4	.	S	5
N17-2135	61.2	38	32	1	1.4	26	.	4	.	S	5
N18-235	66.6	20	23	0	1.6	25	.	5	.	R	1
N18-296	65.5	24	27	-2	1.3	24	.	2	.	SS	3
N18-452	64.9	26	27	0	1.4	24	.	4	.	S	5
R18-14272	65.6	23	24	-2	2.9	37	.	4	.	R	1
R18-14502	69.6	13	17	-2	2.6	38	.	5	.	R	1
R18-3332	69.2	15	21	-1	2.0	37	.	4	.	R	1
R18-67F	71.3	9	16	4	1.7	27	.	5	.	R	1
S17-1263C	62.1	35	28	-4	2.7	31	.	1	.	R	1
S17-2509C	77.8	2	8	-1	1.6	27	.	4	.	R	1
S18-6013C	80.4	1	5	1	1.3	27	.	4	.	R	1
S18-6328C	75.7	4	9	0	2.3	28	.	3	.	R	1
S18-6350C	71.8	7	19	2	2.5	33	.	4	.	SS	3
S19-18135L	76.9	3	10	2	1.3	28	.	4	.	R	1
S19-19741C	70.6	11	17	-3	1.5	26	.	1	.	.	.
TN18-4051	67.3	17	21	2	1.3	25	.	4	.	R	1
TN18-4130	66.7	19	24	1	1.3	22	.	4	.	.	.
TN19-4074	64.3	29	28	1	1.6	28	.	4	.	SS	3
TN19-4100	64.5	27	24	1	1.2	23	.	1	.	R	1
TN19-4101	61.2	37	29	-1	1.4	21	.	3	.	SS	3
TN19-5750R1	61.6	36	31	0	1.4	24	.	5	.	SS	3
V16-2451R2	64.0	30	27	-1	1.3	27	.	3	.	R	1
V16-2471R	62.3	34	27	0	1.4	27	.	4	.	R	1
V17-2099DTR	60.5	39	33	-1	1.7	33	.	4	.	R	1
V17-2131R	57.8	44	34	0	2.1	38	.	4	.	R	1
V17-2460R	63.8	31	26	1	1.4	28	.	5	.	R	1
V17-2924R	69.6	14	19	-2	2.6	38	.	5	.	R	1
Mean	66.5	.	.	0	1.6	27	.	.	.		.
LSD(0.05)	7.8	.	.	2	0.4	3	.	.	.		.
CV(%)	14.4	.	.	676	33.2	13	.	.	.		.

† Data not included in the test mean: Knoxville, TN

‡The race 3 SCN population used in these tests was typed as HG (*Heterodera glycines*) Type 0.

TABLE 66 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST V-EARLY 2021

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
Ellis	2.2	13.1	35.5	18.9	47.5			
AG53X9	2.7	14.7	35.7	18.9	47.9			
AG55X7	2.1	13.6	36.1	19.3	48.6			
TN09-008	2.4	16.7	34.2	19.6	46.3			
DA1405-212-3F	2.2	11.9	36.7	18.6	49.0	W	T	T
DA1405-221-1F	2.2	12.2	36.1	19.0	48.4	W	T	
DA1490-523F	2.2	12.7	36.2	19.1	48.7	P	T	T
DA1539-1010F	2.1	12.8	36.3	18.9	48.7		T	
DA1568-112F	1.9	13.4	36.2	18.8	48.5	P	T	T
DA1585-564F	2.4	12.7	37.1	19.4	50.1	W	G	T
K179229-8	1.9	13.8	35.6	21.1	48.9			
K18-3091	2.2	13.5	35.9	19.1	48.2			
K18-4100	2.4	14.3	33.6	20.3	45.9			
K18-4288	2.0	12.0	36.8	18.8	49.3			
K18-5234	2.3	15.6	35.1	19.9	47.6			
K18-6011	2.3	13.4	36.0	19.4	48.6			
K18-6652	2.5	15.1	36.0	18.4	47.9			
N18-446	1.8	12.8	38.0	18.8	50.8	P	G	
N17-2135	2.1	16.3	38.9	19.6	52.6	P	G	
N18-235	2.2	14.1	34.8	20.4	47.5	W	G	
N18-296	2.2	15.5	36.4	19.0	48.9	P	T	
N18-452	2.2	12.7	38.1	18.7	51.0	W	T	
R18-14272	3.2	15.4	36.5	18.8	48.9	P	G	Tn
R18-14502	2.8	15.2	36.7	18.8	49.1	P	G	Tn
R18-3332	2.8	18.5	36.4	19.0	48.9	W	T	Tn
R18-67F	1.8	14.2	36.6	19.3	49.3	W	Lt	Tn
S17-1263C	2.8	16.2	35.6	20.0	48.4	P	T	Tn
S17-2509C	2.6	16.6	36.0	19.7	48.8	W	T	Tn
S18-6013C	2.5	15.5	35.4	19.9	48.1	W	T	Tn
S18-6328C	2.1	14.2	35.6	19.6	48.1	P	T	T
S18-6350C	2.0	14.1	35.0	19.7	47.4	W	T	T
S19-18135L	1.9	14.4	35.7	19.3	48.1	W	T	
S19-19741C	2.1	14.6	37.2	20.0	50.5	W	G	
TN18-4051	2.2	14.0	36.3	18.5	48.5			
TN18-4130	2.2	12.7	36.5	19.1	49.0			
TN19-4074	2.4	13.6	37.8	18.3	50.2			
TN19-4100	2.4	14.0	36.4	18.4	48.5			
TN19-4101	2.0	13.7	35.3	18.6	47.1			
TN19-5750R1	2.2	12.9	34.3	20.0	46.6			
V16-2451R2	2.2	14.5	37.1	18.5	49.5	W	G	
V16-2471R	2.7	15.2	37.0	19.5	49.9	W	T	
V17-2099DTR	2.5	13.5	38.0	18.6	50.8	P	LT	
V17-2131R	2.7	14.7	36.1	19.3	48.6	P	T	
V17-2460R	2.6	13.8	36.6	19.2	49.2	P	LT	
V17-2924R	2.8	12.9	34.1	20.1	46.4	P	LT	
Mean	2.3	14.2	36.2	19.2	48.7			
LSD(0.05)	0.6	0.8	1.0	0.6	1.2			
CV(%)	25.0	6.8	2.9	3.1	2.6			

TABLE 67 - SEED YIELD (BUSHELS PER ACRE)
PRELIMINARY GROUP V-EARLY 2021 †

STRAIN/ VARIETY	Jackson, TN	Keiser, AR *	Kinston, NC	Knoxville, TN	Portageville, MO(B) *	Starkville, MS	Stoneville, MS *
Ellis	41.6	52.9	68.9	23.2	34.4	81.2	86.6
AG53X9	50.2	80.3	74.2	35.5	69.8	63.4	88.1
AG55X7	56.2	82.6	64.5	43.4	75.5	64.8	89.2
TN09-008	40.0	60.7	59.6	45.7	37.1	77.0	76.3
DA1405-212-3F	52.7	64.9	62.9	53.0	40.7	60.9	76.3
DA1405-221-1F	60.1	50.2	57.0	49.9	28.6	59.5	76.7
DA1490-523F	53.2	65.1	65.0	49.6	48.2	75.5	71.4
DA1539-1010F	52.8	68.9	67.5	40.4	67.5	53.0	81.5
DA1568-112F	55.5	68.4	59.6	31.6	52.4	70.4	78.1
DA1585-564F	41.9	59.5	54.9	43.8	50.4	59.0	63.5
K179229-8	46.0	63.9	51.4	38.0	56.5	34.7	78.2
K18-3091	47.2	58.4	66.1	45.9	52.0	78.5	68.7
K18-4100	44.5	55.2	70.9	27.9	58.2	65.7	76.2
K18-4288	53.5	62.7	56.9	47.8	49.5	73.0	68.6
K18-5234	50.1	30.5	68.5	62.7	24.3	51.8	78.1
K18-6011	38.2	44.6	59.1	32.1	37.3	55.1	78.3
K18-6652	50.6	70.7	64.4	33.9	61.8	71.8	78.1
N18-446	47.0	57.4	63.5	37.1	40.7	67.7	67.1
N17-2135	42.0	56.8	61.2	32.5	51.6	55.8	73.7
N18-235	56.4	53.4	59.8	36.1	42.5	79.2	72.5
N18-296	52.9	59.6	59.7	37.2	63.7	71.0	70.1
N18-452	45.5	58.3	58.9	47.3	45.8	68.3	76.7
R18-14272	52.5	64.6	62.9	36.9	52.1	82.6	76.1
R18-14502	55.4	73.3	63.6	60.6	65.5	80.5	76.8
R18-3332	50.9	75.9	62.2	47.3	69.0	74.6	70.1
R18-67F	51.6	62.1	68.5	48.7	62.2	63.1	77.1
S17-1263C	54.6	63.6	59.2	43.5	62.0	49.7	77.9
S17-2509C	60.4	73.3	74.0	52.1	70.9	95.5	86.8
S18-6013C	67.9	76.5	72.7	57.5	74.1	77.4	86.5
S18-6328C	54.5	78.3	69.1	54.1	73.0	79.3	76.8
S18-6350C	44.2	79.3	59.3	54.0	69.6	66.8	75.0
S19-18135L	50.9	72.0	69.8	57.7	68.1	88.0	73.6
S19-19741C	58.6	63.0	63.5	51.7	50.7	87.0	68.8
TN18-4051	42.0	69.7	66.5	34.3	55.3	56.5	74.9
TN18-4130	50.3	54.7	65.3	33.2	34.5	92.1	74.5
TN19-4074	47.4	55.8	59.1	26.6	47.6	67.2	70.5
TN19-4100	56.7	63.0	63.0	40.7	37.6	71.1	77.8
TN19-4101	48.4	41.4	63.5	26.9	33.5	67.0	76.4
TN19-5750R1	34.9	53.0	61.8	34.0	43.2	56.8	70.2
V16-2451R2	46.2	55.3	62.0	40.4	52.7	61.7	74.8
V16-2471R	43.0	60.0	66.3	45.9	24.4	57.9	66.4
V17-2099DTR	38.4	60.1	58.9	48.0	47.6	50.1	63.6
V17-2131R	42.4	65.7	58.7	41.4	37.6	54.8	57.2
V17-2460R	42.4	49.5	53.4	49.2	32.7	70.6	.
V17-2924R	48.4	68.0	67.8	57.7	55.2	82.5	73.8
Mean	49.3	62.3	63.2	43.0	51.3	68.2	75.0
LSD(0.05)	12.4	11.6	8.6	20.2	13.5	12.4	7.3
LSD(0.10)	10.4	9.7	7.2	16.9	11.2	10.3	6.1
CV(%)	12.5	9.3	6.8	23.3	13.0	8.9	4.8

† Data not included in the test mean: Knoxville, TN

* Locations with obvious damage consistent with exposure to the herbicide Dicamba. The Dicamba resistant checks (all the AG lines) may have had a yield advantage.

TABLE 67 - SEED YIELD (BUSHELS PER ACRE) (continued)
PRELIMINARY GROUP V-EARLY 2021 †

STRAIN/ VARIETY	Stuttgart, AR*	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	69.7	69.6	69.2	63.8
AG53X9	70.7	76.9	83.0	73.3
AG55X7	81.1	76.5	90.0	75.6
TN09-008	64.3	76.5	77.7	63.2
DA1405-212-3F	60.6	73.6	86.4	64.3
DA1405-221-1F	66.9	70.0	75.1	60.5
DA1490-523F	80.1	77.1	95.5	70.1
DA1539-1010F	67.8	82.2	99.4	71.2
DA1568-112F	70.7	72.9	88.1	68.6
DA1585-564F	65.1	41.0	66.3	55.7
K179229-8	62.6	80.5	63.8	59.7
K18-3091	69.8	69.5	82.3	65.8
K18-4100	80.7	52.3	93.5	66.4
K18-4288	78.6	68.9	91.3	67.0
K18-5234	76.3	57.5	91.5	58.7
K18-6011	65.3	48.9	99.9	58.5
K18-6652	79.4	76.9	89.1	71.4
N18-446	75.0	73.3	93.3	65.0
N17-2135	68.9	64.7	76.3	61.2
N18-235	72.6	69.4	94.1	66.6
N18-296	60.7	65.2	86.7	65.5
N18-452	68.7	63.5	98.1	64.9
R18-14272	70.2	53.6	75.6	65.6
R18-14502	78.0	55.5	77.9	69.6
R18-3332	78.5	61.2	80.2	69.2
R18-67F	73.1	88.0	94.9	71.3
S17-1263C	62.3	48.4	80.8	62.1
S17-2509C	83.7	65.5	90.3	77.8
S18-6013C	76.9	93.3	98.0	80.4
S18-6328C	76.6	79.4	93.3	75.7
S18-6350C	63.3	89.0	100.1	71.8
S19-18135L	84.4	90.5	94.9	76.9
S19-19741C	73.1	78.4	91.9	70.6
TN18-4051	66.7	77.8	96.7	67.3
TN18-4130	78.2	60.6	90.2	66.7
TN19-4074	74.0	64.6	92.0	64.3
TN19-4100	65.6	66.0	78.7	64.5
TN19-4101	70.8	69.0	81.1	61.2
TN19-5750R1	70.3	74.1	89.9	61.6
V16-2451R2	71.7	61.1	90.3	64.0
V16-2471R	81.3	76.2	84.9	62.3
V17-2099DTR	73.4	75.2	77.1	60.5
V17-2131R	75.9	54.1	73.6	57.8
V17-2460R	80.9	80.6	92.3	63.8
V17-2924R	66.5	67.7	96.4	69.6
Mean	72.2	69.7	86.9	66.5
LSD(0.05)	17.6	16.6	16.2	7.8
LSD(0.10)	14.6	13.9	13.5	6.5
CV(%)	11.5	11.8	9.3	14.4

TABLE 68 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Starkville, MS	Stoneville, MS
Ellis	10/1	10/13	10/13	10/11	10/6	.	9/26
AG53X9	9	-2	4	1	-1	.	1
AG55X7	6	-3	-3	1	2	.	-2
TN09-008	7	1	3	2	5	.	-1
DA1405-212-3F	11	0	-2	3	3	.	.
DA1405-221-1F	6	-1	-2	2	-2	.	-3
DA1490-523F	3	-2	-1	1	-2	.	-3
DA1539-1010F	7	-1	1	1	6	.	-4
DA1568-112F	5	-3	-1	0	3	.	-4
DA1585-564F	-4	-4	-1	-1	-5	.	-9
K179229-8	1	-3	-2	-1	-5	.	-5
K18-3091	1	-3	-2	-2	0	.	-5
K18-4100	0	-2	-1	-2	0	.	-4
K18-4288	3	0	2	-3	-2	.	-1
K18-5234	5	0	1	-3	2	.	1
K18-6011	1	-1	1	-3	-1	.	-2
K18-6652	5	-1	1	-2	-1	.	-4
N18-446	2	-1	-1	-2	-2	.	-4
N17-2135	2	-1	7	-1	3	.	2
N18-235	7	-2	-1	0	4	.	-4
N18-296	2	-2	-3	2	5	.	-4
N18-452	2	-1	-1	0	1	.	-4
R18-14272	9	-3	0	2	-3	.	-3
R18-14502	2	-4	-1	1	-4	.	-3
R18-3332	0	-3	-2	0	2	.	2
R18-67F	11	1	4	-1	8	.	2
S17-1263C	0	-4	-1	-1	-3	.	-5
S17-2509C	0	-2	-1	0	5	.	-4
S18-6013C	6	-2	3	-1	3	.	1
S18-6328C	5	-2	1	-1	3	.	-2
S18-6350C	9	-1	1	2	5	.	2
S19-18135L	5	-1	2	3	6	.	2
S19-19741C	0	-3	-1	0	-5	.	-4
TN18-4051	11	-1	1	0	2	.	0
TN18-4130	3	0	-1	0	3	.	0
TN19-4074	5	0	3	1	4	.	2
TN19-4100	2	2	-1	0	3	.	-5
TN19-4101	0	0	-2	0	3	.	0
TN19-5750R1	0	0	0	2	2	.	-4
V16-2451R2	0	-2	1	0	2	.	-4
V16-2471R	2	-1	2	0	-1	.	1
V17-2099DTR	5	-2	1	1	3	.	1
V17-2131R	9	-3	-1	2	-4	.	-4
V17-2460R	3	-1	1	5	2	.	-3
V17-2924R	1	-4	-1	3	-2	.	-2
Mean	4	-2	0	0	1	.	-2
LSD(0.05)	5	1	2	1	4	.	.
CV(%)	65	38	945	143	249	.	.

TABLE 68 - RELATIVE MATURITY (continued)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	*Stuttgart, AR*	*Tallassee, AL*	*Warsaw, VA*	*Test Mean*
Ellis	10/6	10/11	10/12	10/8
AG53X9	-3	-6	14	2
AG55X7	-5	-3	5	0
TN09-008	-2	-3	6	2
DA1405-212-3F	-9	-10	4	0
DA1405-221-1F	-5	-5	-3	-1
DA1490-523F	-4	-6	5	-1
DA1539-1010F	1	-6	6	1
DA1568-112F	0	-7	4	0
DA1585-564F	-9	-10	-7	-5
K179229-8	-9	-9	-1	-4
K18-3091	-8	-9	4	-3
K18-4100	-3	-4	3	-1
K18-4288	2	-4	6	0
K18-5234	1	-5	4	0
K18-6011	-4	-9	5	-1
K18-6652	-5	-1	6	0
N18-446	-2	-8	0	-2
N17-2135	-3	-6	5	1
N18-235	-4	-5	4	0
N18-296	-7	-8	0	-2
N18-452	-1	-4	4	0
R18-14272	-6	-7	-2	-2
R18-14502	-3	-4	-3	-2
R18-3332	-3	-4	-1	-1
R18-67F	5	-3	7	4
S17-1263C	-10	-5	-7	-4
S17-2509C	-1	-6	0	-1
S18-6013C	-1	-9	6	1
S18-6328C	0	-7	2	0
S18-6350C	-1	-6	7	2
S19-18135L	5	-6	7	2
S19-19741C	-8	-5	-4	-3
TN18-4051	0	-7	8	2
TN18-4130	3	0	1	1
TN19-4074	0	-5	5	1
TN19-4100	3	-3	4	1
TN19-4101	-4	-1	0	-1
TN19-5750R1	-2	-2	3	0
V16-2451R2	-9	-5	5	-1
V16-2471R	1	-3	4	0
V17-2099DTR	0	-8	-4	-1
V17-2131R	1	-2	5	0
V17-2460R	0	-6	7	1
V17-2924R	-6	-6	0	-2
Mean	-3	-5	3	0
LSD(0.05)	7	5	6	2
CV(%)	133	49	108	676

TABLE 69 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Starkville, MS	Stoneville, MS
Ellis	21	12	36	15	13	.	24
AG53X9	31	28	38	23	31	.	31
AG55X7	26	22	34	21	23	.	30
TN09-008	26	17	37	24	17	.	25
DA1405-212-3F	29	19	37	30	14	.	32
DA1405-221-1F	29	15	35	25	14	.	27
DA1490-523F	31	19	35	24	17	.	32
DA1539-1010F	27	18	33	19	17	.	30
DA1568-112F	33	21	37	19	18	.	32
DA1585-564F	32	29	38	26	28	.	32
K179229-8	23	18	31	18	17	.	31
K18-3091	31	16	35	25	15	.	26
K18-4100	24	15	37	16	16	.	23
K18-4288	26	15	38	22	17	.	25
K18-5234	21	14	33	21	11	.	19
K18-6011	21	14	31	16	14	.	20
K18-6652	30	15	39	23	20	.	33
N18-446	25	15	36	20	14	.	24
N17-2135	29	17	40	21	16	.	28
N18-235	31	12	35	19	15	.	23
N18-296	26	17	37	19	17	.	25
N18-452	25	15	35	22	16	.	26
R18-14272	45	31	47	34	30	.	40
R18-14502	42	32	48	37	33	.	39
R18-3332	36	31	43	33	35	.	40
R18-67F	31	19	36	26	17	.	25
S17-1263C	36	23	38	33	24	.	30
S17-2509C	29	16	37	25	19	.	30
S18-6013C	32	16	38	20	20	.	29
S18-6328C	29	17	37	26	23	.	33
S18-6350C	35	25	41	27	23	.	37
S19-18135L	29	18	38	24	22	.	31
S19-19741C	31	19	32	26	19	.	24
TN18-4051	26	17	37	16	17	.	29
TN18-4130	22	13	34	16	15	.	21
TN19-4074	31	20	40	23	15	.	28
TN19-4100	25	13	36	18	14	.	23
TN19-4101	23	10	30	17	12	.	22
TN19-5750R1	27	14	34	18	14	.	25
V16-2451R2	28	15	42	22	15	.	29
V16-2471R	29	15	37	28	12	.	27
V17-2099DTR	32	29	42	28	24	.	34
V17-2131R	42	32	49	31	30	.	40
V17-2460R	32	18	36	24	13	.	28
V17-2924R	39	35	47	38	32	.	38
Mean	29	19	37	23	19	.	29
LSD(0.05)	5	5	5	6	5	.	4
CV(%)	9	13	7	13	12	.	8

TABLE 69 - PLANT HEIGHT (INCHES) (continued)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	*Stuttgart, AR*	*Tallassee, AL*	*Warsaw, VA*	*Test Mean*
Ellis	17	32	23	21
AG53X9	25	35	33	30
AG55X7	22	35	29	27
TN09-008	20	37	30	26
DA1405-212-3F	24	30	32	27
DA1405-221-1F	24	29	30	25
DA1490-523F	24	38	36	28
DA1539-1010F	20	34	31	25
DA1568-112F	25	33	33	28
DA1585-564F	26	31	36	31
K179229-8	19	29	29	24
K18-3091	21	33	30	26
K18-4100	22	29	34	24
K18-4288	24	31	31	25
K18-5234	18	27	27	21
K18-6011	20	30	29	21
K18-6652	23	34	30	27
N18-446	19	34	30	24
N17-2135	25	29	34	26
N18-235	20	32	36	25
N18-296	21	29	28	24
N18-452	19	27	33	24
R18-14272	30	36	44	37
R18-14502	31	36	43	38
R18-3332	31	40	43	37
R18-67F	24	33	37	27
S17-1263C	26	32	39	31
S17-2509C	26	31	33	27
S18-6013C	19	37	36	27
S18-6328C	27	26	36	28
S18-6350C	27	38	42	33
S19-18135L	21	32	35	28
S19-19741C	26	27	30	26
TN18-4051	21	26	36	25
TN18-4130	19	27	29	22
TN19-4074	23	34	41	28
TN19-4100	23	30	30	23
TN19-4101	16	33	27	21
TN19-5750R1	18	34	35	24
V16-2451R2	22	36	34	27
V16-2471R	23	39	33	27
V17-2099DTR	30	35	40	33
V17-2131R	33	45	44	38
V17-2460R	21	40	40	28
V17-2924R	33	40	44	38
Mean	23	33	34	27
LSD(0.05)	4	8	8	3
CV(%)	9	12	11	13

TABLE 70 - PLANT LODGING (1-5)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	*Jackson, TN*	*Keiser, AR*	*Kinston, NC*	*Knoxville, TN*	*Portageville, MO(B)*	*Starkville, MS*	*Stoneville, MS*
Ellis	1.0	1.0	1.5	2.0	1.0	.	1.0
AG53X9	1.5	1.5	1.8	2.0	2.0	.	1.5
AG55X7	1.5	1.0	1.3	2.0	2.0	.	1.0
TN09-008	1.0	1.0	1.8	2.0	1.0	.	1.0
DA1405-212-3F	2.0	1.0	2.0	2.3	1.0	.	2.0
DA1405-221-1F	1.5	1.0	1.5	2.0	1.0	.	1.0
DA1490-523F	3.0	1.0	2.3	2.0	1.0	.	2.0
DA1539-1010F	1.5	1.0	1.3	2.0	1.0	.	2.0
DA1568-112F	2.5	1.0	2.3	2.0	1.0	.	1.5
DA1585-564F	3.0	1.5	2.5	2.3	2.0	.	4.0
K179229-8	1.5	1.0	3.0	2.0	1.0	.	1.0
K18-3091	1.5	1.0	2.0	2.5	1.0	.	1.0
K18-4100	1.0	1.0	1.5	1.8	1.5	.	1.0
K18-4288	1.5	1.0	1.8	2.0	1.0	.	1.0
K18-5234	1.0	1.0	1.3	2.0	1.0	.	1.0
K18-6011	1.0	1.0	1.3	1.8	1.0	.	1.0
K18-6652	2.0	1.0	2.5	2.0	1.0	.	2.0
N18-446	1.5	1.0	1.8	2.0	1.0	.	2.0
N17-2135	1.5	1.0	2.3	2.0	1.0	.	1.0
N18-235	2.5	1.0	2.5	2.0	1.0	.	1.0
N18-296	1.5	1.0	2.0	2.0	1.0	.	1.0
N18-452	1.5	1.0	2.0	2.0	1.0	.	1.0
R18-14272	4.0	2.0	2.0	2.8	2.5	.	2.5
R18-14502	3.5	2.5	1.8	3.0	2.5	.	2.0
R18-3332	3.0	1.0	2.0	2.0	1.5	.	3.0
R18-67F	3.0	1.0	2.0	2.0	1.0	.	1.5
S17-1263C	4.0	2.0	1.8	3.0	3.0	.	3.0
S17-2509C	2.5	1.0	2.0	2.0	1.0	.	2.0
S18-6013C	2.0	1.0	1.5	2.0	1.0	.	1.0
S18-6328C	3.5	1.0	2.5	2.5	1.5	.	3.5
S18-6350C	3.5	2.0	2.7	2.5	1.5	.	3.5
S19-18135L	1.5	1.0	1.8	2.0	1.0	.	1.0
S19-19741C	2.0	1.0	2.7	2.3	1.0	.	1.0
TN18-4051	1.5	1.0	2.0	1.5	1.0	.	1.0
TN18-4130	1.0	1.0	2.0	2.0	1.0	.	1.0
TN19-4074	2.5	1.0	2.3	2.0	1.0	.	1.5
TN19-4100	1.0	1.0	1.5	1.8	1.0	.	1.0
TN19-4101	1.0	1.0	1.5	1.8	1.0	.	1.0
TN19-5750R1	2.0	1.0	1.8	2.0	1.0	.	1.0
V16-2451R2	1.5	1.0	1.5	2.0	1.0	.	1.0
V16-2471R	1.5	1.0	2.0	2.0	1.0	.	1.0
V17-2099DTR	1.5	1.0	1.8	2.0	2.0	.	2.5
V17-2131R	2.0	2.0	1.5	2.0	1.5	.	2.5
V17-2460R	2.0	1.0	1.8	1.8	1.0	.	1.5
V17-2924R	3.0	2.5	2.0	2.8	2.5	.	2.0
Mean	2.0	1.2	1.9	2.1	1.3	.	1.6
LSD(0.05)	1.0	0.6	0.6	0.3	0.7	.	0.7
CV(%)	25.7	25.0	14.6	8.0	28.2	.	21.2

TABLE 70 - PLANT LODGING (1-5) (continued)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	*Stuttgart, AR*	*Tallassee, AL*	*Warsaw, VA*	*Test Mean*
Ellis	1.0	1.5	1.2	1.2
AG53X9	1.0	1.5	1.3	1.6
AG55X7	1.0	2.0	1.2	1.4
TN09-008	1.0	1.0	1.3	1.2
DA1405-212-3F	1.0	1.0	1.3	1.5
DA1405-221-1F	1.0	1.0	1.2	1.2
DA1490-523F	1.0	2.0	2.5	1.9
DA1539-1010F	1.0	1.5	1.5	1.4
DA1568-112F	1.0	1.5	1.5	1.6
DA1585-564F	2.5	5.0	3.1	2.9
K179229-8	1.0	1.0	3.1	1.6
K18-3091	1.0	1.0	1.5	1.4
K18-4100	1.0	1.5	1.6	1.3
K18-4288	1.0	1.0	2.5	1.4
K18-5234	1.0	1.0	1.2	1.2
K18-6011	1.0	1.0	1.3	1.2
K18-6652	1.5	1.5	1.3	1.7
N18-446	1.0	1.0	2.2	1.5
N17-2135	1.0	1.0	1.5	1.4
N18-235	1.0	2.0	1.5	1.6
N18-296	1.0	1.0	1.3	1.3
N18-452	1.0	1.0	2.2	1.4
R18-14272	3.0	4.0	3.0	2.9
R18-14502	1.5	4.0	2.6	2.6
R18-3332	1.0	3.0	2.0	2.0
R18-67F	1.0	1.0	2.6	1.7
S17-1263C	2.5	2.5	2.9	2.7
S17-2509C	1.0	1.0	1.8	1.6
S18-6013C	1.0	1.0	1.5	1.3
S18-6328C	2.0	1.5	2.6	2.3
S18-6350C	2.5	2.0	2.5	2.5
S19-18135L	1.0	1.0	1.5	1.3
S19-19741C	1.0	1.0	1.8	1.5
TN18-4051	1.0	1.0	1.8	1.3
TN18-4130	1.0	1.0	1.3	1.3
TN19-4074	1.5	1.0	2.0	1.6
TN19-4100	1.0	1.0	1.2	1.2
TN19-4101	1.0	3.0	1.2	1.4
TN19-5750R1	1.0	1.0	1.7	1.4
V16-2451R2	1.0	1.0	1.5	1.3
V16-2471R	1.0	1.0	1.7	1.4
V17-2099DTR	2.0	1.0	1.7	1.7
V17-2131R	2.0	3.5	1.8	2.1
V17-2460R	1.0	1.0	2.0	1.4
V17-2924R	1.5	4.0	2.7	2.6
Mean	1.3	1.6	1.9	1.6
LSD(0.05)	0.9	1.2	0.9	0.4
CV(%)	36.6	37.1	23.3	33.2

TABLE 71 - SEED QUALITY (1-5)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Starkville, MS	Stoneville, MS
Ellis	2.0	3.0	.	1.5	1.0	.	.
AG53X9	2.0	3.0	.	1.5	2.0	.	.
AG55X7	2.0	2.0	.	1.5	2.0	.	.
TN09-008	2.0	3.0	.	2.0	2.0	.	.
DA1405-212-3F	2.0	1.5	.	1.0	3.0	.	.
DA1405-221-1F	1.5	2.5	.	1.5	2.0	.	.
DA1490-523F	1.5	3.0	.	1.0	2.5	.	.
DA1539-1010F	1.5	2.0	.	1.0	3.0	.	.
DA1568-112F	2.0	2.0	.	1.0	2.0	.	.
DA1585-564F	2.0	2.5	.	1.5	1.5	.	.
K179229-8	2.0	1.5	.	1.5	1.0	.	.
K18-3091	2.0	2.5	.	1.0	2.0	.	.
K18-4100	2.0	2.0	.	1.5	2.5	.	.
K18-4288	2.0	2.0	.	1.5	1.5	.	.
K18-5234	2.0	2.5	.	1.5	2.0	.	.
K18-6011	2.0	3.0	.	1.5	1.5	.	.
K18-6652	2.0	3.0	.	1.5	2.0	.	.
N18-446	1.5	2.0	.	1.0	1.0	.	.
N17-2135	1.5	2.0	.	1.0	2.0	.	.
N18-235	1.5	2.5	.	1.0	3.0	.	.
N18-296	2.0	2.0	.	1.0	3.0	.	.
N18-452	1.5	3.0	.	1.5	2.0	.	.
R18-14272	2.5	3.0	.	2.5	2.0	.	.
R18-14502	2.0	2.5	.	2.0	2.5	.	.
R18-3332	2.0	3.0	.	2.0	2.5	.	.
R18-67F	1.0	2.0	.	1.5	2.0	.	.
S17-1263C	2.0	2.5	.	2.5	2.0	.	.
S17-2509C	1.5	2.5	.	1.0	3.0	.	.
S18-6013C	2.0	3.0	.	1.5	2.0	.	.
S18-6328C	2.0	1.5	.	1.0	2.0	.	.
S18-6350C	2.0	2.0	.	1.0	2.0	.	.
S19-18135L	1.0	2.0	.	1.0	1.0	.	.
S19-19741C	1.5	2.0	.	1.5	1.0	.	.
TN18-4051	2.0	2.5	.	1.5	1.5	.	.
TN18-4130	2.0	2.5	.	1.5	2.0	.	.
TN19-4074	1.5	2.5	.	1.5	2.0	.	.
TN19-4100	1.5	2.5	.	1.0	3.0	.	.
TN19-4101	1.5	2.0	.	1.0	1.5	.	.
TN19-5750R1	2.0	3.0	.	1.0	1.5	.	.
V16-2451R2	2.0	2.0	.	1.0	2.5	.	.
V16-2471R	2.0	2.5	.	2.5	2.0	.	.
V17-2099DTR	2.0	2.0	.	2.0	2.0	.	.
V17-2131R	2.5	2.0	.	3.0	1.5	.	.
V17-2460R	2.0	2.5	.	2.0	3.0	.	.
V17-2924R	2.0	3.0	.	3.5	1.5	.	.
Mean	1.8	2.4	.	1.5	2.0	.	.
LSD(0.05)	0.8	1.0	.	.	0.9	.	.
CV(%)	21.4	20.2	.	0.0	21.7	.	.

TABLE 71 - SEED QUALITY (1-5) (continued)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	2.0	4.0	.	2.2
AG53X9	3.5	4.0	.	2.7
AG55X7	2.0	3.0	.	2.1
TN09-008	1.5	4.0	.	2.4
DA1405-212-3F	3.0	3.0	.	2.2
DA1405-221-1F	2.0	3.5	.	2.2
DA1490-523F	2.0	3.0	.	2.2
DA1539-1010F	2.0	3.0	.	2.1
DA1568-112F	1.0	3.0	.	1.9
DA1585-564F	3.0	4.0	.	2.4
K179229-8	2.5	3.0	.	1.9
K18-3091	2.0	4.0	.	2.2
K18-4100	3.0	3.5	.	2.4
K18-4288	2.0	3.0	.	2.0
K18-5234	2.5	3.5	.	2.3
K18-6011	2.0	4.0	.	2.3
K18-6652	2.5	4.0	.	2.5
N18-446	2.0	3.5	.	1.8
N17-2135	3.0	3.0	.	2.1
N18-235	1.5	4.0	.	2.2
N18-296	1.5	4.0	.	2.2
N18-452	2.5	3.0	.	2.2
R18-14272	4.5	4.5	.	3.2
R18-14502	4.0	4.0	.	2.8
R18-3332	3.5	4.0	.	2.8
R18-67F	2.5	2.0	.	1.8
S17-1263C	3.5	4.5	.	2.8
S17-2509C	3.0	4.5	.	2.6
S18-6013C	3.0	3.5	.	2.5
S18-6328C	2.5	3.5	.	2.1
S18-6350C	2.0	3.0	.	2.0
S19-18135L	3.5	3.0	.	1.9
S19-19741C	2.5	4.0	.	2.1
TN18-4051	3.0	3.0	.	2.2
TN18-4130	2.0	3.0	.	2.2
TN19-4074	3.0	4.0	.	2.4
TN19-4100	2.5	4.0	.	2.4
TN19-4101	2.0	4.0	.	2.0
TN19-5750R1	2.0	3.5	.	2.2
V16-2451R2	2.0	4.0	.	2.2
V16-2471R	4.0	3.5	.	2.7
V17-2099DTR	3.0	4.0	.	2.5
V17-2131R	3.5	4.0	.	2.7
V17-2460R	2.5	3.5	.	2.6
V17-2924R	3.0	4.0	.	2.8
Mean	2.6	3.6	.	2.3
LSD(0.05)	1.2	0.7	.	0.6
CV(%)	22.7	10.1	.	25.0

TABLE 72 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Starkville, MS	Stoneville, MS
Ellis	11.4	13.8	13.2	13.6	12.3	.	11.5
AG53X9	14.2	14.3	15.5	15.1	13.6	.	12.1
AG55X7	12.8	14.0	13.8	13.3	13.6	.	12.0
TN09-008	15.5	16.1	18.5	17.2	16.6	.	12.5
DA1405-212-3F	10.8	12.4	12.5	12.7	12.5	.	9.5
DA1405-221-1F	11.4	12.7	12.1	11.9	11.8	.	10.7
DA1490-523F	11.9	12.4	13.5	13.1	12.0	.	9.4
DA1539-1010F	12.0	13.2	13.1	13.2	13.8	.	10.6
DA1568-112F	12.7	14.3	12.9	13.2	13.5	.	10.7
DA1585-564F	11.8	13.4	13.0	13.5	13.0	.	10.2
K179229-8	13.0	14.2	12.7	13.3	13.6	.	11.1
K18-3091	12.7	14.8	13.7	12.7	13.3	.	10.8
K18-4100	13.0	14.3	14.9	14.1	14.2	.	11.6
K18-4288	11.2	12.7	12.9	11.8	11.6	.	10.1
K18-5234	14.2	15.4	16.2	17.0	14.3	.	13.7
K18-6011	12.5	13.9	14.0	13.6	12.4	.	12.0
K18-6652	14.5	15.7	16.4	14.9	15.0	.	12.2
N18-446	11.3	14.2	13.0	12.9	12.3	.	10.3
N17-2135	14.4	17.6	18.0	15.2	17.0	.	14.4
N18-235	12.8	14.4	14.4	13.6	13.9	.	11.4
N18-296	14.9	16.3	14.8	15.4	15.3	.	12.3
N18-452	11.3	13.7	12.7	12.2	12.8	.	10.1
R18-14272	14.8	15.1	17.4	15.8	14.3	.	13.3
R18-14502	14.8	14.5	17.0	15.8	14.2	.	13.7
R18-3332	17.4	18.3	18.9	18.9	18.6	.	14.9
R18-67F	13.2	13.5	13.7	14.0	14.3	.	11.9
S17-1263C	15.2	15.9	16.3	16.7	15.8	.	15.3
S17-2509C	15.6	16.7	16.8	17.5	16.3	.	13.8
S18-6013C	13.7	14.5	15.9	14.6	15.9	.	13.0
S18-6328C	12.5	13.8	13.9	14.1	14.1	.	11.3
S18-6350C	12.3	14.1	13.5	15.7	14.4	.	10.8
S19-18135L	12.4	13.9	14.0	14.7	14.5	.	11.6
S19-19741C	12.6	14.8	14.4	15.5	13.4	.	12.7
TN18-4051	13.0	14.7	13.9	13.6	13.5	.	12.4
TN18-4130	11.9	13.1	12.3	12.3	11.8	.	11.2
TN19-4074	11.7	13.1	13.9	14.2	14.5	.	11.5
TN19-4100	13.2	15.1	14.3	13.7	14.3	.	11.5
TN19-4101	12.9	15.2	14.1	13.5	13.2	.	12.4
TN19-5750R1	11.3	12.7	13.7	13.0	12.5	.	11.1
V16-2451R2	14.0	14.5	14.8	14.9	14.4	.	12.4
V16-2471R	12.5	14.3	15.3	16.1	13.4	.	13.9
V17-2099DTR	12.1	13.5	13.0	15.4	13.0	.	9.3
V17-2131R	14.2	13.6	15.5	17.6	12.1	.	11.8
V17-2460R	12.6	13.4	14.5	15.5	12.2	.	11.6
V17-2924R	11.9	12.1	13.6	15.0	11.1	.	10.6
Mean	13.1	14.3	14.5	14.5	13.8	.	11.8
LSD(0.05)	1.2	1.1	1.2	0.3	1.4	.	
CV(%)	4.7	4.0	4.1	0.9	5.1	.	

TABLE 72 - SEED SIZE (GRAMS PER 100 SEED) (continued)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	*Stuttgart, AR*	*Tallassee, AL*	*Warsaw, VA*	*Test Mean*
Ellis	12.9	15.9	.	13.1
AG53X9	13.0	19.5	.	14.7
AG55X7	13.3	16.3	.	13.6
TN09-008	15.2	21.4	.	16.7
DA1405-212-3F	11.2	13.5	.	11.9
DA1405-221-1F	11.5	15.7	.	12.2
DA1490-523F	12.9	15.9	.	12.7
DA1539-1010F	12.0	14.7	.	12.8
DA1568-112F	12.5	17.2	.	13.4
DA1585-564F	12.6	13.9	.	12.7
K179229-8	13.2	19.5	.	13.8
K18-3091	11.9	17.5	.	13.5
K18-4100	14.7	17.3	.	14.3
K18-4288	11.7	13.9	.	12.0
K18-5234	14.7	18.9	.	15.6
K18-6011	12.3	16.8	.	13.4
K18-6652	14.5	17.4	.	15.1
N18-446	13.7	14.8	.	12.8
N17-2135	15.9	18.3	.	16.3
N18-235	13.4	18.4	.	14.1
N18-296	13.9	20.7	.	15.5
N18-452	12.7	15.7	.	12.7
R18-14272	13.5	19.0	.	15.4
R18-14502	14.1	17.7	.	15.2
R18-3332	19.6	21.1	.	18.5
R18-67F	14.7	18.6	.	14.2
S17-1263C	14.4	20.5	.	16.2
S17-2509C	16.5	19.4	.	16.6
S18-6013C	15.1	21.0	.	15.5
S18-6328C	14.6	19.2	.	14.2
S18-6350C	12.5	18.9	.	14.1
S19-18135L	15.5	18.5	.	14.4
S19-19741C	15.0	18.8	.	14.6
TN18-4051	13.8	17.5	.	14.0
TN18-4130	12.4	16.8	.	12.7
TN19-4074	14.0	15.6	.	13.6
TN19-4100	13.9	15.4	.	14.0
TN19-4101	13.6	15.3	.	13.7
TN19-5750R1	12.4	16.1	.	12.9
V16-2451R2	12.8	18.5	.	14.5
V16-2471R	15.0	21.1	.	15.2
V17-2099DTR	13.9	16.9	.	13.5
V17-2131R	14.7	17.7	.	14.7
V17-2460R	12.5	18.0	.	13.8
V17-2924R	11.8	17.3	.	12.9
Mean	13.7	17.6	.	14.2
LSD(0.05)	1.7	2.0	.	0.8
CV(%)	6.2	5.6	.	6.8

TABLE 73 - OIL (%)†
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Starkville, MS	Stoneville, MS
Ellis	19.3	18.1	18.0	19.1	19.6	.	18.8
AG53X9	18.1	18.2	19.0	19.1	19.7	.	18.5
AG55X7	18.7	19.3	19.6	19.4	19.2	.	19.6
TN09-008	19.6	19.2	20.0	18.9	19.5	.	19.3
DA1405-212-3F	18.5	18.3	18.7	18.8	18.8	.	18.6
DA1405-221-1F	18.5	18.8	19.0	17.5	20.0	.	19.1
DA1490-523F	18.9	18.9	18.6	19.4	20.1	.	18.2
DA1539-1010F	18.4	18.8	19.3	19.2	18.1	.	19.0
DA1568-112F	18.4	17.4	18.6	18.8	19.4	.	18.9
DA1585-564F	18.6	18.9	19.1	19.0	19.1	.	19.9
K179229-8	20.0	20.6	19.8	19.7	25.3	.	20.9
K18-3091	17.7	19.5	18.9	18.4	19.3	.	19.0
K18-4100	19.9	19.5	20.2	20.8	20.1	.	20.5
K18-4288	17.9	18.8	19.2	18.5	18.1	.	18.7
K18-5234	19.4	19.3	20.0	20.1	20.2	.	19.9
K18-6011	18.6	18.4	19.0	19.8	19.0	.	19.4
K18-6652	17.7	17.3	18.1	18.4	18.7	.	18.9
N18-446	17.9	18.4	18.7	18.4	19.7	.	18.5
N17-2135	19.6	19.1	19.6	19.1	19.6	.	19.7
N18-235	19.4	19.4	20.4	19.7	21.4	.	20.1
N18-296	18.3	18.8	19.0	19.3	18.4	.	19.0
N18-452	17.5	17.7	18.4	18.2	18.6	.	18.5
R18-14272	17.7	18.1	18.4	18.7	19.3	.	19.3
R18-14502	18.1	18.4	18.5	18.7	18.4	.	18.9
R18-3332	17.9	18.4	18.5	18.9	19.2	.	19.2
R18-67F	18.8	19.3	19.7	19.7	19.0	.	20.0
S17-1263C	20.1	19.9	20.0	20.3	20.0	.	19.6
S17-2509C	18.8	19.5	19.6	19.8	19.5	.	19.3
S18-6013C	19.6	19.7	19.2	20.2	19.4	.	20.4
S18-6328C	19.6	18.4	19.4	19.4	19.3	.	19.9
S18-6350C	19.7	18.7	19.3	20.1	19.8	.	19.7
S19-18135L	19.7	18.6	19.6	19.7	19.2	.	18.9
S19-19741C	19.3	19.4	19.1	19.6	20.8	.	20.3
TN18-4051	17.3	18.5	18.7	18.3	19.3	.	18.7
TN18-4130	18.7	18.3	19.1	19.0	18.8	.	19.4
TN19-4074	16.9	18.0	18.0	18.2	18.3	.	18.7
TN19-4100	17.4	17.3	18.8	18.1	18.4	.	18.5
TN19-4101	18.1	17.8	18.7	18.3	18.9	.	18.8
TN19-5750R1	.	19.9	20.0	20.2	20.3	.	20.8
V16-2451R2	17.3	18.4	18.0	18.2	18.4	.	18.7
V16-2471R	19.5	19.5	18.8	19.5	20.1	.	19.2
V17-2099DTR	18.1	18.6	17.9	18.7	19.4	.	17.3
V17-2131R	18.8	18.9	18.4	18.6	21.4	.	19.1
V17-2460R	18.9	19.2	18.8	18.8	19.5	.	18.4
V17-2924R	19.7	19.7	19.9	20.1	20.9	.	19.8
Mean	18.6	18.8	19.0	19.1	19.5	.	19.2
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

† Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 73 - OIL (%)† (continued)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	19.2	19.0	.	18.9
AG53X9	19.1	19.9	.	18.9
AG55X7	19.7	19.3	.	19.3
TN09-008	20.0	20.4	.	19.6
DA1405-212-3F	19.2	17.5	.	18.6
DA1405-221-1F	19.8	19.2	.	19.0
DA1490-523F	18.6	20.0	.	19.1
DA1539-1010F	.	19.6	.	18.9
DA1568-112F	19.3	19.8	.	18.8
DA1585-564F	20.0	21.1	.	19.4
K179229-8	21.1	21.2	.	21.1
K18-3091	19.6	20.5	.	19.1
K18-4100	20.4	20.8	.	20.3
K18-4288	18.8	20.0	.	18.8
K18-5234	19.5	20.6	.	19.9
K18-6011	20.3	21.1	.	19.4
K18-6652	18.4	20.1	.	18.4
N18-446	18.7	19.9	.	18.8
N17-2135	20.5	19.7	.	19.6
N18-235	20.6	22.1	.	20.4
N18-296	19.5	19.8	.	19.0
N18-452	19.0	22.2	.	18.7
R18-14272	19.2	19.8	.	18.8
R18-14502	19.5	19.6	.	18.8
R18-3332	19.0	21.2	.	19.0
R18-67F	19.6	18.6	.	19.3
S17-1263C	19.4	21.0	.	20.0
S17-2509C	20.0	21.3	.	19.7
S18-6013C	20.8	20.0	.	19.9
S18-6328C	19.5	21.3	.	19.6
S18-6350C	19.3	20.7	.	19.7
S19-18135L	19.2	19.3	.	19.3
S19-19741C	20.6	20.6	.	20.0
TN18-4051	18.5	18.6	.	18.5
TN18-4130	18.9	20.7	.	19.1
TN19-4074	18.8	19.5	.	18.3
TN19-4100	18.6	20.5	.	18.4
TN19-4101	18.8	19.7	.	18.6
TN19-5750R1	20.7	18.9	.	20.0
V16-2451R2	19.4	19.5	.	18.5
V16-2471R	19.4	19.8	.	19.5
V17-2099DTR	18.3	21.0	.	18.6
V17-2131R	19.2	19.7	.	19.3
V17-2460R	19.2	21.0	.	19.2
V17-2924R	20.4	20.5	.	20.1
Mean	19.5	20.1	.	19.2
LSD(0.05)	.	.	.	0.6
CV(%)	.	.	.	3.1

TABLE 74 - PROTEIN (%)†
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Starkville, MS	Stoneville, MS
Ellis	33.6	35.7	37.2	36.4	33.3	.	35.4
AG53X9	36.7	34.9	34.3	36.9	32.9	.	35.9
AG55X7	37.7	34.6	35.3	36.2	35.6	.	35.2
TN09-008	33.9	33.3	33.8	35.1	32.9	.	34.3
DA1405-212-3F	36.9	36.8	36.0	36.9	36.1	.	35.9
DA1405-221-1F	36.5	35.8	35.7	36.8	34.1	.	36.3
DA1490-523F	36.1	35.2	36.4	35.9	33.6	.	37.3
DA1539-1010F	36.8	35.1	35.8	35.5	36.5	.	35.5
DA1568-112F	36.3	35.6	36.4	36.4	34.7	.	36.3
DA1585-564F	36.8	36.4	36.7	36.7	36.3	.	36.5
K179229-8	37.3	35.0	36.0	37.2	28.0	.	36.6
K18-3091	37.4	34.1	35.9	37.2	34.4	.	36.2
K18-4100	33.8	33.6	33.5	32.9	32.4	.	33.3
K18-4288	37.9	35.0	35.7	37.7	37.4	.	37.3
K18-5234	35.7	34.6	35.1	35.2	33.1	.	35.0
K18-6011	37.2	34.8	36.1	35.3	35.9	.	35.4
K18-6652	37.4	35.7	36.3	36.0	35.1	.	34.6
N18-446	38.7	37.6	37.4	39.6	34.9	.	37.8
N17-2135	38.4	38.8	38.5	40.7	38.2	.	38.5
N18-235	36.4	35.2	34.8	35.9	31.1	.	35.8
N18-296	37.9	35.9	35.6	35.5	36.6	.	36.0
N18-452	38.5	39.0	37.0	38.1	37.3	.	38.2
R18-14272	38.9	34.9	36.5	38.0	33.0	.	35.8
R18-14502	37.1	35.3	36.4	36.7	37.5	.	36.5
R18-3332	37.2	35.4	36.8	36.8	33.4	.	36.1
R18-67F	38.7	34.7	36.2	36.7	36.6	.	36.1
S17-1263C	36.2	33.9	35.2	35.4	32.9	.	36.8
S17-2509C	36.7	34.2	35.0	35.4	35.0	.	36.3
S18-6013C	35.7	34.2	35.9	34.7	35.1	.	34.0
S18-6328C	35.3	35.5	35.0	35.9	34.9	.	34.6
S18-6350C	34.5	34.8	34.9	34.3	34.0	.	35.4
S19-18135L	35.3	34.5	35.4	35.4	34.1	.	36.5
S19-19741C	37.5	36.7	37.1	37.4	33.6	.	37.0
TN18-4051	39.2	35.0	35.8	36.8	33.4	.	36.0
TN18-4130	36.8	36.1	35.9	36.4	36.0	.	36.9
TN19-4074	39.4	36.4	37.4	39.6	36.8	.	37.1
TN19-4100	37.5	35.6	34.7	36.7	35.1	.	35.9
TN19-4101	35.8	35.1	34.5	35.8	33.6	.	35.6
TN19-5750R1	.	33.6	33.6	33.0	33.0	.	34.1
V16-2451R2	39.8	35.0	37.5	37.4	35.9	.	37.7
V16-2471R	36.5	35.1	39.0	37.3	34.0	.	38.0
V17-2099DTR	38.3	36.1	38.9	38.7	35.3	.	39.3
V17-2131R	37.1	34.5	37.1	37.5	29.4	.	36.5
V17-2460R	37.0	34.8	35.7	37.2	35.2	.	37.6
V17-2924R	34.8	31.8	33.8	34.7	30.9	.	34.6
Mean	36.9	35.2	35.9	36.5	34.4	.	36.2
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

† Protein percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 74 - PROTEIN (%)† (continued)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
Ellis	35.0	37.2	.	35.5
AG53X9	35.9	38.3	.	35.7
AG55X7	34.4	39.7	.	36.1
TN09-008	32.9	37.6	.	34.2
DA1405-212-3F	35.8	39.6	.	36.7
DA1405-221-1F	35.4	38.2	.	36.1
DA1490-523F	37.2	38.3	.	36.2
DA1539-1010F	.	39.6	.	36.3
DA1568-112F	36.0	38.0	.	36.2
DA1585-564F	37.0	40.5	.	37.1
K179229-8	34.9	39.7	.	35.6
K18-3091	34.1	38.0	.	35.9
K18-4100	33.1	36.4	.	33.6
K18-4288	35.5	38.2	.	36.8
K18-5234	34.7	37.7	.	35.1
K18-6011	34.0	39.1	.	36.0
K18-6652	35.1	37.5	.	36.0
N18-446	38.2	39.5	.	38.0
N17-2135	37.8	40.6	.	38.9
N18-235	34.2	35.3	.	34.8
N18-296	36.5	37.3	.	36.4
N18-452	37.6	39.5	.	38.1
R18-14272	34.8	40.3	.	36.5
R18-14502	35.0	38.8	.	36.7
R18-3332	35.5	40.3	.	36.4
R18-67F	36.3	37.4	.	36.6
S17-1263C	34.9	39.4	.	35.6
S17-2509C	35.2	40.3	.	36.0
S18-6013C	34.3	39.7	.	35.4
S18-6328C	35.6	37.8	.	35.6
S18-6350C	34.2	38.0	.	35.0
S19-18135L	36.7	37.9	.	35.7
S19-19741C	36.4	41.7	.	37.2
TN18-4051	36.9	37.6	.	36.3
TN18-4130	35.7	38.2	.	36.5
TN19-4074	36.9	38.5	.	37.8
TN19-4100	35.4	40.2	.	36.4
TN19-4101	35.5	36.5	.	35.3
TN19-5750R1	33.3	39.1	.	34.3
V16-2451R2	35.0	38.7	.	37.1
V16-2471R	37.4	38.4	.	37.0
V17-2099DTR	38.6	39.1	.	38.0
V17-2131R	36.5	40.1	.	36.1
V17-2460R	35.7	39.4	.	36.6
V17-2924R	33.1	39.1	.	34.1
Mean	35.5	38.7	.	36.2
LSD(0.05)	.	.	.	1.0
CV(%)	.	.	.	2.9

TABLE 75 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Starkville, MS	Stoneville, MS
Ellis	45.3	47.4	49.2	48.9	45.0	.	47.4
AG53X9	48.8	46.4	46.0	49.6	44.5	.	47.8
AG55X7	50.3	46.6	47.7	48.8	47.9	.	47.5
TN09-008	45.8	44.8	45.9	47.0	44.4	.	46.2
DA1405-212-3F	49.3	48.9	48.2	49.3	48.4	.	47.9
DA1405-221-1F	48.7	47.9	47.9	48.4	46.3	.	48.8
DA1490-523F	48.3	47.1	48.5	48.4	45.6	.	49.6
DA1539-1010F	49.1	47.0	48.2	47.7	48.4	.	47.7
DA1568-112F	48.3	46.9	48.5	48.8	46.7	.	48.6
DA1585-564F	49.2	48.8	49.3	49.2	48.7	.	49.5
K179229-8	50.7	47.9	48.8	50.3	40.7	.	50.2
K18-3091	49.4	46.0	48.0	49.5	46.3	.	48.6
K18-4100	45.8	45.4	45.7	45.2	44.1	.	45.5
K18-4288	50.2	46.8	48.0	50.3	49.6	.	49.8
K18-5234	48.1	46.5	47.7	47.9	45.1	.	47.4
K18-6011	49.6	46.4	48.5	47.9	48.2	.	47.7
K18-6652	49.4	46.9	48.1	47.9	46.8	.	46.4
N18-446	51.2	50.1	49.9	52.7	47.3	.	50.4
N17-2135	51.9	52.1	52.0	54.6	51.7	.	52.0
N18-235	49.1	47.4	47.5	48.6	43.0	.	48.7
N18-296	50.4	48.0	47.8	47.9	48.7	.	48.4
N18-452	50.6	51.5	49.2	50.5	49.8	.	50.9
R18-14272	51.3	46.3	48.6	50.8	44.5	.	48.2
R18-14502	49.3	47.0	48.6	49.0	49.9	.	48.8
R18-3332	49.3	47.2	49.0	49.3	44.9	.	48.6
R18-67F	51.8	46.7	48.9	49.6	49.1	.	49.1
S17-1263C	49.3	46.1	47.9	48.3	44.7	.	49.7
S17-2509C	49.1	46.2	47.2	48.0	47.3	.	48.8
S18-6013C	48.3	46.2	48.2	47.2	47.3	.	46.4
S18-6328C	47.7	47.3	47.2	48.3	47.0	.	46.9
S18-6350C	46.7	46.6	47.1	46.6	46.1	.	47.9
S19-18135L	47.7	46.1	47.8	48.0	45.8	.	48.9
S19-19741C	50.5	49.4	49.9	50.6	46.1	.	50.4
TN18-4051	51.6	46.7	47.8	48.9	45.1	.	48.2
TN18-4130	49.2	48.0	48.1	48.8	48.2	.	49.7
TN19-4074	51.6	48.3	49.5	52.7	48.9	.	49.6
TN19-4100	49.4	46.7	46.5	48.7	46.8	.	47.9
TN19-4101	47.5	46.4	46.1	47.6	45.0	.	47.6
TN19-5750R1	.	45.6	45.6	44.9	45.0	.	46.8
V16-2451R2	52.2	46.6	49.7	49.7	47.8	.	50.3
V16-2471R	49.3	47.3	52.2	50.4	46.2	.	51.1
V17-2099DTR	50.8	48.2	51.4	51.7	47.5	.	51.6
V17-2131R	49.7	46.2	49.5	50.1	40.7	.	49.1
V17-2460R	49.6	46.8	47.8	49.8	47.5	.	50.1
V17-2924R	47.1	43.0	45.9	47.2	42.4	.	46.9
Mean	49.3	47.1	48.3	49.0	46.5	.	48.7
LSD(0.05)	.	.	.	.	.	.	.
CV(%)	.	.	.	.	.	.	.

† Estimated meal protein percentage is reported on a 13% moisture basis.

TABLE 75 - ESTIMATED MEAL PROTEIN (%)† (continued)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	*Stuttgart, AR*	*Tallassee, AL*	*Warsaw, VA*	*Test Mean*
Ellis	47.1	49.9	.	47.5
AG53X9	48.3	52.0	.	47.9
AG55X7	46.5	53.4	.	48.6
TN09-008	44.6	51.4	.	46.3
DA1405-212-3F	48.1	52.2	.	49.0
DA1405-221-1F	47.9	51.3	.	48.4
DA1490-523F	49.7	52.0	.	48.7
DA1539-1010F	.	53.5	.	48.7
DA1568-112F	48.4	51.5	.	48.5
DA1585-564F	50.2	55.8	.	50.1
K179229-8	48.1	54.7	.	48.9
K18-3091	46.1	51.9	.	48.2
K18-4100	45.2	50.0	.	45.9
K18-4288	47.5	51.9	.	49.3
K18-5234	46.9	51.6	.	47.6
K18-6011	46.3	53.9	.	48.6
K18-6652	46.7	51.0	.	47.9
N18-446	51.1	53.6	.	50.8
N17-2135	51.7	55.0	.	52.6
N18-235	46.8	49.2	.	47.5
N18-296	49.3	50.6	.	48.9
N18-452	50.4	55.1	.	51.0
R18-14272	46.7	54.6	.	48.9
R18-14502	47.2	52.5	.	49.1
R18-3332	47.6	55.6	.	48.9
R18-67F	49.1	49.9	.	49.3
S17-1263C	47.1	54.2	.	48.4
S17-2509C	47.8	55.7	.	48.8
S18-6013C	47.1	53.9	.	48.1
S18-6328C	48.1	52.2	.	48.1
S18-6350C	46.1	52.1	.	47.4
S19-18135L	49.3	51.0	.	48.1
S19-19741C	49.9	57.1	.	50.5
TN18-4051	49.2	50.2	.	48.5
TN18-4130	47.9	52.4	.	49.0
TN19-4074	49.3	51.9	.	50.2
TN19-4100	47.2	55.0	.	48.5
TN19-4101	47.4	49.4	.	47.1
TN19-5750R1	45.7	52.4	.	46.6
V16-2451R2	47.2	52.2	.	49.5
V16-2471R	50.5	52.1	.	49.9
V17-2099DTR	51.3	53.8	.	50.8
V17-2131R	49.1	54.3	.	48.6
V17-2460R	48.0	54.2	.	49.2
V17-2924R	45.1	53.4	.	46.4
Mean	48.0	52.7	.	48.7
LSD(0.05)	.	.	.	1.2
CV(%)	.	.	.	2.6

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST V-EARLY 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
Ellis	10.5	3.8	25.6	53.4	6.8
AG53X9	10.0	4.3	23.9	55.1	6.7
DA1405-212-3F	7.1	2.8	83.8	4.2	2.1
DA1405-221-1F	7.1	2.7	85.1	3.2	1.9
DA1585-564F	7.1	3.2	85.6	0.9	3.2
R18-67F	7.3	3.2	78.8	8.3	2.4
S19-19741C	6.9	3.1	83.6	4.6	1.8
TN18-4130	7.3	2.8	80.2	7.4	2.3
TN19-5750R1	7.1	2.6	86.1	2.5	1.8
Mean	7.8	3.1	70.3	15.5	3.2
LSD(0.05)	0.5	0.2	5.6	4.8	0.5
CV(%)	5.7	5.7	7.9	30.4	14.4

† Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Test Mean
Ellis	9.4	9.8	10.5	10.9	10.7	10.8	10.8	10.7	10.5
AG53X9	10.1	9.9	10.2	10.4	10.7	9.6	9.4	9.7	10.0
DA1405-212-3F	6.6	.	7.2	6.9	6.9	7.5	7.2	7.6	7.1
DA1405-221-1F	6.9	7.5	7.3	6.9	7.3	6.9	6.6	7.3	7.1
DA1585-564F	6.4	7.2	7.0	6.8	7.2	7.6	7.2	7.3	7.1
R18-67F	7.9	7.1	7.1	8.1	7.1	7.0	6.5	7.5	7.3
S19-19741C	6.7	6.9	6.6	6.7	6.7	6.8	7.1	7.4	6.9
TN18-4130	6.8	7.3	8.1	8.7	6.9	6.6	6.8	7.5	7.3
TN19-5750R1	6.4	7.3	6.8	6.9	7.2	7.5	7.2	7.9	7.1
Mean	7.5	7.9	7.9	8.0	7.9	7.8	7.6	8.1	7.8
LSD(0.05)	.	.	.	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	.	.	.	5.7

SEED STEARIC ACID (%)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Test Mean
Ellis	3.7	3.3	3.9	4.3	3.6	3.6	3.8	3.9	3.8
AG53X9	4.5	4.1	4.3	4.4	4.0	4.1	4.5	4.3	4.3
DA1405-212-3F	2.9	.	2.8	2.7	2.7	2.7	2.9	2.7	2.8
DA1405-221-1F	2.7	2.6	2.8	2.7	2.6	2.4	2.8	2.8	2.7
DA1585-564F	3.0	3.1	3.6	3.1	3.2	3.2	3.2	2.9	3.2
R18-67F	3.3	3.3	3.3	3.4	3.3	3.2	3.1	2.9	3.2
S19-19741C	3.1	3.2	3.2	3.2	3.1	2.8	3.1	3.0	3.1
TN18-4130	2.7	2.8	3.0	3.5	2.7	2.6	2.7	2.3	2.8
TN19-5750R1	2.6	2.7	2.7	2.5	2.6	2.6	2.4	2.2	2.6
Mean	3.2	3.1	3.3	3.3	3.1	3.0	3.2	3.0	3.1
LSD(0.05)	.	.	.	.	.	.	.	.	0.2
CV(%)	.	.	.	.	.	.	.	.	5.7

SEED OLEIC ACID (%)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Test Mean
Ellis	27.4	44.6	22.9	21.7	19.6	19.0	20.0	29.6	25.6
AG53X9	22.6	21.1	22.0	22.7	20.1	23.9	23.5	35.5	23.9
DA1405-212-3F	83.7	.	82.7	84.0	84.5	82.8	83.5	84.3	83.8
DA1405-221-1F	85.2	83.0	84.8	85.3	84.9	86.4	86.1	85.4	85.1
DA1585-564F	86.8	85.9	85.4	85.0	85.4	84.8	85.6	85.9	85.6
R18-67F	69.2	84.8	84.2	63.2	84.9	79.9	86.5	77.8	78.8
S19-19741C	82.5	82.1	83.0	83.5	83.7	85.4	84.2	84.6	83.6
TN18-4130	85.8	84.7	69.7	56.8	85.3	86.9	85.8	86.7	80.2
TN19-5750R1	86.8	85.4	85.6	86.5	84.9	85.9	86.9	86.6	86.1
Mean	70.0	71.5	68.9	65.4	70.4	70.6	71.3	72.9	70.3
LSD(0.05)	.	.	.	.	.	.	.	.	5.6
CV(%)	.	.	.	.	.	.	.	.	7.9

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Test Mean
Ellis	52.6	36.5	55.4	56.5	58.2	59.5	58.3	49.7	53.4
AG53X9	56.0	57.8	56.1	55.6	57.6	56.5	56.2	45.0	55.1
DA1405-212-3F	4.5	.	5.1	4.3	3.9	4.7	4.4	3.4	4.2
DA1405-221-1F	3.3	4.6	3.2	3.1	3.3	2.5	2.8	2.6	3.2
DA1585-564F	0.6	0.7	0.6	1.5	0.6	1.5	1.1	1.1	0.9
R18-67F	16.9	2.9	3.0	21.5	2.5	8.1	2.2	9.5	8.3
S19-19741C	5.8	5.8	5.2	4.7	4.7	3.4	3.8	3.3	4.6
TN18-4130	2.8	3.2	16.0	26.7	3.1	2.2	2.9	2.0	7.4
TN19-5750R1	2.4	2.8	2.6	2.4	3.5	2.3	1.9	1.8	2.5
Mean	16.1	14.3	16.4	19.6	15.3	15.6	14.8	13.2	15.5
LSD(0.05)	.	.	.	.	.	.	.	.	4.8
CV(%)	.	.	.	.	.	.	.	.	30.4

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP V-EARLY 2021

STRAIN/ VARIETY	Jackson, TN	Keiser, AR	Kinston, NC	Knoxville, TN	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Test Mean
Ellis	6.9	5.7	7.2	6.6	7.8	7.0	7.1	6.1	6.8
AG53X9	6.8	7.2	7.5	6.8	7.6	6.0	6.4	5.5	6.7
DA1405-212-3F	2.2	.	2.2	2.1	1.9	2.3	2.0	2.0	2.1
DA1405-221-1F	1.9	2.2	2.0	2.0	2.0	1.8	1.7	1.9	1.9
DA1585-564F	3.2	3.1	3.4	3.7	3.7	2.9	2.9	2.7	3.2
R18-67F	2.7	1.9	2.3	3.8	2.2	1.9	1.7	2.3	2.4
S19-19741C	1.9	2.0	1.9	1.8	1.8	1.6	1.7	1.8	1.8
TN18-4130	1.9	1.9	3.3	4.3	1.9	1.7	1.8	1.5	2.3
TN19-5750R1	1.8	1.8	2.2	1.8	1.8	1.7	1.6	1.5	1.8
Mean	3.3	3.2	3.6	3.6	3.4	3.0	3.0	2.8	3.2
LSD(0.05)	.	.	.	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	.	.	.	14.4

INTENTIONALLY BLANK

TABLE 76 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP V-LATE 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG 55X7	Commercial check	check		RRX	
2	TN11-5140	Commercial check	check		CONV	
3	AG56X8	Commercial check	check		RRX	
4	N16-8423	NC-Roy x LG01-5087-5	Fallen	F4	CONV	diversity
5	N16-8437	NC-Roy x LG01-5087-5	Fallen	F4	CONV	diversity
6	N16-8531	Osage x Holiday	Fallen	F4	CONV	
7	N16-8564	Osage x Holiday	Fallen	F4	CONV	
8	N17-1791	HR09-397 x R06-3789	Mian		CONV	high protein
9	N18-1188	NCC06-1090 x R11-8011	Mian		CONV	high protein
10	N18-688	NCC06-1090 x UA5814HP	Mian		CONV	high protein
11	N18-952	UA5814HP x N09-9	Mian		CONV	high protein
12	N18-963	UA5814HP x N09-9	Mian		CONV	high protein
13	NDPJE-14-194	N07-14221 x Clifford	Fallen	F4	CONV	
14	NDPJE-14-217	N07-14221 x Clifford	Fallen	F4	CONV	
15	R15-7063	R10-5434 x Md0708WN93	L. Mozzoni		CONV	
16	R17-1079	R09-1970 x R08-47	L. Mozzoni		CONV	
17	R17-3393	R08-3377 x R04-357	L. Mozzoni		CONV	elevated protein
18	R17-3488	S07-6557 x R07-1685	L. Mozzoni		CONV	
19	R18-14286	S09-13635 x R12-712	L. Mozzoni		CONV	
20	R18-3250	S09-10871 x R05-3239	L. Mozzoni		CONV	
21	TN19-5748R1	TN13-5538R1 (4) x TN13-5001LL x TN13-5538R1(4) x TN10-4037-HO-530-214	Pantalone		RR1	HOLN
22	TN20-5036	TN14-5017 x S11-17025	Pantalone		CONV	
23	V14-3987	(Glenn x V03-4660) x Glenn	Zhang	F4	CONV	
24	V16-0157	HUTCHESON x LV 75	Zhang	F4	CONV	
25	V16-1816R2HP	V07-0873 x RR2Y	Zhang	F4	RR1	
26	V16-1923R	HANOVER x V04-1022	Zhang	F4	RR1	
27	V17-0156HP	V10-1687 x R09-3513	Zhang	F4	CONV	
28	V17-1195TI	Glenn x PI 547656	Zhang	F4	CONV	

† Conv= Conventional(non-transgenic),LL= Liberty Link®, RR1= Roundup Ready®, RR2= Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high oleic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 77 - GENERAL SUMMARY OF PERFORMANCE
PRELIMINARY TEST V-LATE 2021

STRAIN/ VARIETY	SEED YIELD†	RANK	AVG. RANK	MAT. INDEX	LOD	HT	SCN Cyst Score (1-5)‡ Race 2	Race 3	Race 5	SC RATING	SC SCORE
AG 55X7	77.6	3	10	0	1.3	28	.	5	.	R	1
TN11-5140	80.3	1	5	5	1.9	33	.	4	.	R	1
AG56X8	76.7	4	9	0	1.6	31	.	1	.	R	1
N16-8423	63.5	26	21	5	1.2	27	.	5	.	R	1
N16-8437	64.7	21	18	6	1.3	28	.	5	.	S	5
N16-8531	64.5	24	19	0	1.2	23	.	4	.		.
N16-8564	74.8	10	9	1	1.4	25	.	3	.	MS	4
N17-1791	68.5	15	15	2	3.2	40	.	3	.	R	1
N18-1188	74.8	9	10	4	1.9	29	.	4	.	SS	3
N18-688	80.2	2	7	7	2.7	32	.	5	.	R	1
N18-952	75.0	8	10	3	1.9	31	.	4	.	R	1
N18-963	75.6	5	8	3	1.5	29	.	4	.	R	1
NDPJE-14-194	73.1	12	11	0	2.1	30	.	3	.	SS	3
NDPJE-14-217	72.6	13	14	-2	1.6	28	.	5	.	MR	2
R15-7063	75.4	7	8	2	2.1	32	.	4	.	R	1
R17-1079	66.4	16	17	0	1.7	29	.	2	.	R	1
R17-3393	63.5	25	19	3	2.3	34	.	4	.	MS	4
R17-3488	75.5	6	9	0	2.2	30	.	5	.	R	1
R18-14286	64.8	19	19	0	3.3	41	.	5	.	R	1
R18-3250	74.3	11	10	2	1.8	36	.	5	.	R	1
TN19-5748R1	66.3	18	18	0	1.6	29	.	3	.	MS	4
TN20-5036	64.6	22	20	-1	1.2	26	.	2	.	MS	4
V14-3987	64.8	20	15	3	1.3	23	.	5	.	R	1
V16-0157	70.9	14	13	-1	1.4	27	.	5	.	R	1
V16-1816R2HP	55.6	28	25	4	1.2	26	.	5	.	R	1
V16-1923R	66.3	17	18	1	1.5	28	.	5	.	R	1
V17-0156HP	64.6	23	20	1	2.1	25	.	5	.		.
V17-1195TI	59.1	27	25	-2	3	40	.	5	.	R	1
Mean	69.8	.	.	2	1.8	30	.	.	.		.
LSD(0.05)	9.5	.	.	3	0.6	3	.	.	.		.
CV(%)	12.9	.	.	201	39.1	13	.	.	.		.

† Data not included in the test mean: Knoxville,TN; Starkville,MS

‡The race 3 SCN population used in these tests was typed as HG (*Heterodera glycines*) Type 0.

TABLE 78 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST V-LATE 2021

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
AG 55X7	2.1	14.2	36.0	19.2	48.4			
TN11-5140	2.0	15.2	36.1	19.0	48.5			
AG56X8	2.4	16.0	35.7	18.9	47.8			
N16-8423	1.9	13.1	34.1	19.6	46.0	P	G	
N16-8437	1.8	13.4	34.6	18.9	46.4	P	G	
N16-8531	2.4	13.9	38.2	17.9	50.5	P	G	
N16-8564	2.5	13.5	36.9	19.2	49.6	P	G	
N17-1791	2.4	17.4	40.0	18.4	53.4	P	T	
N18-1188	2.8	16.0	38.2	17.9	50.5	P	T	
N18-688	2.0	17.1	36.7	18.9	49.2	W	T	
N18-952	2.1	14.6	39.7	18.4	52.9	P	T	
N18-963	1.6	15.8	36.7	19.4	49.5	W	T	
NDPJE-14-194	2.3	15.9	35.9	19.3	48.3	P	T	
NDPJE-14-217	2.0	15.0	36.6	19.1	49.1	P	T	
R15-7063	2.3	12.7	35.5	19.2	47.7	S	G	Tn
R17-1079	2.3	13.5	37.9	17.9	50.1	W	G	Tn
R17-3393	2.1	13.0	38.3	17.3	50.3	W	G	Tn
R17-3488	2.4	13.9	37.3	18.2	49.6	P	T	Br
R18-14286	2.8	15.0	37.1	18.3	49.3	P	Lt	Br
R18-3250	1.9	14.8	34.7	19.3	46.7	P	T	Br
TN19-5748R1	2.6	13.1	34.3	20.3	46.8			
TN20-5036	2.4	12.4	36.1	19.6	48.8			
V14-3987	2.5	14.4	37.4	18.3	49.8	W	G	
V16-0157	2.1	15.4	38.4	18.5	51.2	W	T	
V16-1816R2HP	1.6	12.5	40.0	16.7	52.2	P	G	
V16-1923R	1.8	13.4	36.8	18.6	49.2	P	T	
V17-0156HP	2.1	14.4	39.5	17.6	52.1	W	G	
V17-1195TI	2.3	14.5	36.4	19.0	48.8	W	T	
Mean	2.2	14.4	37.0	18.7	49.4			
LSD(0.05)	0.7	1.2	1.2	0.8	1.3			
CV(%)	26.6	9.4	2.9	3.8	2.3			

§ Protein percentage and oil percentage are reported on a 13% moisture basis beginning in 2015.

TABLE 79 - SEED YIELD (BUSHELS PER ACRE)
PRELIMINARY GROUP V-LATE 2021 †

STRAIN/ VARIETY	Keiser, AR *	Kinston, NC	Knoxville, TN	Starkville, MS	Stoneville, MS *	Stuttgart, AR*	Tallassee, AL	Warsaw, VA	Test Mean
AG 55X7	78.2	63.9	60.5	76.8	78.5	59.5	97.8	85.9	77.6
TN11-5140	82.2	67.9	56.4	65.0	69.1	.	89.6	101.5	80.3
AG56X8	84.0	71.5	50.0	68.6	66.6	48.0	93.9	92.5	76.7
N16-8423	56.3	61.6	40.4	61.2	48.6	65.3	64.1	84.8	63.5
N16-8437	64.8	65.8	35.8	69.6	42.4	65.0	70.5	79.9	64.7
N16-8531	60.6	62.5	36.5	41.5	66.5	50.7	58.7	88.0	64.5
N16-8564	64.3	72.8	44.3	55.9	74.7	62.8	68.3	105.9	74.8
N17-1791	68.5	64.1	51.8	69.1	51.5	72.8	65.6	88.5	68.5
N18-1188	68.8	69.9	53.4	72.1	63.9	60.6	93.3	92.3	74.8
N18-688	76.2	67.8	49.3	58.1	63.8	84.0	89.2	100.3	80.2
N18-952	74.6	65.2	50.1	69.0	61.9	64.8	88.4	94.8	75.0
N18-963	68.8	72.5	40.8	61.3	63.4	70.2	77.9	100.4	75.6
NDPJE-14-194	68.4	69.9	41.0	61.1	64.3	54.7	85.2	94.6	73.1
NDPJE-14-217	67.1	62.6	45.8	70.6	69.5	50.2	94.8	90.5	72.6
R15-7063	70.2	69.4	62.9	84.3	70.0	62.5	77.8	102.3	75.4
R17-1079	67.2	60.0	39.8	77.6	66.3	69.7	46.5	89.0	66.4
R17-3393	68.1	63.2	52.4	69.9	57.0	61.5	46.6	85.9	63.5
R17-3488	67.9	64.2	43.7	69.9	67.3	69.8	88.3	95.2	75.5
R18-14286	72.2	59.7	50.1	66.7	59.8	54.0	55.8	86.7	64.8
R18-3250	72.5	69.7	42.0	63.5	59.4	68.0	85.8	90.9	74.3
TN19-5748R1	48.7	61.9	29.1	51.3	64.1	50.5	76.4	94.8	66.3
TN20-5036	55.3	61.7	41.1	68.1	.	55.5	69.0	89.5	64.6
V14-3987	36.1	67.4	42.6	61.9	68.6	52.4	62.4	100.9	64.8
V16-0157	62.6	65.8	52.5	57.9	70.6	63.5	77.0	86.1	70.9
V16-1816R2HP	55.3	55.9	20.0	74.3	.	52.0	38.3	85.2	55.6
V16-1923R	60.4	57.3	35.5	64.0	51.5	63.2	74.9	90.4	66.3
V17-0156HP	59.8	63.7	57.7	63.0	57.6	49.0	67.2	90.1	64.6
V17-1195TI	59.4	55.6	43.9	70.3	50.4	51.2	56.6	81.5	59.1
Mean	65.7	64.8	45.3	65.8	62.6	60.4	73.6	91.7	69.8
LSD(0.05)	5.5	7.0	14.6	25.2	9.0	13.0	16.5	12.4	9.5
LSD(0.10)	4.5	5.8	12.1	21.0	7.5	10.7	13.7	10.3	8.0
CV(%)	4.0	5.2	15.7	18.4	7.0	8.8	10.9	6.6	12.9

† Data not included in the test mean: Knoxville,TN; Starkville,MS

* Locations with obvious damage consistent with exposure to the herbicide Dicamba. The Dicamba resistant checks (all the AG lines) may have had a yield advantage.

TABLE 80 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	*Keiser, AR*	*Kinston, NC*	*Knoxville, TN*	*Starkville, MS*	*Stoneville, MS*	*Stuttgart, AR*	*Tallassee, AL*	*Warsaw, VA*	*Test Mean*
AG 55X7	10/14	10/11	10/13	.	9/23	10/7	10/7	9/7	10/3
TN11-5140	4	9	1	.	4	9	3	10	5
AG56X8	2	4	1	.	1	0	-4	-1	0
N16-8423	-1	7	0	.	7	8	0	12	5
N16-8437	3	7	0	.	10	10	4	9	6
N16-8531	-2	1	0	.	1	-1	-3	1	0
N16-8564	-2	5	-1	.	1	1	-2	7	1
N17-1791	-2	4	2	.	5	1	-4	10	2
N18-1188	2	8	2	.	0	2	3	11	4
N18-688	2	8	4	.	6	6	6	16	7
N18-952	0	7	1	.	2	3	-1	7	3
N18-963	1	7	-1	.	2	5	-2	7	3
NDPJE-14-194	-1	3	1	.	2	-1	-2	-1	0
NDPJE-14-217	-2	1	1	.	1	-9	-3	0	-2
R15-7063	-1	8	0	.	7	2	-2	3	2
R17-1079	-1	1	0	.	0	1	2	0	0
R17-3393	4	6	1	.	3	3	-3	5	3
R17-3488	-2	0	0	.	0	1	-1	-1	0
R18-14286	-2	2	1	.	1	1	-2	-2	0
R18-3250	1	8	1	.	6	1	-4	-1	2
TN19-5748R1	-2	6	-1	.	0	-2	-2	-2	0
TN20-5036	1	1	0	.	0	-2	-2	-5	-1
V14-3987	2	9	0	.	4	-1	-3	11	3
V16-0157	-2	0	2	.	1	-2	-3	-1	-1
V16-1816R2HP	3	7	-1	.	5	6	-2	12	4
V16-1923R	-1	2	1	.	2	1	-3	2	1
V17-0156HP	-2	7	0	.	4	-2	-3	6	1
V17-1195TI	-5	0	0	.	1	-2	-1	-3	-2
Mean	0	4	0	.	3	1	-1	4	2
LSD(0.05)	5	4	1	.	3	4	7	10	3
CV(%)	3429	39	131	.	53	149	314	131	201

TABLE 81 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	*Keiser, AR*	*Kinston, NC*	*Knoxville, TN*	*Starkville, MS*	*Stoneville, MS*	*Stuttgart, AR*	*Tallassee, AL*	*Warsaw, VA*	*Test Mean*
AG 55X7	21	34	24	.	30	22	35	33	28
TN11-5140	23	40	29	.	34	24	40	40	33
AG56X8	24	40	29	.	35	29	32	31	31
N16-8423	19	36	21	.	31	21	27	34	27
N16-8437	22	38	20	.	29	21	35	36	28
N16-8531	16	30	17	.	25	16	30	27	23
N16-8564	15	35	20	.	28	17	29	30	25
N17-1791	31	45	32	.	54	35	33	49	40
N18-1188	19	38	26	.	34	20	36	33	29
N18-688	22	40	29	.	36	24	39	34	32
N18-952	19	39	29	.	38	24	33	35	31
N18-963	19	41	23	.	31	21	35	34	29
NDPJE-14-194	18	42	21	.	32	27	38	32	30
NDPJE-14-217	17	40	21	.	35	19	33	29	28
R15-7063	22	43	31	.	35	25	25	42	32
R17-1079	21	39	25	.	35	24	27	34	29
R17-3393	25	42	31	.	41	27	33	40	34
R17-3488	19	37	21	.	34	22	41	37	30
R18-14286	35	46	35	.	51	37	41	46	41
R18-3250	30	41	30	.	46	31	37	39	36
TN19-5748R1	14	40	22	.	34	21	33	38	29
TN20-5036	18	37	19	.	29	16	30	31	26
V14-3987	13	31	20	.	25	17	29	26	23
V16-0157	14	36	27	.	32	22	29	30	27
V16-1816R2HP	18	36	15	.	26	23	29	37	26
V16-1923R	17	40	21	.	32	20	28	38	28
V17-0156HP	14	34	21	.	21	17	39	29	25
V17-1195TI	32	46	34	.	48	34	37	47	40
Mean	20	39	25	.	34	23	33	35	30
LSD(0.05)	5	4	5	.	6	4	13	7	3
CV(%)	11	5	11	.	8	9	18	9	13

TABLE 82 - PLANT LODGING (1-5)
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	Keiser, AR	Kinston, NC	Knoxville, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
AG 55X7	1.0	1.3	2.0	.	1.0	1.0	1.0	2.1	1.3
TN11-5140	1.0	2.0	2.5	.	2.5	2.0	1.0	2.1	1.9
AG56X8	1.5	1.5	2.5	.	2.0	1.0	1.0	1.4	1.6
N16-8423	1.0	1.8	1.8	.	1.0	1.0	1.0	1.2	1.2
N16-8437	1.0	1.3	1.8	.	1.0	1.0	1.0	2.0	1.3
N16-8531	1.0	1.5	2.0	.	1.0	1.0	1.0	1.1	1.2
N16-8564	1.0	1.8	2.0	.	1.0	1.0	1.0	2.0	1.4
N17-1791	3.0	1.5	3.0	.	4.0	3.0	4.5	3.7	3.2
N18-1188	1.0	1.8	2.3	.	2.0	1.0	2.0	3.2	1.9
N18-688	1.0	2.5	3.0	.	4.0	1.0	3.5	4.2	2.7
N18-952	1.0	2.3	2.8	.	2.5	1.0	1.0	2.5	1.9
N18-963	1.0	2.0	2.0	.	2.0	1.0	1.0	1.6	1.5
NDPJE-14-194	1.0	2.3	2.3	.	3.0	2.0	1.5	2.4	2.1
NDPJE-14-217	1.0	1.8	2.3	.	2.5	1.0	1.0	1.6	1.6
R15-7063	1.0	2.3	2.8	.	3.0	1.0	1.0	3.7	2.1
R17-1079	1.0	1.8	2.5	.	1.5	1.0	1.5	2.7	1.7
R17-3393	1.0	2.0	3.0	.	3.5	2.0	1.0	3.3	2.3
R17-3488	1.0	1.8	2.0	.	2.0	1.0	5.0	2.8	2.2
R18-14286	3.5	2.0	3.0	.	4.0	2.5	4.5	3.5	3.3
R18-3250	1.5	1.5	2.0	.	2.5	1.5	2.0	1.4	1.8
TN19-5748R1	1.0	1.8	2.2	.	1.5	1.0	1.0	2.7	1.6
TN20-5036	1.0	1.0	1.8	.	1.0	1.0	1.0	1.5	1.2
V14-3987	1.0	1.3	2.0	.	1.0	1.0	1.5	1.0	1.3
V16-0157	1.0	1.5	2.5	.	1.0	1.0	1.0	1.5	1.4
V16-1816R2HP	1.0	1.3	1.8	.	1.0	1.0	1.0	1.5	1.2
V16-1923R	1.0	1.5	1.8	.	2.0	1.0	1.0	2.0	1.5
V17-0156HP	1.0	1.8	2.5	.	1.0	1.0	3.0	4.2	2.1
V17-1195TI	2.0	2.0	3.5	.	4.0	2.0	3.0	4.2	3.0
Mean	1.2	1.7	2.3	.	2.1	1.3	1.8	2.4	1.8
LSD(0.05)	0.5	0.6	0.4	.	0.7	1	2.0	1.6	0.6
CV(%)	18.8	16.4	7.5	.	16.8	38.9	55.0	32.1	39.1

TABLE 83 - SEED QUALITY (1-5)
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	Keiser, AR	Kinston, NC	Knoxville, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
AG 55X7	1.5		2.0	.	.	2.5	2.5	.	2.1
TN11-5140	1.5		1.5	.	.	2.0	3.0	.	2.0
AG56X8	2.5		1.5	.	.	2.5	3.0	.	2.4
N16-8423	2.0		1.0	.	.	1.5	3.0	.	1.9
N16-8437	1.5		1.0	.	.	1.5	3.0	.	1.8
N16-8531	2.5		1.5	.	.	2.5	3.0	.	2.4
N16-8564	2.0		1.0	.	.	4.0	3.0	.	2.5
N17-1791	2.0		1.5	.	.	3.0	3.0	.	2.4
N18-1188	3.5		1.5	.	.	3.0	3.0	.	2.8
N18-688	1.5		1.0	.	.	2.5	3.0	.	2.0
N18-952	1.5		1.5	.	.	2.5	3.0	.	2.1
N18-963	1.0		1.0	.	.	2.0	2.5	.	1.6
NDPJE-14-194	3.0		1.5	.	.	2.0	2.5	.	2.3
NDPJE-14-217	2.5		1.0	.	.	2.0	2.5	.	2.0
R15-7063	2.0		1.0	.	.	3.0	3.0	.	2.3
R17-1079	2.5		2.0	.	.	2.0	2.5	.	2.3
R17-3393	1.5		1.5	.	.	2.5	3.0	.	2.1
R17-3488	3.0		1.0	.	.	2.5	3.0	.	2.4
R18-14286	3.0		1.5	.	.	3.5	3.0	.	2.8
R18-3250	1.5		1.5	.	.	2.0	2.5	.	1.9
TN19-5748R1	3.5		1.5	.	.	3.0	2.5	.	2.6
TN20-5036	2.5		2.0	.	.	2.0	3.0	.	2.4
V14-3987	3.5		1.5	.	.	2.0	3.0	.	2.5
V16-0157	2.0		1.0	.	.	3.0	2.5	.	2.1
V16-1816R2HP	1.5		1.0	.	.	1.5	2.5	.	1.6
V16-1923R	1.5		1.0	.	.	2.0	2.5	.	1.8
V17-0156HP	2.0		1.0	.	.	3.0	2.5	.	2.1
V17-1195TI	2.0		2.0	.	.	2.5	2.5	.	2.3
Mean	2.2		1.4	.	.	2.4	2.8	.	2.2
LSD(0.05)	1.1			.	.	1	1.3	.	0.7
CV(%)	25.5		0.0	.	.	19.1	21.8	.	26.6

TABLE 84 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	Keiser, AR	Kinston, NC	Knoxville, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
AG 55X7	12.8	13.9	15.0	.	11.9	13.0	18.6	.	14.2
TN11-5140	16.1	14.7	15.1	.	11.4	15.6	17.5	.	15.2
AG56X8	16.8	17.1	17.1	.	14.2	15.5	15.7	.	16.0
N16-8423	13.7	13.5	13.1	.	10.7	13.4	13.9	.	13.1
N16-8437	13.2	13.5	13.1	.	11.5	13.8	15.4	.	13.4
N16-8531	14.4	12.9	14.2	.	12.0	12.8	17.1	.	13.9
N16-8564	13.2	12.9	12.5	.	12.3	14.6	15.9	.	13.5
N17-1791	16.9	18.1	18.7	.	12.9	17.1	19.5	.	17.4
N18-1188	16.6	15.9	16.8	.	12.0	16.0	18.1	.	16.0
N18-688	18.2	17.4	17.0	.	14.0	17.5	18.2	.	17.1
N18-952	13.5	15.3	16.1	.	11.0	13.4	18.3	.	14.6
N18-963	16.2	16.4	15.5	.	13.0	16.0	17.2	.	15.8
NDPJE-14-194	16.4	17.3	15.4	.	13.0	15.2	17.7	.	15.9
NDPJE-14-217	16.8	16.8	15.9	.	12.8	12.2	16.3	.	15.0
R15-7063	12.6	12.3	12.2	.	10.2	11.3	17.5	.	12.7
R17-1079	13.2	14.0	13.2	.	11.7	12.1	16.8	.	13.5
R17-3393	12.6	12.9	12.6	.	10.5	12.0	17.3	.	13.0
R17-3488	13.2	14.2	13.5	.	11.7	14.0	17.2	.	13.9
R18-14286	15.1	16.0	15.6	.	12.3	15.0	15.6	.	15.0
R18-3250	14.3	14.6	14.4	.	12.6	14.0	18.9	.	14.8
TN19-5748R1	12.1	13.3	12.9	.	11.4	12.2	17.0	.	13.1
TN20-5036	12.2	13.2	12.1	.	11.3	11.9	14.4	.	12.4
V14-3987	14.9	14.7	13.3	.	13.6	13.2	17.4	.	14.4
V16-0157	15.8	15.8	14.7	.	13.4	14.2	18.8	.	15.4
V16-1816R2HP	12.1	11.2	12.2	.	9.5	11.4	18.5	.	12.5
V16-1923R	14.8	13.9	14.0	.	10.6	12.5	14.5	.	13.4
V17-0156HP	14.6	15.8	13.6	.	13.2	13.0	16.4	.	14.4
V17-1195TI	14.5	14.9	15.8	.	12.1	12.8	16.9	.	14.5
Mean	14.5	14.7	14.5	.	12.0	13.8	17.0	.	14.4
LSD(0.05)	2.2	1.2	0.2	.	.	2.1	5.4	.	1.2
CV(%)	7.4	3.8	0.7	.	.	7.4	15.1	.	9.4

TABLE 85 - OIL (%)†
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	Keiser, AR	Kinston, NC	Knoxville, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
AG 55X7	19.2	18.5	19.4	.	19.5	19.9	18.6	.	19.2
TN11-5140	18.5	19.4	19.4	.	18.9	18.4	19.6	.	19.0
AG56X8	18.4	18.9	18.7	.	19.2	18.9	19.1	.	18.9
N16-8423	19.2	19.8	19.2	.	18.9	20.3	19.9	.	19.6
N16-8437	18.9	19.0	18.3	.	18.1	19.6	19.4	.	18.9
N16-8531	17.5	17.7	18.0	.	17.9	18.5	17.7	.	17.9
N16-8564	19.3	19.1	19.2	.	19.4	19.4	18.7	.	19.2
N17-1791	18.7	18.9	18.7	.	17.6	18.3	18.6	.	18.4
N18-1188	17.5	18.2	18.3	.	17.6	18.2	17.7	.	17.9
N18-688	18.6	18.8	18.4	.	18.4	19.1	20.0	.	18.9
N18-952	17.1	17.9	18.2	.	16.6	19.7	21.1	.	18.4
N18-963	20.4	18.7	19.7	.	19.5	20.3	17.9	.	19.4
NDPJE-14-194	19.5	19.2	19.2	.	18.9	18.9	20.1	.	19.3
NDPJE-14-217	19.0	19.4	18.7	.	19.1	19.5	18.7	.	19.1
R15-7063	19.4	19.4	19.1	.	18.6	19.2	19.6	.	19.2
R17-1079	17.3	17.7	18.3	.	17.8	17.8	18.6	.	17.9
R17-3393	17.1	17.8	16.8	.	17.1	17.3	17.9	.	17.3
R17-3488	17.9	17.6	18.5	.	18.5	18.7	18.0	.	18.2
R18-14286	18.5	17.4	17.1	.	19.6	18.3	18.9	.	18.3
R18-3250	18.8	19.4	19.5	.	19.4	20.6	18.0	.	19.3
TN19-5748R1	20.5	20.1	20.3	.	20.5	20.7	19.6	.	20.3
TN20-5036	19.4	18.8	19.3	.	19.8	20.0	20.6	.	19.6
V14-3987	18.1	18.0	18.1	.	17.7	18.5	19.3	.	18.3
V16-0157	18.1	18.3	19.0	.	18.8	18.8	17.6	.	18.5
V16-1816R2HP	16.7	17.2	15.7	.	15.2	16.2	19.4	.	16.7
V16-1923R	18.9	19.8	19.0	.	18.4	19.7	16.0	.	18.6
V17-0156HP	17.4	17.7	16.9	.	16.8	17.8	19.2	.	17.6
V17-1195TI	19.4	18.6	19.3	.	18.9	19.4	18.1	.	19.0
Mean	18.5	18.6	18.6	.	18.5	19.0	18.9	.	18.7
LSD(0.05)	.	.	.	.	.	.	.	.	0.8
CV(%)	.	.	.	.	.	.	.	.	3.8

† Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 86 - PROTEIN (%)†
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	Keiser, AR	Kinston, NC	Knoxville, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
AG 55X7	34.8	36.7	34.8	.	35.7	35.1	38.7	.	36.0
TN11-5140	35.8	35.3	35.8	.	36.3	36.7	36.8	.	36.1
AG56X8	35.7	35.2	35.0	.	35.8	36.1	36.3	.	35.7
N16-8423	33.9	34.3	34.5	.	34.0	33.0	34.6	.	34.1
N16-8437	33.1	34.7	36.0	.	35.6	33.5	34.8	.	34.6
N16-8531	36.9	38.8	37.7	.	38.3	37.6	39.7	.	38.2
N16-8564	34.7	37.1	36.9	.	36.2	37.4	39.1	.	36.9
N17-1791	38.7	38.5	39.8	.	41.6	40.8	40.8	.	40.0
N18-1188	37.8	37.6	37.8	.	38.5	38.7	38.5	.	38.2
N18-688	35.7	36.2	37.2	.	36.5	35.8	39.1	.	36.7
N18-952	39.9	40.6	40.2	.	40.2	38.8	38.5	.	39.7
N18-963	33.7	38.3	36.6	.	37.3	35.5	38.7	.	36.7
NDPJE-14-194	34.8	36.1	36.5	.	36.4	36.0	35.5	.	35.9
NDPJE-14-217	35.8	36.0	37.0	.	36.3	36.5	37.8	.	36.6
R15-7063	33.1	35.1	35.6	.	35.7	35.3	38.0	.	35.5
R17-1079	37.4	37.8	37.8	.	38.6	37.9	37.7	.	37.9
R17-3393	37.1	36.9	39.2	.	38.2	38.4	39.8	.	38.3
R17-3488	37.0	37.5	37.3	.	37.4	37.0	38.0	.	37.3
R18-14286	35.9	38.1	40.4	.	34.8	36.6	36.7	.	37.1
R18-3250	33.9	33.6	34.5	.	34.5	32.5	39.2	.	34.7
TN19-5748R1	33.1	34.3	35.2	.	34.3	34.0	35.2	.	34.3
TN20-5036	35.8	36.6	36.4	.	35.7	35.9	36.1	.	36.1
V14-3987	36.7	37.7	37.1	.	38.7	36.4	38.0	.	37.4
V16-0157	38.5	38.1	37.1	.	39.5	37.4	39.9	.	38.4
V16-1816R2HP	39.3	39.4	40.8	.	40.9	40.5	39.1	.	40.0
V16-1923R	35.2	35.9	37.3	.	36.8	35.4	40.4	.	36.8
V17-0156HP	38.3	40.8	40.8	.	41.6	38.9	36.7	.	39.5
V17-1195TI	33.1	36.3	36.6	.	36.8	35.8	39.7	.	36.4
Mean	35.9	36.9	37.2	.	37.2	36.5	38.0	.	37.0
LSD(0.05)	.	.	.	.	.	.	.	.	1.2
CV(%)	.	.	.	.	.	.	.	.	2.9

† Protein percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 87 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	Keiser, AR	Kinston, NC	Knoxville, TN	Starkville, MS	Stoneville, MS	Stuttgart, AR	Tallassee, AL	Warsaw, VA	Test Mean
AG 55X7	46.8	49.0	47.0	.	48.2	47.7	51.6	.	48.4
TN11-5140	47.7	47.5	48.2	.	48.6	48.9	49.7	.	48.5
AG56X8	47.6	47.3	46.8	.	48.1	48.3	48.7	.	47.8
N16-8423	45.6	46.5	46.4	.	45.5	45.1	47.0	.	46.0
N16-8437	44.4	46.5	48.0	.	47.3	45.2	46.9	.	46.4
N16-8531	48.5	51.3	50.0	.	50.7	50.2	52.4	.	50.5
N16-8564	46.7	49.8	49.6	.	48.8	50.4	52.3	.	49.6
N17-1791	51.7	51.6	53.2	.	54.8	54.3	54.5	.	53.4
N18-1188	49.8	50.0	50.2	.	50.8	51.4	50.9	.	50.5
N18-688	47.6	48.5	49.5	.	48.7	48.0	53.0	.	49.2
N18-952	52.3	53.7	53.4	.	52.5	52.5	53.0	.	52.9
N18-963	46.1	51.2	49.6	.	50.4	48.4	51.2	.	49.5
NDPJE-14-194	47.0	48.6	49.0	.	48.8	48.3	48.3	.	48.3
NDPJE-14-217	48.1	48.5	49.4	.	48.7	49.3	50.5	.	49.1
R15-7063	44.7	47.3	47.8	.	47.7	47.5	51.4	.	47.7
R17-1079	49.1	50.0	50.3	.	50.9	50.1	50.4	.	50.1
R17-3393	48.6	48.8	51.3	.	50.2	50.4	52.6	.	50.3
R17-3488	48.9	49.5	49.7	.	49.9	49.4	50.3	.	49.6
R18-14286	47.9	50.1	53.0	.	47.0	48.7	49.2	.	49.3
R18-3250	45.4	45.3	46.6	.	46.5	44.4	52.0	.	46.7
TN19-5748R1	45.3	46.6	48.0	.	46.9	46.5	47.6	.	46.8
TN20-5036	48.3	49.0	49.0	.	48.4	48.8	49.4	.	48.8
V14-3987	48.7	50.0	49.3	.	51.1	48.5	51.2	.	49.8
V16-0157	51.2	50.7	49.8	.	52.8	50.1	52.6	.	51.2
V16-1816R2HP	51.3	51.7	52.6	.	52.4	52.5	52.7	.	52.2
V16-1923R	47.1	48.6	50.0	.	49.1	47.9	52.3	.	49.2
V17-0156HP	50.4	53.8	53.4	.	54.4	51.4	49.4	.	52.1
V17-1195TI	44.7	48.5	49.3	.	49.3	48.2	52.7	.	48.8
Mean	47.9	49.3	49.7	.	49.6	49.0	50.8	.	49.4
LSD(0.05)	.	.	.	.	.	.	.	.	1.3
CV(%)	.	.	.	.	.	.	.	.	2.3

† Estimated meal protein percentage is reported on a 13% moisture basis.

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST V-LATE 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AG 55X7	10.7	3.1	23.5	56.4	6.3
TN11-5140	11.1	3.4	18.7	59.0	7.7
TN19-5748R1	7.6	2.9	81.4	6.0	2.2
Mean	9.8	3.1	41.2	40.5	5.4
LSD(0.05)	0.5	0.2	3.9	3.4	0.6
CV(%)	4.0	5.6	6.6	5.7	8.2

† Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	Keiser, AR	Kinston, NC	Knoxville, TN	Stoneville, MS	Stuttgart, AR	Test Mean
AG 55X7	10.6	10.6	11.0	10.1	11.1	10.7
TN11-5140	11.3	10.5	11.4	11.7	10.8	11.1
TN19-5748R1	7.2	7.5	7.4	7.9	7.8	7.6
Mean	9.7	9.6	9.9	9.9	9.9	9.8
LSD(0.05)	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	4.0

SEED STEARIC ACID (%)
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	Keiser, AR	Kinston, NC	Knoxville, TN	Stoneville, MS	Stuttgart, AR	Test Mean
AG 55X7	3.1	3.3	3.1	2.9	3.0	3.1
TN11-5140	3.3	3.5	3.5	3.5	3.3	3.4
TN19-5748R1	3.3	2.9	2.7	3.1	2.8	2.9
Mean	3.2	3.2	3.1	3.2	3.0	3.1
LSD(0.05)	.	.	.	.	.	0.2
CV(%)	.	.	.	.	.	5.6

SEED OLEIC ACID (%)
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	Keiser, AR	Kinston, NC	Knoxville, TN	Stoneville, MS	Stuttgart, AR	Test Mean
AG 55X7	22.3	29.7	20.1	22.0	23.4	23.5
TN11-5140	17.9	21.3	17.4	18.1	19.0	18.7
TN19-5748R1	81.8	82.5	83.9	74.7	83.9	81.4
Mean	40.6	44.5	40.5	38.2	42.1	41.2
LSD(0.05)	.	.	.	.	.	3.9
CV(%)	.	.	.	.	.	6.6

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	Keiser, AR	Kinston, NC	Knoxville, TN	Stoneville, MS	Stuttgart, AR	Test Mean
AG 55X7	57.3	50.5	58.5	59.3	56.6	56.4
TN11-5140	59.5	57.2	58.9	59.5	59.8	59.0
TN19-5748R1	5.5	4.8	4.0	11.9	3.6	6.0
Mean	40.8	37.5	40.5	43.5	40.0	40.5
LSD(0.05)	.	.	.	.	.	3.4
CV(%)	.	.	.	.	.	5.7

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP V-LATE 2021

STRAIN/ VARIETY	Keiser, AR	Kinston, NC	Knoxville, TN	Stoneville, MS	Stuttgart, AR	Test Mean
AG 55X7	6.6	5.8	7.2	5.8	6.0	6.3
TN11-5140	8.1	7.4	8.8	7.3	7.2	7.7
TN19-5748R1	2.3	2.3	2.0	2.5	1.8	2.2
Mean	5.7	5.2	6.0	5.2	5.0	5.4
LSD(0.05)	.	.	.	.	.	0.6
CV(%)	.	.	.	.	.	8.2

TABLE 88 - PARENTAGE OF ENTRIES
UNIFORM GROUP VI 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG64X8 RR2X	Commercial check	check		RRX	
2	USDA-N6005	Commercial check	check		CONV	
3	NC-Dunphy	Commercial check	check		CONV	
4	NC-Dilday	Commercial check	check		CONV	
5	CZ6730	Commercial check	check		LL	
6	G15-1811R2	R04-342 x G09PR-54457R2	Zenglu Li	F7d	RR2	
7	G15-3361R2	N05-7432 x G09PR-54329R2	Zenglu Li	F7d	RR2	
8	G16-8779	LG06-5920 x G00-3880	Zenglu Li	F4d	CONV	
9	G16LL-10015	G08-394 x [G00-3213(2) x A5547-127 Liberty]	Zenglu Li	F6d	LL	
10	G17-4801R2	N07-14182 x G10PR-56248R2	Zenglu Li	F6d	RR2	
11	G17-8322LL	N08-521 x [G00-3213(4) x A5547-127 Liberty]	Zenglu Li	F5d	LL	
12	G17-8706LL	N07-14182 x [G00-3213(4) x A5547-127 Liberty]	Zenglu Li	F5d	LL	
13	Lee	Public cultivar	Fallen		CONV	
14	N10-7412	5157 x 93705-50	Fallen	F4	CONV	drought
15	N14-7254	G00-3213 x TCHM06-Morph-204	Fallen	F4	CONV	protein
16	N14-7784	N6001 x NC-Roy	Fallen	F4	CONV	diversity/protein
17	N16-1286	NC-Roy-BC(4)HOLN	Mian		CONV	HOLN
18	N16-8876	N02-7002 x NMS4-1-45	Fallen	F4	CONV	diversity/elevated protein
19	N16-9064	N7103 x NMS5-48-2-75	Fallen	F4	CONV	diversity/elevated protein
20	N16-9211	N7103 x NMS5-48-2-75	Fallen	F4	CONV	diversity
21	N17-2535	R09-4095 x NC-Miller	Mian		CONV	high oil
22	NC-Roy	Public cultivar	Mian		CONV	

† Conv= Conventional(non-transgenic), LL=Liberty Link®, RR1=Roundup Ready®, RR2=Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high olelic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 89 - GENERAL SUMMARY OF PERFORMANCE
UNIFORM TEST VI 2021

STRAIN/		AVG.	YIELD†			PROTEIN‡			OIL‡		
VARIETY	RANK	RANK	2021	20-21	19-21	2021	20-21	19-21	2021	20-21	19-21
AG64X8 RR2X	7	10	63.9	58.7	57.2	34.7	34.9	35.3	19.2	19.0	19.1
USDA-N6005	12	14	62.4	.	.	37.2	.	.	17.7	.	.
NC-Dunphy	1	5	68.8	62.3	59.3	34.8	34.6	34.7	19.6	19.6	19.7
NC-Dilday	3	9	65.1	60.0	57.4	33.2	33.6	34.1	20.3	20.1	20.2
CZ6730	2	7	66.4	.	.	35.1	.	.	19.8	.	.
G15-1811R2	5	9	64.5	60.7	60.4	35.3	35.5	35.6	19.0	18.8	18.9
G15-3361R2	8	9	63.8	59.5	59.5	35.7	36.1	36.4	18.1	17.9	18.1
G16-8779	4	8	64.7	60.6	.	35.2	35.3	.	19.0	18.8	.
G16LL-10015	9	10	63.8	59.3	.	35.2	35.3	.	20.0	19.7	.
G17-4801R2	10	11	63.4	.	.	36.6	.	.	18.3	.	.
G17-8322LL	13	13	62.0	.	.	35.9	.	.	18.5	.	.
G17-8706LL	6	10	64.4	.	.	35.3	.	.	19.4	.	.
Lee	22	20	49.7	.	.	37.2	.	.	19.1	.	.
N10-7412	14	12	61.6	56.5	55.5	34.6	35.1	35.3	19.5	19.2	19.5
N14-7254	11	9	62.6	.	.	35.3	.	.	19.5	.	.
N14-7784	18	12	60.6	.	.	36.8	.	.	18.2	.	.
N16-1286	17	12	60.7	.	.	37.0	.	.	19.3	.	.
N16-8876	19	12	60.6	57.7	.	36.9	37.0	.	18.7	18.6	.
N16-9064	20	15	58.8	54.9	.	35.9	36.4	.	17.5	17.2	.
N16-9211	21	19	55.8	53.4	52.9	38.2	38.7	38.6	17.1	16.9	17.2
N17-2535	15	12	61.2	57.4	.	34.5	34.5	.	21.6	21.4	.
NC-Roy	16	14	60.8	.	.	37.4	.	.	18.0	.	.
Mean	.	.	62.1	.	.	35.8	.	.	19.0	.	.
LSD(0.05)	.	.	6.0	.	.	1.0	.	.	0.6	.	.
CV(%)	.	.	12.5	.	.	2.0	.	.	2.3	.	.

† Data not included in mean: 2020 Bossier City, Clemson and Tallassee.

‡ Protein percentage and oil percentage reported on a 13% moisture basis beginning in 2015.

TABLE 90 - GENERAL SUMMARY OF PERFORMANCE -Part 2
UNIFORM TEST VI 2021

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
AG64X8 RR2X	46.7	0	1	34	1.8	13.1			
USDA-N6005	49.1	0	1	33	2.0	12.0			
NC-Dunphy	47.0	1	1	30	2.4	15.8			
NC-Dilday	45.3	2	3	34	2.1	16.2			
CZ6730	47.6	1	2	35	2.0	13.9			
G15-1811R2	47.4	0	3	38	1.8	13.2	P	T	T
G15-3361R2	47.4	0	2	40	2.0	12.2	P	T	T
G16-8779	47.2	1	2	33	2.2	14.8	P	T	BR
G16LL-10015	47.8	3	2	39	2.0	13.9	W	T	T
G17-4801R2	48.6	4	2	39	2.0	15.0	W	T	T
G17-8322LL	47.8	3	2	39	1.8	13.0	W	T	T
G17-8706LL	47.6	2	3	39	1.8	16.2	P	T	T
Lee	49.9	-1	3	34	1.8	13.6	P	T	
N10-7412	46.7	-1	2	36	1.7	13.9	P	T	
N14-7254	47.7	4	2	33	1.9	13.4	W	T	
N14-7784	48.9	5	3	34	2.0	14.0	P	G	
N16-1286	49.8	1	2	33	1.8	11.8	W	G	
N16-8876	49.3	1	2	35	2.1	14.0	P	G	
N16-9064	47.3	-1	2	34	2.0	14.6	P	G	
N16-9211	50.1	4	2	30	1.8	10.5	W	G	
N17-2535	47.8	1	2	36	2.6	17.8	P	T	
NC-Roy	49.6	-2	3	36	2.0	12.5	W	G	
Mean	48.0	1	2	35	2.0	13.9			
LSD(0.05)	1.1	5	1	3	0.6	1.2			
CV(%)	1.7	351	43	10	27.0	11.1			

† Estimated meal protein content was added to the annual report in 2018.

TABLE 91 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST VI 2021

STRAIN/	SCN Cyst Score (1-5 Scale)†			RKN Gall Score (1-5 Scale)*			SC	SC
VARIETY	Race 2	Race 3	Race 5	PRK	SRK	JRK	RATING	SCORE
AG64X8 RR2X	.	3	.	3.3	1.0	3.5	R	1
USDA-N6005	.	3	.	5.0	4.5	5.0	S	5
NC-Dunphy	.	3	.	2.5	5.0	3.3	R	1
NC-Dilday	.	2	.	5.0	3.3	5.0	R	1
CZ6730	.	1	.	5.0	1.0	1.0	R	1
G15-1811R2	.	3	.	1.0	1.0	1.5	R	1
G15-3361R2	.	3	.	1.3	1.0	2.8	R	1
G16-8779	.	2	.	1.3	5.0	2.8	MS	4
G16LL-10015	.	2	.	MR	1.0	1.0	R	1
G17-4801R2	.	3	.	5.0	1.3	3.5	MS	4
G17-8322LL	.	2	.	1.0	1.0	1.0	MS	4
G17-8706LL	.	2	.	5.0	1.0	3.0	MS	4
Lee	.	3	.	1.3	5.0	1.3	MS	4
N10-7412	.	4	.	4.5	5.0	2.5	R	1
N14-7254	.	3	.	5.0	4.5	3.5	S	5
N14-7784	.	3	.	5.0	1.5	5.0	S	5
N16-1286	.	4	.	5.0	1.5	4.0	S	5
N16-8876	.	2	.	2.5	5.0	5.0	S	5
N16-9064	.	3	.	3.0	4.5	2.3	S	5
N16-9211	.	4	.	4.3	1.0	5.0	MS	4
N17-2535	.	.	.	4.8	5.0	5.0	R	1
NC-Roy	.	3	.	5.0	5.0	5.0	S	5

†The race 2, 3, and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7, HG Type 0, and HG Type 2.5.7, respectively. Results for race 2 and 5 were omitted. See Materials and Methods.
*The root-knot nematode (RKN) species used in these tests were Meloidogyne incognita (southern root knot = SRK), M. arenaria (peanut root knot = PRK), and M. javanica (Javanese root-knot = JRK;)MR = mixed reaction.

TABLE 92 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST VI 2021 †

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Kinston, NC	Plymouth, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	119.8	63.5	37.3	68.0	45.3	60.6	52.9	63.9
USDA-N6005	125.8	64.5	31.7	55.5	36.5	71.0	50.6	62.4
NC-Dunphy	112.9	60.8	42.8	63.3	49.4	79.5	72.5	68.8
NC-Dilday	111.8	69.9	34.5	67.5	43.2	65.1	63.4	65.1
CZ6730	120.4	79.1	47.5	57.7	46.1	66.6	47.6	66.4
G15-1811R2	108.7	64.3	50.8	56.0	43.8	67.4	60.7	64.5
G15-3361R2	111.3	72.9	40.4	57.7	39.9	66.1	58.4	63.8
G16-8779	113.1	76.8	40.0	60.1	43.3	62.3	57.6	64.7
G16LL-10015	111.0	72.7	38.5	58.1	37.1	65.1	64.2	63.8
G17-4801R2	113.2	77.5	36.6	52.6	36.9	72.2	55.0	63.4
G17-8322LL	96.7	70.9	34.9	54.3	39.3	66.4	71.4	62.0
G17-8706LL	111.0	73.8	37.1	56.9	40.1	65.0	66.7	64.4
Lee	78.7	45.1	37.4	53.9	33.1	48.0	51.4	49.7
N10-7412	100.2	71.0	34.6	60.0	45.2	63.0	57.4	61.6
N14-7254	106.8	61.7	41.0	58.3	44.5	65.2	60.5	62.6
N14-7784	96.3	61.4	39.8	59.4	39.7	67.6	60.3	60.6
N16-1286	100.7	66.2	40.5	59.4	42.7	61.7	53.6	60.7
N16-8876	102.6	68.0	41.3	61.9	36.0	55.6	58.9	60.6
N16-9064	100.3	66.0	36.9	56.8	43.6	54.5	53.6	58.8
N16-9211	99.6	60.6	37.4	52.0	35.3	53.7	52.0	55.8
N17-2535	104.7	66.6	40.6	54.9	42.8	59.7	59.1	61.2
NC-Roy	107.8	71.7	35.8	55.2	42.1	62.6	50.1	60.8
Mean	107.0	67.5	39.0	58.2	41.2	63.6	58.1	62.1
LSD(0.05)	14.8	13.4	9.7	6.1	6.1	13.5	5.5	6.0
LSD(0.10)	12.4	11.2	8.1	5.0	5.1	11.3	4.6	5.0
CV(%)	8.4	12.0	15.1	6.2	8.9	12.9	5.7	12.5

†Data not included in the test mean: None excluded

TABLE 93 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Kinston, NC	Plymouth, NC	Tifton, GA	Test Mean
AG64X8 RR2X	10/16	10/16	10/21	10/20	10/19	10/2	10/16
USDA-N6005	1	2	-4	0	4	-1	0
NC-Dunphy	-4	0	18	-1	-5	-3	1
NC-Dilday	-1	-1	19	2	-5	-3	2
CZ6730	1	1	1	0	3	0	1
G15-1811R2	0	1	-2	1	1	1	0
G15-3361R2	1	2	-2	-2	1	-1	0
G16-8779	0	-1	5	3	1	-1	1
G16LL-10015	2	2	5	3	4	2	3
G17-4801R2	1	3	7	3	7	5	4
G17-8322LL	3	1	1	4	5	7	3
G17-8706LL	-1	3	-1	2	5	2	2
Lee	2	-2	-1	-2	-2	0	-1
N10-7412	-3	-1	4	-1	-2	-5	-1
N14-7254	0	2	8	3	6	7	4
N14-7784	2	0	17	2	4	7	5
N16-1286	1	0	3	2	1	-2	1
N16-8876	-5	-1	14	2	0	-3	1
N16-9064	0	0	0	-1	0	-4	-1
N16-9211	3	1	18	0	3	-2	4
N17-2535	-2	-2	17	0	-5	-6	1
NC-Roy	0	0	-6	-3	-2	-4	-2
Mean	0	1	5	1	1	0	1
LSD(0.05)	3	2	8	2	3	.	5
CV(%)	2274	222	93	134	158	0	351

TABLE 94 - PLANT HEIGHT (INCHES)
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Kinston, NC	Plymouth, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	42	30	30	39	35	30	33	34
USDA-N6005	37	28	30	38	34	33	30	33
NC-Dunphy	32	24	29	32	27	33	29	30
NC-Dilday	36	33	33	39	28	34	33	34
CZ6730	40	32	36	37	33	31	34	35
G15-1811R2	42	36	39	42	36	33	35	38
G15-3361R2	44	38	38	48	43	33	40	40
G16-8779	41	29	32	40	23	33	35	33
G16LL-10015	42	35	38	47	39	32	41	39
G17-4801R2	46	33	37	44	41	34	38	39
G17-8322LL	41	34	38	46	42	34	41	39
G17-8706LL	43	36	38	45	35	34	41	39
Lee	38	29	34	37	36	31	33	34
N10-7412	38	33	32	41	40	33	37	36
N14-7254	38	30	30	41	28	28	36	33
N14-7784	39	30	33	41	33	31	32	34
N16-1286	31	33	34	37	38	28	35	34
N16-8876	39	34	36	41	37	27	35	35
N16-9064	38	31	34	37	35	27	32	34
N16-9211	32	30	31	33	32	26	29	30
N17-2535	38	36	35	40	32	32	36	36
NC-Roy	41	33	37	40	38	32	35	36
Mean	39	32	34	40	35	31	35	35
LSD(0.05)	6	4	7	6	2	6	4	3
CV(%)	9	7	12	8	3	12	7	10

TABLE 95 - PLANT LODGING (1-5)
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Kinston, NC	Plymouth, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	2.0	1.0	1.3	1.5	1.8	1.0	1.3	1.4
USDA-N6005	1.3	1.0	1.0	1.5	1.0	1.0	1.0	1.1
NC-Dunphy	1.0	1.0	1.0	1.7	1.0	2.7	1.3	1.4
NC-Dilday	2.3	1.7	3.0	1.7	1.0	4.0	3.7	2.6
CZ6730	3.0	1.0	1.3	2.0	1.3	1.7	1.7	1.7
G15-1811R2	2.7	1.7	4.0	2.5	2.3	2.7	2.0	2.5
G15-3361R2	2.7	1.0	1.7	2.5	2.3	2.7	1.0	1.9
G16-8779	2.3	1.0	1.0	1.5	1.3	2.0	1.3	1.5
G16LL-10015	3.0	1.0	2.0	2.5	2.0	2.3	2.3	2.2
G17-4801R2	2.3	1.0	1.3	2.2	2.0	2.0	2.0	1.8
G17-8322LL	3.3	1.3	3.0	2.2	1.5	2.3	3.0	2.4
G17-8706LL	3.0	1.3	2.0	2.2	2.0	4.3	3.3	2.6
Lee	3.7	2.3	3.0	3.7	2.0	4.3	2.7	3.1
N10-7412	2.7	1.0	1.0	2.0	2.0	1.7	2.7	1.8
N14-7254	2.7	1.0	1.3	1.5	1.5	1.0	3.0	1.7
N14-7784	3.3	2.0	2.3	2.2	2.3	3.3	3.7	2.8
N16-1286	2.3	1.0	2.3	2.0	1.5	1.7	2.0	1.8
N16-8876	2.7	1.0	2.0	2.5	1.5	1.0	2.0	1.8
N16-9064	3.3	1.0	1.0	1.5	1.3	1.0	2.3	1.6
N16-9211	2.3	1.7	2.7	2.0	1.5	1.7	1.3	1.9
N17-2535	2.7	1.0	1.7	2.0	1.3	1.0	2.0	1.6
NC-Roy	3.7	1.7	4.0	2.7	2.7	4.7	3.3	3.3
Mean	2.7	1.3	2.0	2.1	1.7	2.3	2.2	2.0
LSD(0.05)	1.0	0.7	1.7	0.4	0.6	1.9	1.6	0.6
CV(%)	23.7	32.7	52.2	10.1	16.3	49.6	42.3	42.5

TABLE 96 - SEED QUALITY (1-5)
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Kinston, NC	Plymouth, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	1.0	1.0	.	.	.	3.7	1.5	1.8
USDA-N6005	1.5	1.0	.	.	.	3.7	1.8	2.0
NC-Dunphy	3.2	1.0	.	.	.	3.7	1.8	2.4
NC-Dilday	2.3	1.0	.	.	.	3.0	2.0	2.1
CZ6730	2.0	1.0	.	.	.	3.3	1.5	2.0
G15-1811R2	1.0	1.0	.	.	.	3.7	1.8	1.8
G15-3361R2	1.7	1.0	.	.	.	3.7	1.5	2.0
G16-8779	2.0	1.0	.	.	.	3.3	2.5	2.2
G16LL-10015	1.3	1.0	.	.	.	4.0	1.5	2.0
G17-4801R2	1.3	1.0	.	.	.	4.0	1.8	2.0
G17-8322LL	1.2	1.0	.	.	.	3.7	1.3	1.8
G17-8706LL	1.8	1.0	.	.	.	3.3	1.0	1.8
Lee	1.2	1.0	.	.	.	3.7	1.3	1.8
N10-7412	1.5	1.0	.	.	.	3.0	1.3	1.7
N14-7254	2.0	1.0	.	.	.	3.3	1.3	1.9
N14-7784	2.2	1.0	.	.	.	3.3	1.5	2.0
N16-1286	1.0	1.0	.	.	.	3.7	1.8	1.8
N16-8876	2.2	1.0	.	.	.	3.7	1.8	2.1
N16-9064	2.2	1.0	.	.	.	3.3	1.5	2.0
N16-9211	1.3	1.0	.	.	.	3.0	1.8	1.8
N17-2535	3.7	1.0	.	.	.	3.7	2.0	2.6
NC-Roy	1.7	1.0	.	.	.	3.7	1.5	2.0
Mean	1.8	1.0	.	.	.	3.5	1.6	2.0
LSD(0.05)	0.8	.	.	.	.	1.0	0.8	0.6
CV(%)	27.9	0.0	.	.	.	17.9	24.4	27.3

TABLE 97 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Bossier City, LA*	*Calhoun, GA*	*Kinston, NC*	*Plymouth, NC*	*Tallassee, AL*	*Tifton, GA*	*Test Mean*
AG64X8 RR2X	16.2	13.6	.	12.9	11.6	14.1	10.0	13.1
USDA-N6005	14.7	11.4	.	11.8	9.8	13.6	9.9	12.0
NC-Dunphy	19.3	17.0	.	17.4	13.2	14.2	16.2	15.8
NC-Dilday	19.5	14.0	.	17.4	14.2	15.9	15.1	16.2
CZ6730	16.4	13.2	.	14.6	13.0	13.9	12.4	13.9
G15-1811R2	14.6	13.0	.	13.7	12.3	14.7	11.0	13.2
G15-3361R2	16.6	12.6	.	12.3	9.9	11.7	9.9	12.2
G16-8779	18.7	14.8	.	15.0	11.9	14.6	13.7	14.8
G16LL-10015	16.3	12.6	.	14.9	13.7	13.4	12.5	13.9
G17-4801R2	17.4	16.0	.	15.0	13.4	16.1	12.7	15.0
G17-8322LL	14.3	13.0	.	13.5	11.0	14.5	12.1	13.0
G17-8706LL	17.9	18.0	.	16.9	14.4	16.6	14.8	16.2
Lee	15.8	12.6	.	13.0	11.5	15.2	12.9	13.6
N10-7412	15.1	14.8	.	14.3	11.6	16.0	12.0	13.9
N14-7254	16.0	13.5	.	12.9	12.0	14.4	11.9	13.4
N14-7784	18.0	13.0	.	14.3	12.0	13.9	12.0	14.0
N16-1286	13.3	13.2	.	11.8	9.9	13.3	10.1	11.8
N16-8876	17.6	12.3	.	14.5	10.9	15.3	11.8	14.0
N16-9064	16.9	15.0	.	14.8	13.6	15.3	12.8	14.6
N16-9211	13.1	11.5	.	9.9	8.4	11.7	8.9	10.5
N17-2535	21.5	16.5	.	18.4	15.0	17.3	17.3	17.8
NC-Roy	16.0	11.0	.	12.3	10.8	13.3	10.7	12.5
Mean	16.6	13.8	.	14.2	12.0	14.5	12.3	13.9
LSD(0.05)	2.9		.	1.1	0.9	3.9	1.9	1.2
CV(%)	10.5		.	3.6	3.8	16.4	7.5	11.1

TABLE 98 - OIL (%)†
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	19.3	.	19.1	19.4	19.0	19.2
USDA-N6005	17.9	.	17.4	17.7	17.8	17.7
NC-Dunphy	19.9	.	19.6	19.1	19.9	19.6
NC-Dilday	19.8	.	19.9	20.7	20.7	20.3
CZ6730	20.3	.	20.1	19.4	19.4	19.8
G15-1811R2	18.9	.	18.9	19.1	19.3	19.0
G15-3361R2	17.7	.	18.4	18.7	17.6	18.1
G16-8779	18.7	.	18.9	19.1	19.3	19.0
G16LL-10015	20.7	.	19.8	19.8	19.9	20.0
G17-4801R2	18.4	.	18.4	18.6	17.9	18.3
G17-8322LL	18.7	.	18.8	18.6	17.8	18.5
G17-8706LL	19.8	.	19.4	19.3	18.9	19.4
Lee	19.6	.	19.1	19.2	18.6	19.1
N10-7412	19.9	.	19.1	20.0	18.9	19.5
N14-7254	19.1	.	18.8	19.3	20.9	19.5
N14-7784	18.1	.	17.8	19.0	18.0	18.2
N16-1286	19.5	.	19.1	19.5	19.1	19.3
N16-8876	19.1	.	18.7	19.1	18.0	18.7
N16-9064	17.4	.	17.7	18.2	16.7	17.5
N16-9211	17.3	.	17.2	17.3	16.7	17.1
N17-2535	22.2	.	20.7	21.7	21.8	21.6
NC-Roy	17.6	.	18.1	18.7	17.8	18.0
Mean	19.1	.	18.9	19.2	18.8	19.0
LSD(0.05)	.	.	.	.	.	0.6
CV(%)	.	.	.	.	.	2.3

†Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 99 - PROTEIN (%)†
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	35.8	.	34.3	33.0	35.7	34.7
USDA-N6005	37.6	.	37.0	36.2	37.8	37.2
NC-Dunphy	35.3	.	33.9	34.5	35.4	34.8
NC-Dilday	33.9	.	32.7	32.4	34.0	33.2
CZ6730	34.8	.	34.4	35.2	36.2	35.1
G15-1811R2	35.4	.	34.9	34.6	36.3	35.3
G15-3361R2	36.9	.	35.4	33.6	37.0	35.7
G16-8779	36.3	.	35.1	33.8	35.5	35.2
G16LL-10015	34.0	.	35.8	34.4	36.4	35.2
G17-4801R2	36.9	.	36.9	35.1	37.4	36.6
G17-8322LL	35.9	.	35.6	34.0	38.0	35.9
G17-8706LL	34.9	.	35.0	34.6	36.8	35.3
Lee	37.5	.	37.2	35.6	38.5	37.2
N10-7412	34.7	.	34.6	33.1	36.1	34.6
N14-7254	35.0	.	35.5	34.1	36.7	35.3
N14-7784	37.7	.	36.6	34.4	38.4	36.8
N16-1286	37.5	.	37.0	35.7	37.8	37.0
N16-8876	36.8	.	35.9	35.1	39.7	36.9
N16-9064	36.2	.	34.7	34.6	38.2	35.9
N16-9211	38.7	.	37.9	37.1	39.3	38.2
N17-2535	34.5	.	35.1	32.9	35.4	34.5
NC-Roy	39.8	.	36.5	35.6	37.8	37.4
Mean	36.2	.	35.5	34.5	37.0	35.8
LSD(0.05)	.	.	.	.	.	1.0
CV(%)	.	.	.	.	.	2.0

†Protein percentage reported on a 13% moisture basis beginning in 2015.

TABLE 100 - ESTIMATED MEAL PROTEIN (%)†
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	48.2	.	46.0	44.5	47.9	46.7
USDA-N6005	49.8	.	48.8	47.8	49.9	49.1
NC-Dunphy	48.0	.	45.8	46.4	48.0	47.0
NC-Dilday	46.0	.	44.3	44.3	46.5	45.3
CZ6730	47.5	.	46.7	47.5	48.8	47.6
G15-1811R2	47.4	.	46.8	46.5	48.8	47.4
G15-3361R2	48.7	.	47.1	44.8	48.8	47.4
G16-8779	48.6	.	47.0	45.4	47.9	47.2
G16LL-10015	46.6	.	48.5	46.7	49.3	47.8
G17-4801R2	49.1	.	49.1	46.9	49.5	48.6
G17-8322LL	47.9	.	47.6	45.4	50.3	47.8
G17-8706LL	47.3	.	47.2	46.6	49.4	47.6
Lee	50.7	.	49.9	47.8	51.4	49.9
N10-7412	47.1	.	46.5	45.0	48.3	46.7
N14-7254	47.0	.	47.6	45.9	50.4	47.7
N14-7784	50.1	.	48.4	46.1	50.9	48.9
N16-1286	50.6	.	49.7	48.2	50.8	49.8
N16-8876	49.4	.	47.9	47.2	52.6	49.3
N16-9064	47.7	.	45.9	45.9	49.8	47.3
N16-9211	50.8	.	49.8	48.7	51.2	50.1
N17-2535	48.2	.	48.1	45.7	49.2	47.8
NC-Roy	52.5	.	48.4	47.6	50.0	49.6
Mean	48.6	.	47.6	46.4	49.5	48.0
LSD(0.05)	.	.	.	.	.	1.1
CV(%)	.	.	.	.	.	1.7

SUMMARY OF SEED FATTY ACIDS (%)
UNIFORM TEST VI 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AG64X8 RR2X	12.2	3.8	18.3	57.3	8.4
USDA-N6005	12.4	3.9	19.4	55.6	8.7
N16-1286	7.0	3.2	83.8	3.9	2.1
Mean	10.6	3.7	40.5	38.9	6.4
LSD(0.05)	0.6	0.3	1.3	1.4	0.4
CV(%)	3.1	4.2	1.9	2.3	3.7

†Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	12.0	12.3	11.7	12.8	12.2
USDA-N6005	12.6	12.1	12.4	12.4	12.4
N16-1286	7.3	7.2	6.6	7.2	7.0
Mean	10.6	10.5	10.2	10.8	10.6
LSD(0.05)	.	.	.	.	0.6
CV(%)	.	.	.	.	3.1

SEED STEARIC ACID (%)
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	3.6	3.6	3.8	4.2	3.8
USDA-N6005	3.8	3.9	4.0	3.9	3.9
N16-1286	3.0	3.1	3.2	3.5	3.2
Mean	3.5	3.6	3.7	3.9	3.7
LSD(0.05)	.	.	.	.	0.3
CV(%)	.	.	.	.	4.2

SEED OLEIC ACID (%)
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	17.3	18.0	19.5	18.6	18.3
USDA-N6005	19.8	20.2	19.4	18.2	19.4
N16-1286	83.4	83.9	84.4	83.6	83.8
Mean	40.1	40.7	41.1	40.1	40.5
LSD(0.05)	.	.	.	.	1.3
CV(%)	.	.	.	.	1.9

SEED LINOLEIC ACID (%)
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	58.8	57.8	56.8	55.7	57.3
USDA-N6005	55.1	55.1	56.0	56.5	55.6
N16-1286	4.3	3.6	3.8	3.8	3.9
Mean	39.4	38.8	38.9	38.6	38.9
LSD(0.05)	.	.	.	.	1.4
CV(%)	.	.	.	.	2.3

SEED LINOLENIC ACID (%)
UNIFORM GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	8.3	8.3	8.2	8.7	8.4
USDA-N6005	8.7	8.7	8.2	9.1	8.7
N16-1286	2.1	2.3	2.0	1.9	2.1
Mean	6.4	6.4	6.1	6.6	6.4
LSD(0.05)	.	.	.	.	0.4
CV(%)	.	.	.	.	3.7

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TABLE 101 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP VI 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG64X8 RR2X	Commercial check	check		RRX	
2	USDA-N6005	Commercial check	check		CONV	
3	NC-Dunphy	Commercial check	check		CONV	
4	NC-Dilday	Commercial check	check		CONV	
5	CZ6730	Commercial check	check		LL	
6	G18-11267	Boggs x N09-12854	Zenglu Li	F4d	CONV	
7	G18-11901	Woodruff x N09-13128	Zenglu Li	F5d	CONV	
8	G18-12382	Woodruff x G12-7199	Zenglu Li	F5d	CONV	
9	G18-12647	G00-3880 x G12-7199	Zenglu Li	F5d	CONV	
10	G18-3051R2	G10PR-224R2 x NCC07-8138	Zenglu Li	F6d	RR2	
11	G18-3118R2	G10PR-224R2 x NCC06-1090	Zenglu Li	F6d	RR2	
12	G18F3D-415	NC-Raleigh X JTN-4307	Zenglu Li	F4d	CONV	
13	N11-11924	NC-Roy x PI 291290	Fallen	F4	CONV	diversity/protein
14	N11-7354	NC-Roy x PI587696	Fallen	F4	CONV	diversity
15	N11-7477	NC-Roy x PI 587563B	Fallen	F4	CONV	diversity
16	N14-7691	N6002 x NC-Roy	Fallen	F4	CONV	diversity/protein
17	N14-7797	N6001 x NC-Roy	Fallen	F4	CONV	diversity/protein
18	N16-10889	NC-Roy x N01-11771	Fallen	F4	CONV	drought
19	N18-1472	G00-3213 x N07-3297	Mian		CONV	
20	N18-719	NCC06-1090 x UA5814HP	Mian		CONV	
21	N18-947	UA5814HP x N09-9	Mian		CONV	
22	N18-960	UA5814HP x N09-9	Mian		CONV	
23	N-STPR14-549	N6001 x Young	Fallen	F4	CONV	diversity/protein

† Conv= Conventional(non-transgenic),LL= Liberty Link®, RR1= Roundup Ready®, RR2= Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high oleic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 102 - GENERAL SUMMARY OF PERFORMANCE
PRELIMINARY TEST VI 2021

STRAIN/	*SEED*		*AVG.*	*MAT.*			*SCN Cyst Score (1-5)‡*			*SC*	*SC*
VARIETY	*YIELD†*	*RANK*	*RANK*	*INDEX*	*LOD*	*HT*	*Race 2*	*Race 3*	*Race 5*	*RATING*	*SCORE*
AG64X8 RR2X	77.2	7	8	0	1.3	37	.	5	.	R	1
USDA-N6005	77.7	5	10	1	1.1	34	.	5	.	S	5
NC-Dunphy	79.0	4	7	-2	1.1	29	.	5	.	R	1
NC-Dilday	76.0	9	8	-2	1.3	32	.	4	.	R	1
CZ6730	81.6	2	7	1	1.8	35	.	1	.	R	1
G18-11267	69.7	20	15	-5	1.5	33	.	2	.	MS	4
G18-11901	72.3	16	12	-3	1.5	36	.	3	.	SS	3
G18-12382	70.2	18	17	-4	1.9	37	.	4	.	MS	4
G18-12647	69.7	19	18	1	1.9	39	.	5	.	SS	3
G18-3051R2	82.4	1	5	1	1.5	35	.	1	.	MS	4
G18-3118R2	80.9	3	10	3	1.8	43	.	1	.	R	1
G18F3D-415	75.9	10	14	5	1.8	40	.	2	.	R	1
N11-11924	73.3	14	12	-1	3.0	35	.	5	.	MS	4
N11-7354	75.0	12	13	0	2.2	38	.	5	.	MS	4
N11-7477	66.2	23	19	1	1.6	39	.	5	.	S	5
N14-7691	69.0	21	18	5	2.2	40	.	5	.	S	5
N14-7797	66.4	22	19	3	2.1	37	.	5	.	MS	4
N16-10889	77.3	6	7	0	2.0	35	.	5	.	MS	4
N18-1472	76.4	8	10	-1	2.2	41	.	5	.	MS	4
N18-719	75.4	11	9	-1	1.6	35	.	5	.	MS	4
N18-947	70.8	17	14	-4	1.6	37	.	5	.	R	1
N18-960	74.1	13	11	-3	2.4	36	.	5	.	R	1
N-STPR14-549	72.5	15	13	-2	2.0	35	.	5	.	S	5
Mean	74.3	.	.	0	2	36	.	.	.		.
LSD(0.05)	9.3	.	.	4	0.7	3	.	.	.		.
CV(%)	11.2	.	.	746	37.9	9	.	.	.		.

† Data not included in the test mean: Tallassee,AL

‡The race 3 SCN population used in these tests was typed as HG (*Heterodera glycines*) Type 0.

TABLE 103 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST VI 2021

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
AG64X8 RR2X	2.2	13.8	34.4	19.3	46.4			
USDA-N6005	2.1	13.4	36.7	17.9	48.6			
NC-Dunphy	3.2	17.3	34.3	19.7	46.5			
NC-Dilday	3.3	17.9	33.7	20.3	46.0			
CZ6730	2.5	15.2	35.0	19.9	47.4			
G18-11267	3.2	14.8	36.3	19.0	48.7	W	G	T
G18-11901	2.8	17.7	34.6	19.2	46.6	P	T	T
G18-12382	2.6	17.1	38.1	18.2	50.6	W	T	T
G18-12647	2.7	15.6	38.7	17.5	51.0	P	T	T
G18-3051R2	2.3	14.1	33.9	19.7	45.9	W	T	T
G18-3118R2	2.1	14.5	34.9	18.6	46.6	P	T	T
G18F3D-415	2.5	14.8	35.4	19.9	48.0	W	T	T
N11-11924	2.2	13.3	36.7	18.3	48.8	W	G	
N11-7354	2.7	15.1	35.1	19.0	47.1	P	T	
N11-7477	2.3	17.4	36.9	18.4	49.1	W	T	
N14-7691	2.4	15.9	37.3	18.2	49.6	P	G	
N14-7797	2.5	14.5	38.0	18.2	50.5	W	G	
N16-10889	2.2	12.4	36.0	18.7	48.2	P	G	
N18-1472	2.7	15.2	36.4	19.2	49.0	W	T	
N18-719	3.2	18.3	39.3	19.7	53.3	P	G	
N18-947	3.5	17.2	39.5	17.7	52.2	P	T	
N18-960	3.0	16.6	36.4	20.3	49.6	W	T	
N-STPR14-549	3.2	15.9	36.7	19.0	49.2	P	G	
Mean	2.7	15.6	36.3	18.9	48.6			
LSD(0.05)	0.7	1.4	1.6	0.6	2.5			
CV(%)	19.5	9.1	3.5	2.5	4.0			

§ Protein percentage and oil percentage are reported on a 13% moisture basis beginning in 2015.

TABLE 104 - SEED YIELD (BUSHELS PER ACRE)
PRELIMINARY GROUP VI 2021 †

STRAIN/ VARIETY	*Athens, GA(A)*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Tallassee, AL*	*Test Mean*
AG64X8 RR2X	109.0	63.8	85.5	50.3	65.7	77.2
USDA-N6005	113.6	57.5	95.6	44.2	78.8	77.7
NC-Dunphy	110.8	62.2	87.9	55.3	79.8	79.0
NC-Dilday	101.4	67.8	88.1	46.7	73.2	76.0
CZ6730	123.4	59.8	97.6	45.6	80.1	81.6
G18-11267	101.6	60.1	74.0	42.9	81.1	69.7
G18-11901	96.6	64.6	76.1	52.0	78.3	72.3
G18-12382	104.0	54.9	83.5	38.3	76.7	70.2
G18-12647	102.7	54.6	82.0	39.6	73.4	69.7
G18-3051R2	121.9	61.2	96.8	49.5	75.2	82.4
G18-3118R2	126.0	54.6	102.1	41.1	73.4	80.9
G18F3D-415	120.4	57.2	87.8	38.0	66.2	75.9
N11-11924	97.8	61.3	91.3	42.9	66.9	73.3
N11-7354	114.7	56.2	88.1	40.8	84.1	75.0
N11-7477	98.4	55.5	69.2	41.5	71.5	66.2
N14-7691	98.7	56.3	80.3	40.6	67.5	69.0
N14-7797	90.8	60.7	73.9	40.3	43.0	66.4
N16-10889	99.6	64.0	97.4	48.1	55.2	77.3
N18-1472	114.0	57.9	88.1	45.5	67.0	76.4
N18-719	102.1	65.8	90.0	43.8	58.4	75.4
N18-947	97.4	62.2	77.0	46.8	46.6	70.8
N18-960	100.3	61.1	87.2	48.0	82.9	74.1
N-STPR14-549	93.6	67.3	85.0	44.1	74.8	72.5
Mean	106.0	60.3	86.3	44.6	70.4	74.3
LSD(0.05)	14.8	6.0	11.0	6.5	27.4	9.3
LSD(0.10)	12.3	5.0	9.2	5.4	22.7	7.7
CV(%)	8.5	6.0	7.8	8.8	18.8	11.2

† Data not included in the test mean: Tallassee,AL

TABLE 105 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP VI 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Tallassee, AL*	*Test Mean*
AG64X8 RR2X	10/17	10/19	.	10/19	10/31	10/21
USDA-N6005	3	2	.	0	-1	1
NC-Dunphy	-3	0	.	-6	-1	-2
NC-Dilday	-3	1	.	-3	-2	-2
CZ6730	0	4	.	3	-2	1
G18-11267	-9	-2	.	-9	-2	-5
G18-11901	-4	-1	.	-5	-2	-3
G18-12382	-10	-1	.	-4	-2	-4
G18-12647	1	1	.	3	-2	1
G18-3051R2	3	2	.	3	-2	1
G18-3118R2	2	7	.	6	-2	3
G18F3D-415	3	9	.	8	-2	5
N11-11924	-1	-1	.	-1	-2	-1
N11-7354	2	2	.	-1	-2	0
N11-7477	2	4	.	-1	-2	1
N14-7691	4	7	.	10	-2	5
N14-7797	2	4	.	6	-2	3
N16-10889	2	1	.	-2	-2	0
N18-1472	-1	0	.	1	-2	-1
N18-719	2	1	.	-5	-2	-1
N18-947	-7	-1	.	-6	-2	-4
N18-960	-4	-1	.	-5	-2	-3
N-STPR14-549	-3	-1	.	-3	-2	-2
Mean	-1	2	.	0	-2	0
LSD(0.05)	1	3	.	3	2	4
CV(%)	74	89	.	352	42	746

TABLE 106 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP VI 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Tallassee, AL*	*Test Mean*
AG64X8 RR2X	41	37	35	39	31	37
USDA-N6005	35	35	34	38	28	34
NC-Dunphy	31	31	28	28	25	29
NC-Dilday	33	40	32	26	30	32
CZ6730	39	38	35	33	31	35
G18-11267	34	37	32	33	29	33
G18-11901	39	41	36	35	31	36
G18-12382	42	42	38	35	25	37
G18-12647	42	43	39	36	33	39
G18-3051R2	37	36	35	35	31	35
G18-3118R2	45	49	42	47	34	43
G18F3D-415	43	44	38	44	34	40
N11-11924	33	37	37	38	32	35
N11-7354	36	43	36	42	32	38
N11-7477	39	45	37	45	30	39
N14-7691	39	44	40	44	31	40
N14-7797	40	42	34	45	27	37
N16-10889	36	38	35	37	27	35
N18-1472	45	46	38	45	30	41
N18-719	35	40	35	39	28	35
N18-947	38	42	38	39	30	37
N18-960	37	37	38	35	33	36
N-STPR14-549	39	37	38	29	34	35
Mean	38	40	36	37	30	36
LSD(0.05)	3	5	4	2	9	3
CV(%)	4	6	7	2	14	9

TABLE 107 - PLANT LODGING (1-5)
PRELIMINARY GROUP VI 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Tallassee, AL*	*Test Mean*
AG64X8 RR2X	1.0	1.5	1.0	1.5	1.5	1.3
USDA-N6005	1.0	1.2	1.0	1.3	1.0	1.1
NC-Dunphy	1.0	1.5	1.0	1.0	1.0	1.1
NC-Dilday	1.7	1.8	1.0	1.0	1.0	1.3
CZ6730	3.0	1.5	1.0	1.3	2.0	1.8
G18-11267	1.7	1.5	1.0	1.3	2.0	1.5
G18-11901	2.3	1.5	1.0	1.0	1.5	1.5
G18-12382	3.0	2.0	1.2	1.5	1.5	1.9
G18-12647	3.0	1.8	1.0	1.2	2.5	1.9
G18-3051R2	2.0	1.5	1.0	1.5	1.5	1.5
G18-3118R2	1.7	2.5	1.0	2.0	2.0	1.8
G18F3D-415	2.0	2.0	1.0	2.0	2.0	1.8
N11-11924	4.0	2.8	2.0	2.5	3.5	3.0
N11-7354	2.7	2.5	1.2	2.7	2.0	2.2
N11-7477	2.0	1.8	1.2	2.0	1.0	1.6
N14-7691	2.3	2.0	1.0	2.5	3.5	2.2
N14-7797	2.7	2.0	2.5	2.2	1.0	2.1
N16-10889	3.7	2.0	1.2	2.2	1.0	2.0
N18-1472	2.7	2.3	1.0	2.0	3.0	2.2
N18-719	2.7	1.5	1.0	1.2	1.5	1.6
N18-947	2.3	1.8	1.0	1.8	1.0	1.6
N18-960	3.0	2.0	1.2	1.5	4.5	2.4
N-STPR14-549	3.0	1.8	1.7	1.3	2.0	2.0
Mean	2.4	1.8	1.2	1.7	1.9	1.8
LSD(0.05)	0.7	0.7	0.5	0.6	2.5	0.7
CV(%)	18.9	17.5	23.5	18.7	62.9	37.9

TABLE 108 - SEED QUALITY (1-5)
PRELIMINARY GROUP VI 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Tallassee, AL*	*Test Mean*
AG64X8 RR2X	1.0	.	1.7	.	4.0	2.2
USDA-N6005	1.2	.	2.0	.	3.0	2.1
NC-Dunphy	3.2	.	2.5	.	4.0	3.2
NC-Dilday	2.7	.	3.2	.	4.0	3.3
CZ6730	1.7	.	2.0	.	4.0	2.5
G18-11267	3.2	.	2.5	.	4.0	3.2
G18-11901	2.5	.	2.0	.	4.0	2.8
G18-12382	2.7	.	2.2	.	3.0	2.6
G18-12647	2.2	.	2.5	.	3.5	2.7
G18-3051R2	1.5	.	1.3	.	4.0	2.3
G18-3118R2	1.2	.	1.3	.	4.0	2.1
G18F3D-415	1.7	.	1.8	.	4.0	2.5
N11-11924	1.3	.	1.8	.	3.5	2.2
N11-7354	2.0	.	2.0	.	4.0	2.7
N11-7477	1.3	.	2.0	.	3.5	2.3
N14-7691	1.3	.	2.0	.	4.0	2.4
N14-7797	1.7	.	1.8	.	4.0	2.5
N16-10889	1.3	.	1.3	.	4.0	2.2
N18-1472	2.0	.	2.2	.	4.0	2.7
N18-719	2.7	.	2.8	.	4.0	3.2
N18-947	3.2	.	3.2	.	4.0	3.5
N18-960	2.7	.	2.3	.	4.0	3.0
N-STPR14-549	2.5	.	3.0	.	4.0	3.2
Mean	2.0	.	2.2	.	3.8	2.7
LSD(0.05)	0.7	.	0.6	.	0.8	0.7
CV(%)	21.7	.	15.8	.	10.4	19.5

TABLE 109 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plains, GA	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	15.4	12.7	17.0	10.9	13.1	13.8
USDA-N6005	15.1	11.2	15.6	10.2	15.6	13.4
NC-Dunphy	20.8	16.5	19.4	12.7	16.9	17.3
NC-Dilday	21.2	16.9	19.5	14.2	17.2	17.9
CZ6730	16.3	14.3	16.8	12.4	16.5	15.2
G18-11267	16.6	14.3	15.6	11.5	16.0	14.8
G18-11901	19.9	17.1	18.8	15.1	17.7	17.7
G18-12382	19.1	17.1	18.7	13.4	17.2	17.1
G18-12647	17.3	15.0	17.9	13.2	14.5	15.6
G18-3051R2	15.0	12.5	16.2	10.6	16.3	14.1
G18-3118R2	16.3	14.8	16.6	12.7	12.2	14.5
G18F3D-415	15.8	14.2	16.1	12.4	15.7	14.8
N11-11924	14.8	13.0	14.5	10.6	13.7	13.3
N11-7354	16.8	13.8	15.8	11.5	18.1	15.1
N11-7477	20.3	17.0	20.5	15.1	13.4	17.4
N14-7691	17.4	15.7	18.0	14.4	14.1	15.9
N14-7797	15.7	14.1	15.9	12.4	14.6	14.5
N16-10889	12.8	11.3	13.7	9.4	15.4	12.4
N18-1472	16.4	14.0	15.9	13.4	16.8	15.2
N18-719	20.2	17.9	21.3	15.7	16.1	18.3
N18-947	18.9	17.7	20.1	14.0	14.9	17.2
N18-960	17.8	16.0	17.9	13.3	18.1	16.6
N-STPR14-549	18.1	15.0	17.5	12.3	16.4	15.9
Mean	17.3	14.9	17.4	12.6	15.7	15.6
LSD(0.05)	0.9	1.2	1.0	1.2	5.7	1.4
CV(%)	3.3	4.0	3.6	4.8	17.1	9.1

TABLE 110 - OIL (%)†
PRELIMINARY GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plains, GA	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	19.5	19.2	19.6	18.8	19.2	19.3
USDA-N6005	17.9	17.9	18.4	18.0	17.1	17.9
NC-Dunphy	20.1	19.9	20.1	19.0	19.4	19.7
NC-Dilday	19.8	20.3	20.7	19.9	20.6	20.3
CZ6730	20.4	19.6	20.6	19.2	19.6	19.9
G18-11267	19.2	18.6	19.8	18.1	19.2	19.0
G18-11901	19.1	18.3	19.8	19.1	19.8	19.2
G18-12382	18.4	17.9	18.8	17.6	18.2	18.2
G18-12647	17.6	17.8	17.7	17.5	17.2	17.5
G18-3051R2	19.8	19.7	20.2	19.3	19.5	19.7
G18-3118R2	18.8	18.4	18.6	18.3	18.9	18.6
G18F3D-415	19.5	19.8	20.6	19.6	20.1	19.9
N11-11924	18.8	17.9	18.8	17.7	18.0	18.3
N11-7354	18.8	19.0	19.5	18.5	19.1	19.0
N11-7477	18.6	18.0	18.9	18.5	17.9	18.4
N14-7691	19.0		18.6	17.6	17.9	18.2
N14-7797	18.0	18.8	18.6	17.8	17.9	18.2
N16-10889	19.0	18.7	19.4	18.5	18.1	18.7
N18-1472	19.4	19.6	19.9	18.3	19.0	19.2
N18-719	18.7	19.1	23.0	18.7	19.3	19.7
N18-947	18.2	17.8	17.8	16.9	17.9	17.7
N18-960	20.4	20.8	20.5	19.6	20.2	20.3
N-STPR14-549	19.3	19.5	18.8	18.5	18.8	19.0
Mean	19.1	18.9	19.5	18.5	18.8	18.9
LSD(0.05)	.	.	.	.	.	0.6
CV(%)	.	.	.	.	.	2.5

† Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 111 - PROTEIN (%)†
PRELIMINARY GROUP VI 2021

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plains, GA	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	34.3	33.8	34.6	34.4	35.0	34.4
USDA-N6005	37.7	36.1	35.6	36.7	37.7	36.7
NC-Dunphy	34.3	33.8	34.0	34.8	34.9	34.3
NC-Dilday	34.7	32.5	34.1	33.7	33.6	33.7
CZ6730	34.8	35.4	34.0	35.3	35.4	35.0
G18-11267	36.7	35.6	36.3	36.2	36.6	36.3
G18-11901	35.8	33.5	34.5	34.6	34.8	34.6
G18-12382	39.1	38.0	38.1	36.9	38.4	38.1
G18-12647	39.1	37.7	39.1	38.4	39.2	38.7
G18-3051R2	34.0	33.4	33.3	33.9	35.0	33.9
G18-3118R2	34.5	34.5	35.3	34.6	35.5	34.9
G18F3D-415	35.7	35.0	34.7	35.6	35.8	35.4
N11-11924	36.2	37.3	36.2	37.0	36.9	36.7
N11-7354	36.4	34.7	34.5	35.1	35.1	35.1
N11-7477	37.1	37.1	36.2	36.9	37.0	36.9
N14-7691	36.5		36.5	38.3	38.3	37.3
N14-7797	37.7	36.7	37.7	38.5	39.4	38.0
N16-10889	35.8	35.3	35.5	36.2	37.3	36.0
N18-1472	36.0	36.2	35.8	37.3	36.8	36.4
N18-719	37.0	36.2	48.7	36.6	37.9	39.3
N18-947	39.0	39.0	38.4	41.0	40.3	39.5
N18-960	36.9	35.1	36.3	36.7	37.0	36.4
N-STPR14-549	37.4	35.1	37.1	36.5	37.3	36.7
Mean	36.4	35.5	36.4	36.3	36.7	36.3
LSD(0.05)	.	.	.	.	.	1.6
CV(%)	.	.	.	.	.	3.5

† Protein percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 112 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP VI 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Tallassee, AL*	*Test Mean*
AG64X8 RR2X	46.3	45.5	46.7	46.1	47.1	46.4
USDA-N6005	49.9	47.8	47.5	48.6	49.4	48.6
NC-Dunphy	46.6	45.8	46.3	46.6	47.0	46.5
NC-Dilday	47.1	44.2	46.7	45.8	46.0	46.0
CZ6730	47.4	47.9	46.6	47.5	47.8	47.4
G18-11267	49.4	47.5	49.3	48.0	49.3	48.7
G18-11901	48.1	44.6	46.8	46.4	47.1	46.6
G18-12382	52.0	50.3	50.9	48.7	51.0	50.6
G18-12647	51.6	49.8	51.6	50.6	51.5	51.0
G18-3051R2	46.1	45.1	45.3	45.7	47.3	45.9
G18-3118R2	46.2	45.9	47.2	46.0	47.6	46.6
G18F3D-415	48.2	47.4	47.5	48.2	48.7	48.0
N11-11924	48.5	49.4	48.5	48.9	48.9	48.8
N11-7354	48.7	46.5	46.6	46.8	47.1	47.1
N11-7477	49.6	49.1	48.5	49.2	49.0	49.1
N14-7691	49.0		48.8	50.4	50.6	49.6
N14-7797	49.9	49.1	50.3	51.0	52.2	50.5
N16-10889	48.0	47.2	47.8	48.3	49.5	48.2
N18-1472	48.6	48.9	48.6	49.6	49.5	49.0
N18-719	49.4	48.6	68.7	48.9	51.0	53.3
N18-947	51.8	51.6	50.7	53.7	53.4	52.2
N18-960	50.4	48.1	49.6	49.6	50.4	49.6
N-STPR14-549	50.4	47.3	49.7	48.7	49.9	49.2
Mean	48.8	47.6	49.1	48.4	49.2	48.6
LSD(0.05)	.	.	.	.	.	2.5
CV(%)	.	.	.	.	.	4.0

† Estimated meal protein percentage is reported on a 13% moisture basis.

TABLE 113 - PARENTAGE OF ENTRIES
UNIFORM GROUP VII 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AGS-738RR	Commercial check	check		RR1	
2	AG74X8 RR2X	Commercial check	check		RRX	
3	N7003CN	Commercial check	check		CONV	
4	NC-Wilder	Commercial check	check		CONV	
5	SH 7418LL	Commercial check	check		LL	
6	G16-4418R2	G06-3182RR x G10PR-224R2	Zenglu Li	F5d	RR2	
7	G16-5923R2	NCC04-619 x G09PR-54457R2	Zenglu Li	F7d	RR2	
8	G16LL-10193	G08-394 x [G00-3213(2) x A5547-127 Liberty]	Zenglu Li	F6d	LL	
9	G17-11315	G08PR-394 x G00-3213	Zenglu Li	F5d	CONV	
10	G17-3336R2	N08-391 x G10PR-56248R2	Zenglu Li	F6d	RR2	
11	G17-5173R2	G11PR-56238R2 x (G00-3880R2 x Benning EMGH)	Zenglu Li	F5d	RR2	
12	G17-8737LL	N07-14182 x [G00-3213(4) x A5547-127 Liberty]	Zenglu Li	F5d	LL	
13	G17PR-1071HOLNR1	G06-3182RR-HOLL-B4	Zenglu Li	BC3F3d	RR1	HOLN
14	G18-6534HOLNR2	[G10PR-224R2(4) x TN10-5002LL] x {G10PR-224R2(4) x [G00-3213 (4) x (17D x S08-14788)HO]}	Zenglu Li	BC3F3d	RR2	HOLN
15	N09-13890	TCPR01-83 x N01-11136	Fallen	F4	CONV	diversity/drought
16	N11-10295	N01-11298 x N04-9646	Fallen	F4	CONV	diversity/drought
17	N14-7142	G00-3213 x TCHM06-Morph-204	Fallen	F4	CONV	protein
18	N14-7822	N6001 x NC-Roy	Fallen	F4	CONV	diversity/protein
19	N16-9124	N7103 x NMS5-48-2-75	Fallen	F4	CONV	diversity/elevated protein
20	N16-9198	N7103 x NMS5-48-2-75	Fallen	F4	CONV	diversity/elevated protein
21	N94-7441	NTCPR90-143 x PEARL	Fallen	F4	CONV	

† Conv= Conventional(non-transgenic), LL=Liberty Link®, RR1=Roundup Ready®, RR2=Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high olelic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 114 - GENERAL SUMMARY OF PERFORMANCE
UNIFORM TEST VII 2021

STRAIN/ VARIETY	RANK	AVG. RANK	YIELD† 2021	YIELD† 20-21	YIELD† 19-21	PROTEIN‡ 2021	PROTEIN‡ 20-21	PROTEIN‡ 19-21	OIL‡ 2021	OIL‡ 20-21	OIL‡ 19-21
AGS-738RR	12	11	59.2	55.4	55.4	34.2	34.5	34.5	19.4	19.0	19.0
AG74X8 RR2X	10	12	60.1	52.4	52.6	34.6	35.2	35.3	19.3	18.8	19.0
N7003CN	17	16	55.8	51.1	50.4	33.9	34.6	34.8	19.3	18.8	19.0
NC-Wilder	7	8	63.7	58.1	56.3	34.1	34.5	34.6	19.7	19.4	19.7
SH 7418LL	5	7	64.2	.	.	36.5	.	.	18.9	.	.
G16-4418R2	2	6	65.2	59.2	.	34.8	35.4	.	19.3	18.8	.
G16-5923R2	3	6	64.7	59.5	.	35.9	36.1	.	18.8	18.4	.
G16LL-10193	4	7	64.3	57.3	.	34.1	34.9	.	19.8	19.4	.
G17-11315	8	8	62.5	.	.	35.4	.	.	19.9	.	.
G17-3336R2	9	11	61.1	.	.	36.9	.	.	18.3	.	.
G17-5173R2	1	4	68.5	.	.	35.1	.	.	19.3	.	.
G17-8737LL	6	8	63.9	.	.	35.4	.	.	18.4	.	.
G17PR-1071HOLNR1	14	12	58.7	.	.	35.7	.	.	19.6	.	.
G18-6534HOLNR2	13	12	59.0	.	.	36.6	.	.	19.7	.	.
N09-13890	16	13	57.0	.	.	35.2	.	.	19.3	.	.
N11-10295	20	17	53.6	.	.	36.8	.	.	17.9	.	.
N14-7142	11	10	59.3	.	.	35.9	.	.	19.0	.	.
N14-7822	19	16	55.6	.	.	36.8	.	.	18.5	.	.
N16-9124	21	18	51.1	48.4	.	38.2	38.6	.	16.9	16.6	.
N16-9198	15	14	57.6	53.7	51.7	37.9	38.3	38.1	16.6	16.3	16.7
N94-7441	18	16	55.7	51.9	49.3	37.4	37.7	37.6	16.9	16.7	17.0
Mean	.	.	60.0	.	.	35.8	.	.	18.8	.	.
LSD(0.05)	.	.	5.2	.	.	0.7	.	.	0.4	.	.
CV(%)	.	.	12.2	.	.	1.9	.	.	1.8	.	.

† Data not included in mean: 2021 Calhoun

‡ Protein percentage and oil percentage reported on a 13% moisture basis beginning in 2015.

TABLE 115 - GENERAL SUMMARY OF PERFORMANCE -Part 2
UNIFORM TEST VII 2021

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
AGS-738RR	46.2	0	2	31	1.5	14.0			
AG74X8 RR2X	46.7	5	2	35	1.4	16.8			
N7003CN	45.7	5	2	34	1.7	17.0			
NC-Wilder	46.2	5	2	35	1.5	16.1			
SH 7418LL	48.9	3	2	36	1.5	17.2			
G16-4418R2	46.9	3	2	38	1.3	14.3	W	T	T
G16-5923R2	48.1	2	2	37	1.4	14.7	P	T	T
G16LL-10193	46.3	7	2	41	1.8	17.5	W	T	T
G17-11315	48.0	5	2	37	1.9	18.2	W	G	T
G17-3336R2	49.0	5	2	39	1.4	15.2	W	T	T
G17-5173R2	47.3	1	2	35	1.7	15.2	P	T	T
G17-8737LL	47.2	5	2	36	1.6	16.3	P	T	T
G17PR-1071HOLNR1	48.3	0	2	35	1.5	13.7	P	T	T
G18-6534HOLNR2	49.6	3	2	39	1.5	13.8	W	T	T
N09-13890	47.4	4	2	36	1.8	17.0	P	T	
N11-10295	48.8	6	2	38	1.4	13.9	W	G	
N14-7142	48.1	9	2	37	1.5	16.9	P	G	
N14-7822	49.0	7	2	36	1.7	16.0	P	G	
N16-9124	49.9	6	2	29	1.5	11.0	W	G	
N16-9198	49.4	8	2	34	1.2	9.7	W	G	
N94-7441	48.9	5	2	30	1.2	8.7	W	G	
Mean	47.9	4	2	36	1.5	14.9			
LSD(0.05)	0.8	3	0	2	0.4	0.8			
CV(%)	1.7	82	33	9	25.0	6.4			

† Estimated meal protein content was added to the annual report in 2018.

TABLE 116 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST VII 2021

STRAIN/	SCN Cyst Score (1-5 Scale)†			RKN Gall Score (1-5 Scale)*			SC	SC
VARIETY	Race 2	Race 3	Race 5	PRK	SRK	JRK	RATING	SCORE
AGS-738RR	.	2	.	5.0	1.0	4.5	R	1
AG74X8 RR2X	.	5	.	2.3	1.0	4.8	R	1
N7003CN	.	1	.	5.0	1.3	5.0	MS	4
NC-Wilder	.	3	.	1.5	3.3	1.8	MS	4
SH 7418LL	.	3	.	1.0	1.5	1.3	MS	4
G16-4418R2	.	1	.	1.5	1.0	1.0	R	1
G16-5923R2	.	3	.	5.0	1.0	5.0	R	1
G16LL-10193	.	5	.	1.0	4.8	2.5	SS	3
G17-11315	.	5	.	1.0	1.5	1.0	R	1
G17-3336R2	.	5	.	5.0	1.0	4.7	R	1
G17-5173R2	.	3	.	5.0	1.0	4.3	S	5
G17-8737LL	.	5	.	1.0	1.0	1.0	MS	4
G17PR-1071HOLNR1	.	2	.	3.3	1.0	4.0	R	1
G18-6534HOLNR2	.	4	.	1.3	1.0	2.5	SS	3
N09-13890	.	5	.	5.0	1.5	5.0	R	1
N11-10295	.	5	.	5.0	5.0	5.0	R	1
N14-7142	.	2	.	5.0	5.0	4.7	MS	4
N14-7822	.	.	.	5.0	4.7	5.0	MS	4
N16-9124	.	2	.	1.0	2.5	1.0	R	1
N16-9198	.	4	.	3.3	1.0	1.3	R	1
N94-7441	.	5	.	3.3	5.0	3.5	R	1

†The race 2, 3, and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7, HG Type 0, and HG Type 2.5.7, respectively. Results for race 2 and 5 were omitted. See Materials and Methods.
*The root-knot nematode (RKN) species used in these tests were Meloidogyne incognita (southern root knot = SRK), M. arenaria (peanut root knot = PRK), and M. javanica (Javanese root-knot = JRK;)MR = mixed reaction.

TABLE 117 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST VII 2021 †

STRAIN/ VARIETY	*Athens, GA(A)*	*Athens, GA(B)*	*Bossier City, LA*	*Calhoun, GA*	*Fairhope, AL*	*Jackson Springs, NC*	*Kinston, NC*
AGS-738RR	102.4	80.9	42.4	35.6	60.6	39.7	56.4
AG74X8 RR2X	115.4	98.1	42.2	39.2	60.2	24.9	59.1
N7003CN	104.9	75.1	44.5	33.3	53.7	34.9	50.1
NC-Wilder	121.6	96.4	50.2	38.5	60.8	25.3	53.5
SH 7418LL	110.8	91.5	55.6	45.3	59.7	35.4	55.8
G16-4418R2	117.8	91.8	59.4	34.2	62.1	38.9	54.4
G16-5923R2	113.7	88.9	52.4	38.7	57.8	37.0	60.3
G16LL-10193	119.0	94.3	55.5	38.7	61.2	35.7	52.8
G17-11315	119.6	79.3	54.1	31.1	61.5	28.6	63.1
G17-3336R2	116.9	82.5	47.9	35.8	66.8	23.7	50.5
G17-5173R2	118.1	100.0	51.0	36.1	55.9	42.1	61.6
G17-8737LL	118.0	84.5	51.5	35.1	60.2	30.2	51.7
G17PR-1071HOLNR1	95.8	87.0	51.6	37.8	55.2	35.6	54.7
G18-6534HOLNR2	109.4	85.2	56.5	43.5	55.7	29.4	47.1
N09-13890	97.1	87.4	44.0	37.8	54.2	26.2	53.0
N11-10295	105.7	71.3	41.8	39.9	59.1	24.3	39.7
N14-7142	96.1	62.9	57.8	35.8	59.2	40.8	50.4
N14-7822	109.7	83.4	43.1	38.2	53.5	24.0	43.6
N16-9124	98.4	60.9	41.2	37.2	49.3	16.0	53.5
N16-9198	105.1	85.6	43.7	28.7	53.9	23.7	49.3
N94-7441	101.4	83.7	40.9	35.3	52.6	28.0	50.9
Mean	109.4	84.3	48.9	37.0	57.8	30.7	52.9
LSD(0.05)	11.2	17.1	5.6	12.0	10.1	5.7	6.8
LSD(0.10)	9.3	14.2	4.7	10.0	8.4	4.7	5.6
CV(%)	6.2	12.3	7.0	19.7	10.6	11.2	7.7

†Data not included in the test mean: Calhoun

TABLE 117 - SEED YIELD (BUSHELS PER ACRE) (continued)
UNIFORM TEST VII 2021 †

STRAIN/ VARIETY	*Plains, GA*	*Plymouth, NC*	*Tifton, GA*	*Test Mean*
AGS-738RR	81.9	38.1	30.2	59.2
AG74X8 RR2X	84.4	36.5	20.5	60.1
N7003CN	79.2	30.7	29.6	55.8
NC-Wilder	95.4	36.6	33.6	63.7
SH 7418LL	88.5	42.9	37.2	64.2
G16-4418R2	90.5	42.2	29.9	65.2
G16-5923R2	97.9	43.6	30.7	64.7
G16LL-10193	93.0	37.2	30.1	64.3
G17-11315	82.3	40.5	33.2	62.5
G17-3336R2	89.7	45.5	26.5	61.1
G17-5173R2	102.4	45.9	39.9	68.5
G17-8737LL	103.5	42.2	33.1	63.9
G17PR-1071HOLNR1	80.9	33.9	32.9	58.7
G18-6534HOLNR2	78.7	39.0	30.2	59.0
N09-13890	82.0	41.8	27.7	57.0
N11-10295	74.7	40.4	25.7	53.6
N14-7142	88.9	41.7	35.7	59.3
N14-7822	79.3	40.9	24.1	55.6
N16-9124	80.6	32.5	27.2	51.1
N16-9198	92.3	37.7	27.5	57.6
N94-7441	89.3	33.0	21.3	55.7
Mean	87.4	39.2	29.8	60.0
LSD(0.05)	10.1	7.3	6.5	5.2
LSD(0.10)	8.4	6.1	5.5	4.4
CV(%)	7.0	11.0	13.3	12.2

TABLE 118 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Athens, GA(B)*	*Bossier City, LA*	*Calhoun, GA*	*Fairhope, AL*	*Jackson Springs, NC*	*Kinston, NC*
AGS-738RR	10/18	10/28	10/19	10/26	10/28	11/1	10/19
AG74X8 RR2X	6	1	6	3	2	7	8
N7003CN	4	7	6	6	3	8	4
NC-Wilder	5	8	5	5	0	6	1
SH 7418LL	-1	0	4	8	-1	0	5
G16-4418R2	1	1	5	1	-1	2	7
G16-5923R2	2	1	4	1	-1	0	2
G16LL-10193	8	8	6	6	0	4	7
G17-11315	2	7	5	19	0	5	8
G17-3336R2	2	2	4	10	2	2	7
G17-5173R2	-1	0	1	2	0	-1	1
G17-8737LL	3	5	6	5	1	7	4
G17PR-1071HOLNR1	-1	0	-1	-3	1	4	1
G18-6534HOLNR2	-1	0	6	-1	-1	-2	7
N09-13890	4	2	5	7	1	2	4
N11-10295	4	12	4	11	1	4	6
N14-7142	9	8	6	17	1	6	11
N14-7822	9	7	5	10	0	6	4
N16-9124	10	12	6	0	-1	8	7
N16-9198	10	12	6	10	0	6	9
N94-7441	3	11	6	-4	1	3	6
Mean	4	5	5	5	0	4	5
LSD(0.05)	1	1	3	11	3	4	5
CV(%)	10	8	34	122	490	56	45

TABLE 118 - RELATIVE MATURITY (continued)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	*Plymouth, NC*	*Tifton, GA*	*Test Mean*
AGS-738RR	10/20	10/3	10/21
AG74X8 RR2X	7	10	5
N7003CN	4	3	5
NC-Wilder	5	9	5
SH 7418LL	6	10	3
G16-4418R2	6	7	3
G16-5923R2	1	8	2
G16LL-10193	8	13	7
G17-11315	0	-1	5
G17-3336R2	6	8	5
G17-5173R2	5	1	1
G17-8737LL	4	8	5
G17PR-1071HOLNR1	0	4	0
G18-6534HOLNR2	6	10	3
N09-13890	8	7	4
N11-10295	4	10	6
N14-7142	13	15	9
N14-7822	7	11	7
N16-9124	4	9	6
N16-9198	5	10	8
N94-7441	6	9	5
Mean	5	8	4
LSD(0.05)	4		3
CV(%)	36	0	82

TABLE 119 - PLANT HEIGHT (INCHES)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Bossier City, LA	Calhoun, GA	Fairhope, AL	Jackson Springs, NC	Kinston, NC
AGS-738RR	36	31	25	30	26	36	36
AG74X8 RR2X	43	37	25	34	24	40	45
N7003CN	39	39	29	31	27	40	41
NC-Wilder	41	41	31	35	30	38	40
SH 7418LL	43	37	31	37	28	36	44
G16-4418R2	47	37	33	36	27	46	42
G16-5923R2	43	37	32	36	27	40	43
G16LL-10193	49	42	34	38	35	40	48
G17-11315	41	42	31	41	30	36	46
G17-3336R2	47	44	35	40	28	36	46
G17-5173R2	41	34	28	37	26	30	42
G17-8737LL	40	35	29	38	29	36	42
G17PR-1071HOLNR1	39	37	29	35	28	40	40
G18-6534HOLNR2	47	39	35	38	31	44	48
N09-13890	42	33	31	45	24	36	42
N11-10295	45	41	30	34	33	40	45
N14-7142	44	39	30	37	29	36	45
N14-7822	43	34	29	32	32	40	40
N16-9124	33	32	25	30	20	30	35
N16-9198	39	37	29	30	30	40	41
N94-7441	40	32	22	28	22	36	36
Mean	42	37	30	35	28	38	42
LSD(0.05)	3	3	4	7	6	.	6
CV(%)	5	4	8	12	13	.	7

TABLE 119 - PLANT HEIGHT (INCHES) (continued)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	*Plains, GA*	*Plymouth, NC*	*Tifton, GA*	*Test Mean*
AGS-738RR	34	34	27	31
AG74X8 RR2X	39	33	27	35
N7003CN	37	31	30	34
NC-Wilder	36	35	28	35
SH 7418LL	43	34	29	36
G16-4418R2	42	39	31	38
G16-5923R2	44	38	29	37
G16LL-10193	48	41	34	41
G17-11315	43	34	28	37
G17-3336R2	46	35	31	39
G17-5173R2	40	35	30	35
G17-8737LL	43	37	29	36
G17PR-1071HOLNR1	37	35	28	35
G18-6534HOLNR2	43	42	29	39
N09-13890	39	38	31	36
N11-10295	41	44	28	38
N14-7142	42	35	33	37
N14-7822	37	42	32	36
N16-9124	34	25	23	29
N16-9198	35	34	27	34
N94-7441	35	28	22	30
Mean	40	35	29	36
LSD(0.05)	4	2	3	2
CV(%)	6	3	6	9

TABLE 120 - PLANT LODGING (1-5)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Bossier City, LA	Calhoun, GA	Fairhope, AL	Jackson Springs, NC	Kinston, NC
AGS-738RR	3.3	2.7	1.0	2.7	1.0	1.0	2.0
AG74X8 RR2X	2.0	1.7	1.0	1.0	1.0	2.0	1.8
N7003CN	2.0	3.3	1.0	1.0	1.0	2.5	2.3
NC-Wilder	3.3	3.3	1.0	4.0	1.3	2.5	3.5
SH 7418LL	2.7	2.3	1.0	1.7	1.0	1.0	2.0
G16-4418R2	2.0	2.0	1.0	1.7	1.0	2.0	2.3
G16-5923R2	2.3	3.0	1.0	1.0	1.0	2.0	2.0
G16LL-10193	2.3	2.3	1.0	1.7	1.3	2.5	2.5
G17-11315	3.3	3.7	1.0	1.0	1.0	1.5	1.5
G17-3336R2	2.7	3.3	1.0	2.3	1.3	1.0	2.3
G17-5173R2	2.7	3.3	1.0	3.0	1.0	1.5	2.0
G17-8737LL	2.7	2.7	1.0	1.0	1.0	2.0	2.5
G17PR-1071HOLNR1	3.0	2.3	1.0	4.0	1.3	2.0	2.3
G18-6534HOLNR2	2.0	1.7	1.0	1.3	1.0	1.5	2.0
N09-13890	3.3	3.0	1.0	2.3	1.0	1.5	1.8
N11-10295	4.0	4.0	1.0	2.7	2.0	2.0	2.0
N14-7142	4.0	4.0	1.0	3.0	1.7	3.0	2.3
N14-7822	2.7	3.0	1.0	2.0	1.0	2.0	2.0
N16-9124	2.3	3.7	1.0	2.3	1.3		2.3
N16-9198	2.3	2.3	1.0	3.0	1.3	2.0	2.0
N94-7441	2.0	2.0	1.0	1.0	1.0	2.0	2.2
Mean	2.7	2.8	1.0	2.1	1.2	1.9	2.2
LSD(0.05)	0.8	0.8	.	1.7	0.5	.	0.6
CV(%)	17.9	16.6	0.0	49.2	27.1	.	14.1

TABLE 120 - PLANT LODGING (1-5) (continued)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Plains, GA	Plymouth, NC	Tifton, GA	Test Mean
AGS-738RR	2.0	1.0	1.0	1.8
AG74X8 RR2X	2.0	1.5	1.0	1.5
N7003CN	2.3	1.0	1.0	1.7
NC-Wilder	2.0	2.3	1.3	2.4
SH 7418LL	1.3	1.3	1.0	1.5
G16-4418R2	1.7	1.8	1.0	1.6
G16-5923R2	2.0	1.8	1.3	1.7
G16LL-10193	2.0	1.3	1.3	1.8
G17-11315	1.0	1.0	1.0	1.6
G17-3336R2	1.8	1.8	1.0	1.9
G17-5173R2	1.3	1.5	1.0	1.9
G17-8737LL	2.0	1.8	1.0	1.7
G17PR-1071HOLNR1	1.7	1.3	1.0	2.0
G18-6534HOLNR2	1.7	1.5	1.0	1.5
N09-13890	1.7	1.3	1.0	1.8
N11-10295	2.0	1.5	1.0	2.2
N14-7142	2.3	2.0	1.3	2.4
N14-7822	2.0	1.8	1.0	1.8
N16-9124	2.0	1.5	1.0	1.9
N16-9198	1.7	1.8	1.0	1.8
N94-7441	1.7	1.3	1.0	1.5
Mean	1.8	1.5	1.1	1.8
LSD(0.05)	0.7	0.4	0.4	0.4
CV(%)	22.1	12.0	23.7	32.6

TABLE 121 - SEED QUALITY (1-5)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Bossier City, LA	Calhoun, GA	Fairhope, AL	Jackson Springs, NC	Kinston, NC
AGS-738RR	1.0	1.7	1.0	.	2.0	.	.
AG74X8 RR2X	1.2	1.2	1.0	.	2.0	.	.
N7003CN	1.7	1.3	1.0	.	2.0	.	.
NC-Wilder	1.0	1.2	1.0	.	2.7	.	.
SH 7418LL	1.7	1.2	1.0	.	2.0	.	.
G16-4418R2	1.2	1.2	1.0	.	2.0	.	.
G16-5923R2	1.2	1.0	1.0	.	2.0	.	.
G16LL-10193	1.5	1.8	1.0	.	2.3	.	.
G17-11315	1.7	1.8	1.0	.	2.3	.	.
G17-3336R2	1.3	1.3	1.0	.	2.0	.	.
G17-5173R2	1.7	1.3	1.0	.	2.7	.	.
G17-8737LL	1.2	1.3	1.0	.	3.0	.	.
G17PR-1071HOLNR1	1.3	1.0	1.0	.	2.0	.	.
G18-6534HOLNR2	1.2	1.2	1.0	.	3.0	.	.
N09-13890	1.3	1.3	1.0	.	2.7	.	.
N11-10295	1.2	1.2	1.0	.	2.0	.	.
N14-7142	1.5	1.2	1.0	.	2.0	.	.
N14-7822	1.2	1.3	1.0	.	3.0	.	.
N16-9124	1.0	1.3	1.0	.	3.0	.	.
N16-9198	1.0	1.0	1.0	.	2.0	.	.
N94-7441	1.0	1.2	1.0	.	2.0	.	.
Mean	1.3	1.3	1.0	.	2.3	.	.
LSD(0.05)	0.5	0.5		.	0.4	.	.
CV(%)	23.5	22.5	0.0	.	11.3	.	.

TABLE 121 - SEED QUALITY (1-5) (continued)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Plains, GA	Plymouth, NC	Tifton, GA	Test Mean
AGS-738RR	1.8	.	.	1.5
AG74X8 RR2X	1.7	.	.	1.4
N7003CN	2.7	.	.	1.7
NC-Wilder	1.7	.	.	1.5
SH 7418LL	1.5	.	.	1.5
G16-4418R2	1.2	.	.	1.3
G16-5923R2	1.7	.	.	1.4
G16LL-10193	2.5	.	.	1.8
G17-11315	2.5	.	.	1.9
G17-3336R2	1.5	.	.	1.4
G17-5173R2	1.8	.	.	1.7
G17-8737LL	1.7	.	.	1.6
G17PR-1071HOLNR1	2.3	.	.	1.5
G18-6534HOLNR2	1.2	.	.	1.5
N09-13890	2.5	.	.	1.8
N11-10295	1.8	.	.	1.4
N14-7142	1.7	.	.	1.5
N14-7822	2.0	.	.	1.7
N16-9124	1.2	.	.	1.5
N16-9198	1.0	.	.	1.2
N94-7441	1.0	.	.	1.2
Mean	1.8	.	.	1.5
LSD(0.05)	0.6	.	.	0.4
CV(%)	20.3	.	.	24.8

TABLE 122 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Bossier City, LA	Calhoun, GA	Fairhope, AL	Jackson Springs, NC	Kinston, NC
AGS-738RR	15.2	16.4	11.9	.	15.9	12.6	12.9
AG74X8 RR2X	18.0	17.9	14.1	.	17.7	16.7	15.8
N7003CN	18.2	18.2	15.2	.	17.4	18.0	16.1
NC-Wilder	17.2	17.0	16.3	.	18.1	15.5	14.1
SH 7418LL	17.6	18.4	17.3	.	18.8	17.1	16.5
G16-4418R2	14.1	14.9	13.2	.	15.4	14.5	14.2
G16-5923R2	15.0	15.6	14.0	.	16.7	15.1	13.4
G16LL-10193	18.0	19.2	16.4	.	17.8	17.9	17.0
G17-11315	18.8	19.8	18.0	.	20.1	18.3	17.6
G17-3336R2	15.3	17.1	13.4	.	17.2	14.5	14.7
G17-5173R2	16.5	16.7	15.0	.	16.2	14.1	14.1
G17-8737LL	17.5	18.1	16.3	.	18.2	15.8	15.3
G17PR-1071HOLNR1	14.4	15.4	12.4	.	15.6	13.4	12.5
G18-6534HOLNR2	14.0	15.2	13.8	.	15.8	13.4	13.3
N09-13890	18.6	18.8	14.7	.	17.0	16.2	16.2
N11-10295	14.8	16.2	13.3	.	14.5	13.9	13.1
N14-7142	17.8	18.7	16.5	.	18.7	16.7	14.7
N14-7822	17.2	18.1	13.8	.	16.8	16.8	13.1
N16-9124	11.8	12.4	11.5	.	11.6	10.6	9.9
N16-9198	10.1	11.4	10.2	.	9.5	9.2	8.7
N94-7441	9.1	9.7	8.5	.	8.5	8.8	8.5
Mean	15.7	16.4	14.1	.	16.1	14.7	13.9
LSD(0.05)	1.2	1.0	.	.	1.9	1.8	1.0
CV(%)	4.5	3.8	.	.	7.2	6.0	3.5

TABLE 122 - SEED SIZE (GRAMS PER 100 SEED) (continued)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	*Plains, GA*	*Plymouth, NC*	*Tifton, GA*	*Test Mean*
AGS-738RR	15.5	10.7	.	14.0
AG74X8 RR2X	18.7	14.6	.	16.8
N7003CN	18.9	13.8	.	17.0
NC-Wilder	17.0	13.7	.	16.1
SH 7418LL	16.7	15.6	.	17.2
G16-4418R2	15.5	12.5	.	14.3
G16-5923R2	15.5	12.0	.	14.7
G16LL-10193	19.5	14.3	.	17.5
G17-11315	17.8	15.7	.	18.2
G17-3336R2	16.1	13.0	.	15.2
G17-5173R2	16.0	13.5	.	15.2
G17-8737LL	16.6	13.0	.	16.3
G17PR-1071HOLNR1	14.3	11.2	.	13.7
G18-6534HOLNR2	13.4	12.0	.	13.8
N09-13890	19.8	14.0	.	17.0
N11-10295	15.1	10.2	.	13.9
N14-7142	17.0	15.2	.	16.9
N14-7822	18.6	12.7	.	16.0
N16-9124	12.1	8.8	.	11.0
N16-9198	11.0	8.2	.	9.7
N94-7441	9.8	7.8	.	8.7
Mean	15.9	12.5	.	14.9
LSD(0.05)	1.1	1.4	.	0.8
CV(%)	4.2	5.3	.	6.4

TABLE 123 - OIL (%)†
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Bossier City, LA	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	19.5	19.1	.	20.0	18.8	19.7	19.7	19.2	19.4
AG74X8 RR2X	19.2	19.4	.	19.9	17.9	19.2	20.3	19.6	19.3
N7003CN	19.7	19.5	.	20.2	18.0	19.4	19.3	19.3	19.3
NC-Wilder	19.7	18.8	.	20.7	19.1	20.0	20.0	19.9	19.7
SH 7418LL	19.2	18.4	.	19.0	18.5	19.0	19.5	18.8	18.9
G16-4418R2	19.5	19.1	.	20.1	18.7	19.1	19.1	20.0	19.3
G16-5923R2	18.6	18.6	.	18.9	18.7	18.4	19.4	19.0	18.8
G16LL-10193	19.9	19.5	.	20.4	19.3	19.5	20.1	20.2	19.8
G17-11315	19.7	19.4	.	20.2	19.4	19.5	20.3	20.5	19.9
G17-3336R2	18.5	18.3	.	18.6	17.6	18.6	18.2	18.1	18.3
G17-5173R2	19.2	19.6	.	19.8	18.9	18.9	19.7	19.0	19.3
G17-8737LL	18.9	17.7	.	18.9	17.6	18.6	18.7	18.8	18.4
G17PR-1071HOLNR1	19.7	19.1	.	19.8	18.9	19.8	20.5	19.8	19.6
G18-6534HOLNR2	19.4	18.7	.	20.6	19.6	19.6	19.9	20.3	19.7
N09-13890	19.5	19.4		19.7	18.2	19.6	19.5	19.1	19.3
N11-10295	18.1	17.8	.	18.9	17.2	17.3	18.4	18.0	17.9
N14-7142	19.1	18.2	.	19.4	18.7	18.5	19.8	19.2	19.0
N14-7822	18.9	18.8	.	18.9	17.6	18.3	18.5	18.6	18.5
N16-9124	17.3	16.9	.	17.3	15.9	16.6	16.8	17.4	16.9
N16-9198	16.8	16.5	.	16.8	15.7	16.9	16.5	17.3	16.6
N94-7441	16.9	16.6	.	17.2	16.3	16.9	17.0	17.8	16.9
Mean	18.9	18.5	.	19.3	18.1	18.7	19.1	19.0	18.8
LSD(0.05)	.	.	.	.	.	.	.	.	0.4
CV(%)	.	.	.	.	.	.	.	.	1.8

†Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 124 - PROTEIN (%)†
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Bossier City, LA	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	34.5	34.8	.	33.2	35.6	33.3	35.5	32.7	34.2
AG74X8 RR2X	34.1	34.0	.	34.3	37.8	34.5	34.3	33.5	34.6
N7003CN	33.2	33.1	.	33.0	36.5	33.7	34.6	33.3	33.9
NC-Wilder	33.2	35.1	.	33.8	35.7	33.2	35.1	32.8	34.1
SH 7418LL	36.2	36.3	.	36.5	37.2	36.6	35.8	36.6	36.5
G16-4418R2	34.2	35.0	.	35.1	36.8	34.6	35.5	32.5	34.8
G16-5923R2	35.9	36.6	.	36.5	37.1	36.1	35.6	33.7	35.9
G16LL-10193	33.9	33.4	.	33.5	35.9	35.0	34.8	32.6	34.1
G17-11315	35.7	36.0	.	34.8	36.6	35.7	35.8	33.0	35.4
G17-3336R2	36.9	37.9	.	36.6	38.4	36.6	36.1	35.7	36.9
G17-5173R2	35.2	34.8	.	35.1	36.0	36.0	34.3	34.2	35.1
G17-8737LL	34.6	35.9	.	35.5	37.5	35.3	34.9	34.3	35.4
G17PR-1071HOLNR1	36.0	35.9	.	35.9	38.3	34.6	35.3	33.9	35.7
G18-6534HOLNR2	37.0	36.8	.	36.6	37.7	36.6	36.9	34.9	36.6
N09-13890	35.0	34.6		35.0	37.8	34.8	34.8	34.3	35.2
N11-10295	36.4	36.6	.	35.9	38.1	38.0	37.3	35.3	36.8
N14-7142	35.4	36.2	.	36.6	36.7	36.9	35.1	34.4	35.9
N14-7822	35.7	37.1	.	37.3	38.9	37.1	35.8	35.4	36.8
N16-9124	37.7	39.0	.	37.1	39.9	37.6	39.0	36.9	38.2
N16-9198	37.1	38.7	.	37.9	39.9	36.7	39.0	36.2	37.9
N94-7441	37.3	38.5	.	37.1	38.7	36.6	38.1	35.5	37.4
Mean	35.5	36.0	.	35.6	37.5	35.7	35.9	34.4	35.8
LSD(0.05)	.	.	.	.	.	.	.	.	0.7
CV(%)	.	.	.	.	.	.	.	.	1.9

†Protein percentage reported on a 13% moisture basis beginning in 2015.

TABLE 125 - ESTIMATED MEAL PROTEIN (%)†
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Bossier City, LA	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	46.5	46.8	.	45.1	47.6	45.1	48.0	44.0	46.2
AG74X8 RR2X	45.9	45.8	.	46.6	50.1	46.4	46.8	45.3	46.7
N7003CN	45.0	44.6	.	44.9	48.4	45.4	46.6	44.8	45.7
NC-Wilder	44.9	47.0	.	46.4	48.0	45.1	47.7	44.5	46.2
SH 7418LL	48.7	48.3	.	49.0	49.6	49.2	48.3	49.0	48.9
G16-4418R2	46.1	47.1	.	47.7	49.2	46.5	47.7	44.1	46.9
G16-5923R2	48.0	48.8	.	48.8	49.5	48.1	48.0	45.2	48.1
G16LL-10193	46.0	45.0	.	45.8	48.3	47.2	47.3	44.5	46.3
G17-11315	48.3	48.5	.	47.3	49.3	48.2	48.8	45.2	48.0
G17-3336R2	49.2	50.4	.	48.8	50.7	48.9	48.0	47.4	49.0
G17-5173R2	47.4	47.0	.	47.6	48.2	48.3	46.4	45.9	47.3
G17-8737LL	46.4	47.4	.	47.6	49.4	47.1	46.7	45.9	47.2
G17PR-1071HOLNR1	48.8	48.2	.	48.6	51.4	46.8	48.2	46.0	48.3
G18-6534HOLNR2	49.9	49.2	.	50.1	50.9	49.5	50.1	47.6	49.6
N09-13890	47.3	46.7		47.4	50.2	47.0	47.0	46.0	47.4
N11-10295	48.3	48.4	.	48.2	50.1	50.0	49.7	46.8	48.8
N14-7142	47.5	48.0	.	49.3	49.0	49.1	47.5	46.3	48.1
N14-7822	47.8	49.6	.	50.0	51.3	49.4	47.8	47.3	49.0
N16-9124	49.5	51.0	.	48.8	51.6	49.0	51.0	48.6	49.9
N16-9198	48.5	50.3	.	49.4	51.4	48.0	50.7	47.5	49.4
N94-7441	48.8	50.1	.	48.7	50.2	47.9	50.0	46.9	48.9
Mean	47.5	48.0	.	47.9	49.7	47.7	48.2	46.1	47.9
LSD(0.05)	.	.	.	.	.	.	.	.	0.8
CV(%)	.	.	.	.	.	.	.	.	1.7

SUMMARY OF SEED FATTY ACIDS (%)
UNIFORM TEST VII 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AGS-738RR	11.1	3.6	23.1	54.7	7.5
AG74X8 RR2X	10.5	3.9	20.9	57.6	7.2
G17PR-1071HOLNR1	7.6	3.1	78.5	7.3	3.4
Mean	9.7	3.5	40.8	39.9	6.0
LSD(0.05)	0.5	0.3	4.7	3.9	0.7
CV(%)	4.5	5.5	9.0	7.7	8.6

†Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plymouth, NC	Test Mean
AGS-738RR	10.9	10.5	11.9	10.8	11.4	10.8	11.1
AG74X8 RR2X	10.2	10.7	10.1	10.5	10.4	11.1	10.5
G17PR-1071HOLNR1	7.8	8.3	7.4	7.2	7.8	7.3	7.6
Mean	9.6	9.8	9.8	9.5	9.9	9.7	9.7
LSD(0.05)	.	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	.	4.5

SEED STEARIC ACID (%)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plymouth, NC	Test Mean
AGS-738RR	3.5	3.6	3.4	3.9	3.6	3.5	3.6
AG74X8 RR2X	3.9	3.9	3.5	4.5	4.0	3.8	3.9
G17PR-1071HOLNR1	3.2	3.0	2.6	3.2	3.1	3.4	3.1
Mean	3.6	3.5	3.2	3.9	3.5	3.6	3.5
LSD(0.05)	.	.	.	.	.	.	0.3
CV(%)	.	.	.	.	.	.	5.5

SEED OLEIC ACID (%)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plymouth, NC	Test Mean
AGS-738RR	25.9	23.8	20.9	26.4	22.6	19.1	23.1
AG74X8 RR2X	19.8	19.4	22.7	23.8	19.8	19.7	20.9
G17PR-1071HOLNR1	80.0	67.2	84.0	80.9	79.7	79.4	78.5
Mean	41.9	36.8	42.5	43.7	40.7	39.4	40.8
LSD(0.05)	.	.	.	.	.	.	4.7
CV(%)	.	.	.	.	.	.	9.0

SEED LINOLEIC ACID (%)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plymouth, NC	Test Mean
AGS-738RR	52.9	53.9	56.1	52.6	54.4	58.4	54.7
AG74X8 RR2X	58.7	58.3	57.5	55.1	57.9	57.9	57.6
G17PR-1071HOLNR1	5.7	16.7	3.5	5.6	5.9	6.6	7.3
Mean	39.1	43.0	39.0	37.8	39.4	41.0	39.9
LSD(0.05)	.	.	.	.	.	.	3.9
CV(%)	.	.	.	.	.	.	7.7

SEED LINOLENIC ACID (%)
UNIFORM GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plymouth, NC	Test Mean
AGS-738RR	6.8	8.2	7.6	6.3	8.0	8.3	7.5
AG74X8 RR2X	7.5	7.8	6.1	6.2	7.9	7.6	7.2
G17PR-1071HOLNR1	3.3	4.8	2.6	3.1	3.5	3.3	3.4
Mean	5.8	6.9	5.5	5.2	6.4	6.4	6.0
LSD(0.05)	.	.	.	.	.	.	0.7
CV(%)	.	.	.	.	.	.	8.6

INTENTIONALLY BLANK

TABLE 126 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP VII 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AGS-738RR	Commercial check	check		RR1	
2	AG74X8 RR2X	Commercial check	check		RRX	
3	N7003CN	Commercial check	check		CONV	
4	NC-Wilder	Commercial check	check		CONV	
5	SH 7418LL	Commercial check	check		LL	
6	G17PR-1039HOLNR1	G06-3182RR-HOLL-B1	Zenglu Li	BC3 F3d	RR1	HOLN
7	G18-12061	Woodruff x N10-7121	Zenglu Li	F5d	CONV	
8	G18-3336R2	G10PR-56248R2 x TN08-100	Zenglu Li	F6d	RR2	
9	G18-3558R2	G10PR-56248R2 x TN09-44420	Zenglu Li	F6d	RR2	
10	G18-4195R2	G10PR-224R2 x UA5612	Zenglu Li	F5d	RR2	
11	G18-6302R2	G12-3698R2 x G12-6543	Zenglu Li	F6d	RR2	
12	G18-6669HOLNR2	[G11-1614R2(4) x TN10-5002LL] x {G11-1614R2(4) x [G00-3213 (4) x (17D x S08-14788)HO]}	Zenglu Li	BC3 F3d	RR2	HOLN
13	G18-8480LL	TN08-100 x G13LL-7	Zenglu Li	F6d	LL	
14	N07-15769	N93-110-6 x N98-7165	Fallen	F4	CONV	drought
15	N11-7405	Roy x PI587696	Fallen	F4	CONV	diversity
16	N14-7563	N6002 x NC-Roy	Fallen	F4	CONV	diversity/protein
17	N14-7719	N07-14704 (sib of N6001) x NC-Roy	Fallen	F4	CONV	diversity/protein
18	N16-10927	NC-Roy x N01-11771	Fallen	F4	CONV	drought
19	N16-10962	NC-Roy x N01-11771	Fallen	F4	CONV	drought
20	N16-8470	NC-Roy x LG01-5087-3	Fallen	F4	CONV	diversity
21	N16-9198	N7103 x NMS5-48-2-75	Fallen	F4	CONV	diversity/protein

† Conv= Conventional(non-transgenic),LL= Liberty Link®, RR1= Roundup Ready®, RR2= Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high oleic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 127 - GENERAL SUMMARY OF PERFORMANCE
PRELIMINARY TEST VII 2021

STRAIN/ VARIETY	SEED YIELD†	RANK	AVG. RANK	MAT. INDEX	LOD	HT	SCN Cyst Score (1-5)‡ Race 2	Race 3	Race 5	SC RATING	SC SCORE
AGS-738RR	68.2	7	9	0	1.9	34	.	1	.	R	1
AG74X8 RR2X	68.3	6	9	5	1.3	38	.	4	.	R	1
N7003CN	63.5	17	12	4	1.8	37	.	2	.	MS	4
NC-Wilder	68.5	4	7	2	2.5	37	.	5	.	MS	4
SH 7418LL	67.3	10	10	1	1.5	40	.	2	.	MS	4
G17PR-1039HOLNR1	67.9	9	9	0	1.8	38	.	1	.	MR	2
G18-12061	66.2	12	11	4	2.1	42	.	4	.	MS	4
G18-3336R2	73.7	1	3	0	1.4	40	.	4	.	R	1
G18-3558R2	71.3	2	6	0	1.2	36	.	5	.	R	1
G18-4195R2	69.4	3	9	-2	2.2	41	.	5	.	SS	3
G18-6302R2	68.0	8	9	-1	1.6	41	.	2	.	MS	4
G18-6669HOLNR2	63.9	15	14	2	1.3	41	.	1	.	MS	4
G18-8480LL	67.0	11	11	2	1.7	42	.	5	.	R	1
N07-15769	61.7	18	16	9	2.2	43	.	5	.	SS	3
N11-7405	64.0	14	14	3	2.1	38	.	5	.	MS	4
N14-7563	60.7	19	16	5	2.6	39	.	5	.	R	1
N14-7719	56.2	21	18	8	2.9	45	.	5	.	S	5
N16-10927	68.4	5	7	4	2.1	40	.	5	.	R	1
N16-10962	65.9	13	11	1	1.9	40	.	5	.	R	1
N16-8470	58.3	20	16	2	2.6	39	.	5	.	R	1
N16-9198	63.7	16	13	8	1.7	37	.	5	.	R	1
Mean	65.8	.	.	3	1.9	39	.	.	.		.
LSD(0.05)	7.5	.	.	3	0.6	4	.	.	.		.
CV(%)	11.5	.	.	89	26.7	8	.	.	.		.

† Data not included in the test mean: not applicable

‡The race 3 SCN population used in these tests was typed as HG (*Heterodera glycines*) Type 0.

TABLE 128 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST VII 2021

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
AGS-738RR	1.3	13.0	33.7	19.6	45.5			
AG74X8 RR2X	1.2	16.1	34.9	19.2	47.0			
N7003CN	1.7	16.6	34.9	19.2	46.9			
NC-Wilder	1.1	15.1	34.1	20.0	46.4			
SH 7418LL	1.2	15.9	36.4	19.0	48.9			
G17PR-1039HOLNR	1.2	13.2	35.8	19.8	48.5	P	T	T
G18-12061	1.3	15.7	38.5	17.6	50.8	W	T	T
G18-3336R2	1.1	14.8	36.4	18.6	48.6	W	T	T
G18-3558R2	1.7	14.3	36.1	18.3	48.0	P	T	T
G18-4195R2	1.2	13.8	34.6	19.4	46.7	W	T	T
G18-6302R2	1.5	15.4	36.3	19.0	48.7	P	T	T
G18-6669HOLNR2	1.1	13.6	35.9	20.1	48.7	P	T	T
G18-8480LL	1.2	14.8	37.5	18.6	50.1	W	T	T
N07-15769	1.2	13.6	36.0	18.6	48.0	P	G	
N11-7405	2.1	16.0	34.7	18.6	46.3	P	T	
N14-7563	1.2	15.5	37.1	17.8	49.0	P	G	
N14-7719	1.2	13.5	38.5	17.5	50.7	P	G	
N16-10927	1.4	12.8	35.2	18.6	47.0	P	G	
N16-10962	2.1	14.4	35.6	18.6	47.5	W	G	
N16-8470	1.3	12.3	34.6	18.8	46.3	W	G	
N16-9198	1.0	9.1	38.1	16.6	49.6	W	G	
Mean	1.4	14.3	35.9	18.7	48.1			
LSD(0.05)	0.5	0.9	1.0	0.6	1.1			
CV(%)	24.3	5.9	2.3	2.4	1.9			

§ Protein percentage and oil percentage are reported on a 13% moisture basis beginning in 2015.

TABLE 129 - SEED YIELD (BUSHELS PER ACRE)
PRELIMINARY GROUP VII 2021 †

STRAIN/ VARIETY	Athens, GA(A)	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	102.2	43.1	60.9	85.6	49.4	68.2
AG74X8 RR2X	115.3	27.0	63.8	86.2	49.1	68.3
N7003CN	92.2	36.6	55.6	91.6	41.5	63.5
NC-Wilder	107.5	29.9	64.0	95.6	45.5	68.5
SH 7418LL	106.3	37.3	56.7	81.1	55.4	67.3
G17PR-1039HOLNR1	103.8	38.1	61.6	84.5	51.4	67.9
G18-12061	99.5	25.9	57.9	96.3	51.7	66.2
G18-3336R2	116.6	36.3	65.1	91.5	58.8	73.7
G18-3558R2	114.2	32.9	64.2	91.0	54.2	71.3
G18-4195R2	119.4	28.1	56.4	89.8	53.4	69.4
G18-6302R2	106.5	39.8	60.2	83.2	50.4	68.0
G18-6669HOLNR2	100.8	34.7	58.6	84.5	40.9	63.9
G18-8480LL	102.2	37.0	54.4	87.3	54.1	67.0
N07-15769	96.9	29.5	54.8	86.2	41.1	61.7
N11-7405	106.5	27.0	55.6	91.1	39.6	64.0
N14-7563	95.2	22.5	50.4	89.8	45.5	60.7
N14-7719	76.2	19.5	54.4	91.5	39.1	56.2
N16-10927	108.2	29.6	61.7	98.7	43.9	68.4
N16-10962	113.6	24.9	58.2	91.2	41.7	65.9
N16-8470	83.8	24.9	55.3	91.7	36.0	58.3
N16-9198	105.8	31.3	58.9	80.4	42.0	63.7
Mean	103.5	31.2	58.5	89.0	46.9	65.8
LSD(0.05)	14.7	5.8	7.4	7.6	8.3	7.5
LSD(0.10)	12.2	4.9	6.1	6.3	6.9	6.3
CV(%)	8.6	11.2	7.6	5.2	10.8	11.5

† Data not included in the test mean: not applicable

TABLE 130 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Jackson Springs, NC*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Test Mean*
AGS-738RR	10/19	10/27	10/20	.	10/21	10/22
AG74X8 RR2X	2	5	6	.	5	5
N7003CN	3	5	8	.	1	4
NC-Wilder	2	6	4	.	-4	2
SH 7418LL	0	0	3	.	4	1
G17PR-1039HOLNR1	1	-2	1	.	1	0
G18-12061	4	6	2	.	5	4
G18-3336R2	0	-2	1	.	2	0
G18-3558R2	-2	2	1	.	-3	0
G18-4195R2	-1	-6	0	.	-3	-2
G18-6302R2	-1	0	0	.	-2	-1
G18-6669HOLNR2	4	-1	3	.	2	2
G18-8480LL	1	5	2	.	0	2
N07-15769	9	10	10	.	6	9
N11-7405	2	10	2	.	-2	3
N14-7563	4	10	5	.	1	5
N14-7719	9	10	9	.	6	8
N16-10927	4	5	6	.	0	4
N16-10962	0	-2	4	.	0	1
N16-8470	3	6	2	.	-2	2
N16-9198	9	10	8	.	4	8
Mean	3	4	4	.	1	3
LSD(0.05)	1	7	3	.	3	3
CV(%)	16	92	32	.	111	89

TABLE 131 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Jackson Springs, NC*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Test Mean*
AGS-738RR	35	34	37	33	29	34
AG74X8 RR2X	43	31	41	40	36	38
N7003CN	40	36	38	36	34	37
NC-Wilder	40	33	38	37	38	37
SH 7418LL	41	31	44	41	41	40
G17PR-1039HOLNR1	40	32	42	41	35	38
G18-12061	44	38	47	43	37	42
G18-3336R2	41	34	44	41	40	40
G18-3558R2	40	36	39	38	29	36
G18-4195R2	42	36	43	40	42	41
G18-6302R2	40	38	46	41	41	41
G18-6669HOLNR2	44	35	48	42	33	41
G18-8480LL	40	37	50	40	45	42
N07-15769	43	37	50	45	43	43
N11-7405	38	34	42	38	39	38
N14-7563	38	34	35	41	47	39
N14-7719	46	41	46	45	48	45
N16-10927	42	36	43	37	41	40
N16-10962	41	38	42	41	41	40
N16-8470	38	32	43	41	39	39
N16-9198	37	37	45	32	33	37
Mean	41	35	43	40	38	39
LSD(0.05)	4	.	5	3	2	4
CV(%)	5	.	5	4	3	8

TABLE 132 - PLANT LODGING (1-5)
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	3.3	2.0	2.0	1.0	1.0	1.9
AG74X8 RR2X	1.7	1.5	1.5	1.0	1.0	1.3
N7003CN	2.3	2.0	2.0	1.2	1.5	1.8
NC-Wilder	3.3	2.5	2.5	1.2	3.0	2.5
SH 7418LL	2.0	1.5	1.7	1.0	1.5	1.5
G17PR-1039HOLNR1	3.0	1.5	2.3	1.0	1.3	1.8
G18-12061	3.3	2.5	2.3	1.0	1.8	2.1
G18-3336R2	2.0	1.0	2.0	1.0	1.0	1.4
G18-3558R2	1.0	1.5	1.8	1.0	1.0	1.2
G18-4195R2	3.7	1.5	2.5	1.0	2.0	2.2
G18-6302R2	2.3	2.0	2.0	1.0	1.0	1.6
G18-6669HOLNR2	2.0	1.0	1.5	1.0	1.0	1.3
G18-8480LL	2.0	2.0	2.5	1.0	1.3	1.7
N07-15769	3.3	2.5	2.0	1.2	2.3	2.2
N11-7405	3.7	1.5	2.3	1.0	1.8	2.1
N14-7563	3.7	2.5	3.0	2.0	2.0	2.6
N14-7719	4.0	2.5	2.3	3.0	2.5	2.9
N16-10927	3.3	2.0	2.5	1.0	1.8	2.1
N16-10962	3.0	1.5	2.5	1.0	1.5	1.9
N16-8470	4.0	2.0	2.3	2.8	1.8	2.6
N16-9198	2.3	2.0	2.0	1.0	1.5	1.7
Mean	2.8	1.9	2.2	1.3	1.6	1.9
LSD(0.05)	0.9	.	0.6	0.4	0.8	0.6
CV(%)	18.6	.	13.1	21.0	23.4	26.7

TABLE 133 - SEED QUALITY (1-5)
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	1.7	.	.	1.0	.	1.3
AG74X8 RR2X	1.5	.	.	1.0	.	1.2
N7003CN	2.2	.	.	1.3	.	1.7
NC-Wilder	1.2	.	.	1.0	.	1.1
SH 7418LL	1.5	.	.	1.0	.	1.2
G17PR-1039HOLNR1	1.5	.	.	1.0	.	1.2
G18-12061	1.5	.	.	1.2	.	1.3
G18-3336R2	1.2	.	.	1.0	.	1.1
G18-3558R2	2.2	.	.	1.2	.	1.7
G18-4195R2	1.3	.	.	1.2	.	1.2
G18-6302R2	1.7	.	.	1.3	.	1.5
G18-6669HOLNR2	1.2	.	.	1.0	.	1.1
G18-8480LL	1.3	.	.	1.2	.	1.2
N07-15769	1.3	.	.	1.0	.	1.2
N11-7405	2.3	.	.		.	2.1
N14-7563	1.5	.	.	1.0	.	1.2
N14-7719	1.2	.	.	1.2	.	1.2
N16-10927	1.5	.	.	1.3	.	1.4
N16-10962	2.7	.	.	1.5	.	2.1
N16-8470	1.3	.	.	1.3	.	1.3
N16-9198	1.0	.	.	1.0	.	1.0
Mean	1.6	.	.	1.1	.	1.4
LSD(0.05)	0.6	.	.	0.4	.	0.5
CV(%)	22.1	.	.	19.3	.	24.3

TABLE 134 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Jackson Springs, NC*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Test Mean*
AGS-738RR	14.7	11.9	12.3	15.0	11.2	13.0
AG74X8 RR2X	17.3	16.3	14.3	17.9	14.5	16.1
N7003CN	18.0	17.1	16.7	17.9	13.5	16.6
NC-Wilder	17.3	14.8	14.9	16.2	12.1	15.1
SH 7418LL	16.7	16.7	15.4	15.7	15.4	15.9
G17PR-1039HOLNR1	15.4	12.3	12.8	14.5	11.2	13.2
G18-12061	16.5	16.4	15.4	16.8	13.7	15.7
G18-3336R2	15.6	14.8	14.5	16.3	13.1	14.8
G18-3558R2	16.2	13.8	13.5	15.6	12.5	14.3
G18-4195R2	15.1	13.2	14.1	15.4	11.4	13.8
G18-6302R2	17.6	16.0	14.9	15.6	13.2	15.4
G18-6669HOLNR2	14.4	13.7	13.8	14.9	11.4	13.6
G18-8480LL	15.8	15.0	14.6	15.6	13.0	14.8
N07-15769	14.2	14.1	13.3	15.1	11.4	13.6
N11-7405	18.0	16.1	15.6	.	12.9	16.0
N14-7563	17.3	15.6	14.4	17.1	13.2	15.5
N14-7719	14.5	14.0	12.9	15.3	10.7	13.5
N16-10927	15.0	12.1	12.5	14.9	9.7	12.8
N16-10962	17.4	14.3	14.5	15.7	10.0	14.4
N16-8470	13.3	12.8	12.0	13.5	10.1	12.3
N16-9198	10.2	9.0	9.1	10.3	7.2	9.1
Mean	15.7	14.3	13.9	15.5	12.0	14.3
LSD(0.05)	1.1	1.2	1.4	0.8	1.6	0.9
CV(%)	4.4	4.1	4.8	3.2	6.6	5.9

TABLE 135 - OIL (%)†
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	19.4	19.3	19.6	20.0	19.5	19.6
AG74X8 RR2X	19.4	18.7	18.7	19.6	19.5	19.2
N7003CN	19.1	18.3	19.2	19.8	19.7	19.2
NC-Wilder	19.9	19.5	20.0	20.5	20.0	20.0
SH 7418LL	18.9	19.0	18.5	19.6	19.1	19.0
G17PR-1039HOLNR1	19.9	19.3	19.7	20.6	19.5	19.8
G18-12061	18.4	15.3	17.9	18.7	17.8	17.6
G18-3336R2	18.9	18.4	18.3	18.8	18.8	18.6
G18-3558R2	18.7	17.6	18.4	18.8	18.3	18.3
G18-4195R2	18.9	19.6	19.0	20.0	19.5	19.4
G18-6302R2	19.1	18.8	18.8	19.6	18.5	19.0
G18-6669HOLNR2	20.4	19.6	20.2	20.4	19.7	20.1
G18-8480LL	18.6	17.6	19.4	19.1	18.5	18.6
N07-15769	18.9	17.3	18.2	19.5	19.2	18.6
N11-7405	18.8	17.7	18.7	19.4	18.5	18.6
N14-7563	19.1	17.1	16.4	18.4	17.9	17.8
N14-7719	17.8	17.2	17.0	18.1	17.5	17.5
N16-10927	19.1	17.8	18.2	19.2	18.9	18.6
N16-10962	18.4	17.6	18.7	19.4	18.7	18.6
N16-8470	19.1	18.0	18.6	20.0	18.5	18.8
N16-9198	16.6	15.9	16.3	16.5	17.4	16.6
Mean	18.9	18.1	18.6	19.3	18.8	18.7
LSD(0.05)	.	.	.	.	.	0.6
CV(%)	.	.	.	.	.	2.4

† Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 136 - PROTEIN (%)†
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	34.8	34.0	33.4	33.7	32.5	33.7
AG74X8 RR2X	34.4	36.4	34.9	34.8	34.3	34.9
N7003CN	34.6	37.1	35.3	34.5	33.1	34.9
NC-Wilder	34.4	34.8	33.8	34.1	33.6	34.1
SH 7418LL	37.2	36.5	36.5	35.7	36.1	36.4
G17PR-1039HOLNR1	36.1	36.6	35.5	35.4	35.3	35.8
G18-12061	37.5	41.9	38.4	36.9	37.8	38.5
G18-3336R2	36.1	37.7	37.0	36.2	35.1	36.4
G18-3558R2	36.4	38.7	34.9	35.6	34.8	36.1
G18-4195R2	35.9	34.6	35.2	34.5	33.0	34.6
G18-6302R2	36.2	36.9	36.2	35.3	37.1	36.3
G18-6669HOLNR2	36.0	36.8	35.4	35.6	35.5	35.9
G18-8480LL	37.4	38.6	38.1	36.5	36.9	37.5
N07-15769	35.1	39.2	36.4	34.7	34.5	36.0
N11-7405	34.3	36.5	34.4	33.4	34.8	34.7
N14-7563	34.5	38.9	37.9	36.9	37.2	37.1
N14-7719	38.0	39.7	39.4	38.1	37.1	38.5
N16-10927	35.0	36.8	35.9	34.9	33.6	35.2
N16-10962	35.6	37.8	35.4	34.4	34.7	35.6
N16-8470	34.6	36.7	34.9	33.0	33.7	34.6
N16-9198	38.3	39.9	37.7	38.3	36.1	38.1
Mean	35.8	37.4	36.0	35.3	35.1	35.9
LSD(0.05)	.	.	.	.	.	1.0
CV(%)	.	.	.	.	.	2.3

† Protein percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 137 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	46.9	45.8	45.2	45.7	43.8	45.5
AG74X8 RR2X	46.3	48.7	46.7	47.1	46.2	47.0
N7003CN	46.4	49.3	47.5	46.7	44.8	46.9
NC-Wilder	46.7	46.9	45.9	46.6	45.7	46.4
SH 7418LL	49.9	49.0	48.7	48.3	48.5	48.9
G17PR-1039HOLNR1	48.9	49.3	48.0	48.4	47.7	48.5
G18-12061	50.0	53.8	50.9	49.4	50.1	50.8
G18-3336R2	48.4	50.2	49.2	48.5	46.9	48.6
G18-3558R2	48.6	51.1	46.5	47.6	46.2	48.0
G18-4195R2	48.0	46.7	47.3	46.8	44.5	46.7
G18-6302R2	48.7	49.4	48.5	47.7	49.5	48.7
G18-6669HOLNR2	49.2	49.8	48.2	48.6	48.0	48.7
G18-8480LL	50.0	50.9	51.4	49.0	49.1	50.1
N07-15769	47.0	51.5	48.3	46.8	46.4	48.0
N11-7405	45.9	48.1	46.0	45.1	46.3	46.3
N14-7563	46.3	51.0	49.3	49.1	49.2	49.0
N14-7719	50.2	52.0	51.6	50.6	48.9	50.7
N16-10927	46.9	48.6	47.7	46.9	45.0	47.0
N16-10962	47.5	49.9	47.4	46.4	46.4	47.5
N16-8470	46.4	48.7	46.6	44.8	45.0	46.3
N16-9198	50.0	51.5	48.9	49.9	47.5	49.6
Mean	48.0	49.6	48.1	47.6	46.9	48.1
LSD(0.05)	.	.	.	.	.	1.1
CV(%)	.	.	.	.	.	1.9

† Estimated meal protein percentage is reported on a 13% moisture basis.

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST VII 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AGS-738RR	10.8	3.4	23.3	55.2	7.2
AG74X8 RR2X	11.4	3.8	20.0	57.3	7.5
G17PR-1039HOLNR1	7.4	2.9	79.7	6.7	3.3
G18-6669HOLNR2	7.9	3.7	76.9	9.0	2.5
Mean	9.3	3.5	50.0	32.1	5.1
LSD(0.05)	0.6	0.2	3.5	2.9	0.4
CV(%)	4.3	5.1	5.1	6.7	5.4

† Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	10.8	10.6	10.8	11.3	10.6	10.8
AG74X8 RR2X	11.7	10.6	12.5	11.2	10.8	11.4
G17PR-1039HOLNR1	7.7	7.6	7.3	7.2	7.1	7.4
G18-6669HOLNR2	7.8	7.9	8.3	7.8	7.6	7.9
Mean	9.5	9.2	9.7	9.4	9.0	9.3
LSD(0.05)	.	.	.	.	.	0.6
CV(%)	.	.	.	.	.	4.3

SEED STEARIC ACID (%)
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	3.4	3.4	3.5	3.4	3.5	3.4
AG74X8 RR2X	4.0	3.8	3.8	3.8	3.8	3.8
G17PR-1039HOLNR1	2.9	3.1	3.0	2.7	3.0	2.9
G18-6669HOLNR2	3.7	3.6	3.7	3.3	4.3	3.7
Mean	3.5	3.5	3.5	3.3	3.7	3.5
LSD(0.05)	.	.	.	.	.	0.2
CV(%)	.	.	.	.	.	5.1

SEED OLEIC ACID (%)
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	22.8	23.1	24.1	24.4	22.2	23.3
AG74X8 RR2X	19.8	21.4	18.2	20.6	19.9	20.0
G17PR-1039HOLNR1	80.5	73.3	80.8	83.7	80.2	79.7
G18-6669HOLNR2	78.0	76.8	71.3	80.5	77.8	76.9
Mean	50.3	48.7	48.6	52.3	50.0	50.0
LSD(0.05)	.	.	.	.	.	3.5
CV(%)	.	.	.	.	.	5.1

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	55.5	56.0	54.0	54.5	56.2	55.2
AG74X8 RR2X	57.0	56.6	57.6	57.5	57.7	57.3
G17PR-1039HOLNR1	5.7	12.1	5.4	4.0	6.4	6.7
G18-6669HOLNR2	8.1	9.1	13.6	6.3	8.0	9.0
Mean	31.6	33.4	32.6	30.6	32.1	32.1
LSD(0.05)	.	.	.	.	.	2.9
CV(%)	.	.	.	.	.	6.7

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP VII 2021

STRAIN/ VARIETY	Athens, GA(A)	Jackson Springs, NC	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	7.5	7.0	7.7	6.4	7.4	7.2
AG74X8 RR2X	7.6	7.5	8.0	6.9	7.7	7.5
G17PR-1039HOLNR1	3.2	4.0	3.5	2.4	3.3	3.3
G18-6669HOLNR2	2.5	2.6	3.1	2.2	2.4	2.5
Mean	5.2	5.3	5.6	4.5	5.2	5.1
LSD(0.05)	.	.	.	.	.	0.4
CV(%)	.	.	.	.	.	5.4

TABLE 138 - PARENTAGE OF ENTRIES
UNIFORM GROUP VIII 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG79X9RR2X/SR	Commercial check	check		RRX	
2	N8001	Commercial check	check		CONV	
3	N8002	Commercial check	check		CONV	
4	AGS 798R2	Commercial check	check		RR2	
5	G15LL-9205	NCC06-899 x [G00-3213(2) x A5547-127 Liberty]	Zenglu Li	F6d	LL	
6	G16LL-10180	G08-394 x [G00-3213(2) x A5547-127 Liberty]	Zenglu Li	F6d	LL	
7	G17-11274	G08PR-394 x G00-3213	Zenglu Li	F5d	CONV	
8	G17-3878R2	N08-521 x G10PR-56466R2	Zenglu Li	F5d	RR2	
9	G17-6512R2	G10PR-224R2 x G11-1162R2	Zenglu Li	F5d	RR2	
10	G17-7222HOLNR2	G10PR-56264R2-HOLL	Zenglu Li	BC3F3d	RR2	HOLN
11	G17-8932LL	NMS4-1-77 x [G00-3880(4) x A5547-127 Liberty]	Zenglu Li	F5d	LL	
12	N14-8522	NMS4-44-329 x N7103	Fallen	F4	CONV	diversity/elevated protein
13	N14-8537	NMS4-44-329 x N7103	Fallen	F4	CONV	diversity/elevated protein
14	N16-9171	N7103 x NMS5-48-2-75	Fallen	F4	CONV	diversity/elevated protein

† Conv= Conventional(non-transgenic), LL=Liberty Link®, RR1=Roundup Ready®, RR2=Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high olelic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 139 - GENERAL SUMMARY OF PERFORMANCE
UNIFORM TEST VIII 2021

STRAIN/		AVG.	YIELD†			PROTEIN‡			OIL‡		
VARIETY	RANK	RANK	2021	20-21	19-21	2021	20-21	19-21	2021	20-21	19-21
AG79X9RR2X/SR	2	5	68.7	62.6	59.2	34.8	35.0	35.4	18.3	18.2	18.3
N8001	6	8	63.2	57.0	54.8	36.3	36.5	36.3	17.7	17.4	17.8
N8002	1	3	70.5	64.8	59.6	36.2	36.1	36.2	18.2	18.0	18.1
AGS 798R2	9	8	62.8	60.3	55.8	36.3	36.2	36.4	18.7	18.5	18.6
G15LL-9205	5	6	66.3	63.5	60.6	34.4	34.6	34.5	20.2	19.8	20.1
G16LL-10180	3	6	68.6	62.1	.	37.3	37.4	.	18.8	18.5	.
G17-11274	8	7	62.9	.	.	34.8	.	.	19.6	.	.
G17-3878R2	7	7	63.0	.	.	37.1	.	.	18.5	.	.
G17-6512R2	4	5	67.8	.	.	38.8	.	.	18.6	.	.
G17-7222HOLNR2	12	10	57.0	.	.	37.0	.	.	19.0	.	.
G17-8932LL	10	8	60.7	.	.	36.1	.	.	18.4	.	.
N14-8522	13	10	56.7	54.9	53.2	37.1	37.3	37.3	18.0	17.8	18.0
N14-8537	14	12	52.6	51.5	49.8	36.9	36.8	37.0	17.9	17.7	17.8
N16-9171	11	10	59.1	57.1	54.3	37.5	37.5	37.8	17.0	17.0	17.1
Mean	.	.	62.8	.	.	36.5	.	.	18.5	.	.
LSD(0.05)	.	.	8.0	.	.	1.2	.	.	0.5	.	.
CV(%)	.	.	14.0	.	.	2.9	.	.	2.1	.	.

† Data not included in mean: None excluded

‡ Protein percentage and oil percentage reported on a 13% moisture basis beginning in 2015.

TABLE 140 - GENERAL SUMMARY OF PERFORMANCE -Part 2
UNIFORM TEST VIII 2021

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
AG79X9RR2X/SR	46.3	0	1	41	1.9	17.7			
N8001	48.0	-2	2	38	1.8	15.2			
N8002	48.0	2	2	37	1.6	15.1			
AGS 798R2	48.5	0	2	37	1.8	15.4			
G15LL-9205	46.8	-5	2	40	1.4	14.5	W	G	T
G16LL-10180	49.9	1	2	39	1.5	16.4	W	G	T
G17-11274	47.1	0	2	40	1.8	16.1	W	T	T
G17-3878R2	49.6	-1	2	39	1.9	14.4	W	T	T
G17-6512R2	51.8	-1	2	41	2.1	17.0	W	T	T
G17-7222HOLNR2	49.6	-5	2	38	1.8	14.0	W	T	T
G17-8932LL	48.0	-4	2	37	1.4	14.5	W	T	T
N14-8522	49.1	-2	2	31	1.6	9.5	P	G	
N14-8537	48.8	-1	3	36	1.7	10.1	P	T	
N16-9171	49.2	0	2	33	1.4	9.1	W	T	
Mean	48.6	-1	2	38	1.7	14.2			
LSD(0.05)	1.5	3	0	2	0.3	1.1			
CV(%)	2.7	189	25	7	23.0	9.4			

† Estimated meal protein content was added to the annual report in 2018.

TABLE 141 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST VIII 2021

STRAIN/	*SCN Cyst Score (1-5 Scale)†*			*RKN Gall Score (1-5 Scale)**			*SC*	*SC*
VARIETY	*Race 2*	*Race 3*	*Race 5*	*PRK*	*SRK*	*JRK*	*RATING*	*SCORE*
AG79X9RR2X/SR	.	1	.	5.0	1.0	4.3	SS	3
N8001	.	5	.	5.0	1.0	5.0	SS	3
N8002	.	5	.	5.0	4.8	5.0	S	5
AGS 798R2	.	.	.	5.0	1.0	5.0	R	1
G15LL-9205	.	5	.	1.5	1.0	1.0	MS	4
G16LL-10180	.	5	.	4.5	1.3	4.5	S	5
G17-11274	.	5	.	1.3	1.0	2.3	R	1
G17-3878R2	.	5	.	5.0	1.0	5.0	MS	4
G17-6512R2	.	3	.	5.0	1.0	3.8	MS	4
G17-7222HOLNR2	.	5	.	1.5	1.0	1.0	MS	4
G17-8932LL	.	4	.	5.0	1.3	5.0	R	1
N14-8522	.	5	.	5.0	1.0	1.0	R	1
N14-8537	.	5	.	2.0	1.0	1.0	R	1
N16-9171	.	4	.	4.8	MR	2.3	R	1

†The race 2, 3, and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7, HG Type 0, and HG Type 2.5.7, respectively. Results for race 2 and 5 were omitted. See Materials and Methods.
*The root-knot nematode (RKN) species used in these tests were Meloidogyne incognita (southern root knot = SRK), M. arenaria (peanut root knot = PRK), and M. javanica (Javanese root-knot = JRK;)MR = mixed reaction.

TABLE 142 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST VIII 2021 †

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Tifton, GA	Test Mean
AG79X9RR2X/SR	120.0	98.4	51.3	33.1	59.5	85.0	33.5	68.7
N8001	107.8	88.2	52.8	20.2	54.2	89.1	29.8	63.2
N8002	120.5	90.1	64.7	25.6	57.4	92.4	42.5	70.5
AGS 798R2	109.2	68.5	55.7	32.9	51.4	84.9	37.3	62.8
G15LL-9205	95.4	85.8	62.7	25.4	57.0	83.0	55.0	66.3
G16LL-10180	108.1	94.8	54.1	40.7	51.5	82.4	48.3	68.6
G17-11274	103.7	73.4	59.3	18.2	52.1	83.5	49.4	62.9
G17-3878R2	98.6	77.5	61.7	20.6	52.7	80.2	49.5	63.0
G17-6512R2	114.4	91.3	56.5	28.2	49.7	93.0	41.4	67.8
G17-7222HOLNR2	102.1	59.1	55.9	16.5	52.2	66.2	46.9	57.0
G17-8932LL	95.3	71.1	54.7	23.1	60.6	81.0	39.3	60.7
N14-8522	91.2	71.7	51.6	20.2	57.4	74.4	30.7	56.7
N14-8537	88.2	47.0	52.4	18.0	48.9	86.6	27.0	52.6
N16-9171	106.7	68.8	54.9	19.1	56.8	79.4	28.0	59.1
Mean	104.4	77.6	56.3	24.4	54.4	82.9	39.9	62.8
LSD(0.05)	13.4	15.5	6.4	3.4	6.0	8.1	6.2	8.0
LSD(0.10)	11.1	12.9	5.3	2.8	5.0	6.8	5.2	6.7
CV(%)	7.7	11.9	6.8	8.2	6.6	5.9	9.3	14.0

†Data not included in the test mean: None excluded

TABLE 143 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Athens, GA(B)*	*Fairhope, AL*	*Jackson Springs, NC*	*Kinston, NC*	*Tifton, GA*	*Test Mean*
AG79X9RR2X/SR	10/27	11/5	11/4	11/9	10/29	10/14	10/30
N8001	1	3	-8	-5	-1	-2	-2
N8002	4	5	-3	2	-1	6	2
AGS 798R2	3	3	-6	0	0	0	0
G15LL-9205	-6	-2	-8	-8	-3	-2	-5
G16LL-10180	2	5	-4	-5	2	6	1
G17-11274	1	1	-4	-3	0	2	0
G17-3878R2	-2	0	0	-3	0	-1	-1
G17-6512R2	0	-1	-6	-4	-1	4	-1
G17-7222HOLNR2	-3	-7	-7	-8	-2	-3	-5
G17-8932LL	-7	-6	-7	0	-3	-3	-4
N14-8522	2	1	-4	-9	-2	-2	-2
N14-8537	2	-1	-6	1	-2	-1	-1
N16-9171	2	4	-2	-1	1	-1	0
Mean	0	0	-5	-3	-1	0	-1
LSD(0.05)	1	1	3	5	1	.	3
CV(%)	.	178	43	75	84	0	189

TABLE 144 - PLANT HEIGHT (INCHES)
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Tifton, GA	Test Mean
AG79X9RR2X/SR	47	38	28	45	49	45	34	41
N8001	43	35	29	38	43	41	35	38
N8002	43	38	28	38	40	40	32	37
AGS 798R2	42	35	25	39	41	42	31	37
G15LL-9205	46	45	30	47	43	39	33	40
G16LL-10180	46	38	30	37	43	42	35	39
G17-11274	44	41	30	39	48	44	35	40
G17-3878R2	44	39	30	39	47	42	34	39
G17-6512R2	46	43	32	42	48	43	35	41
G17-7222HOLNR2	42	37	27	41	45	41	36	38
G17-8932LL	44	34	25	36	45	40	34	37
N14-8522	35	31	23	31	38	33	28	31
N14-8537	41	30	30	36	42	41	35	36
N16-9171	39	30	22	37	39	35	29	33
Mean	43	37	28	39	44	41	33	38
LSD(0.05)	3	3	4	7	5	4	4	2
CV(%)	5	5	8	6	5	5	8	7

TABLE 145 - PLANT LODGING (1-5)
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Tifton, GA	Test Mean
AG79X9RR2X/SR	1.3	1.3	1.0	1.8	1.5	1.0	1.0	1.3
N8001	3.0	3.0	1.3	3.0	2.3	1.5	1.7	2.2
N8002	3.7	2.7	1.7	2.1	2.3	1.5	1.3	2.2
AGS 798R2	3.0	3.7	1.0	2.3	2.0	1.5	1.0	2.1
G15LL-9205	4.0	3.7	1.0	1.6	2.8	1.5	1.3	2.3
G16LL-10180	2.3	2.0	1.0	2.1	1.5	1.0	1.0	1.5
G17-11274	3.0	3.7	1.0	2.5	1.5	1.3	1.3	2.1
G17-3878R2	2.7	3.3	1.3	2.3	2.3	1.5	1.3	2.1
G17-6512R2	2.7	3.0	1.0	2.3	1.5	1.5	1.0	1.8
G17-7222HOLNR2	2.0	3.7	1.0	1.6	1.8	1.0	1.0	1.7
G17-8932LL	2.3	2.7	1.0	2.3	2.0	1.5	1.0	1.8
N14-8522	2.0	3.3	1.3	2.0	1.8	1.3	1.0	1.8
N14-8537	4.0	4.0	2.0	2.8	2.8	1.5	1.0	2.6
N16-9171	3.0	2.3	1.3	2.1	2.0	1.3	1.0	1.9
Mean	2.8	3.0	1.2	2.2	2.0	1.4	1.1	2.0
LSD(0.05)	0.6	0.8	0.6	1.1	0.5	0.2	0.6	0.4
CV(%)	13.6	16.1	28.4	18.1	12.6	9.1	30.2	25.0

TABLE 146 - SEED QUALITY (1-5)
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Tifton, GA	Test Mean
AG79X9RR2X/SR	1.3	1.0	2.7	.	.	2.0	2.5	1.9
N8001	1.3	1.0	3.0	.	.	1.5	2.3	1.8
N8002	1.0	1.2	2.3	.	.	1.2	2.5	1.6
AGS 798R2	1.3	1.5	2.7	.	.	1.7	1.8	1.8
G15LL-9205	1.0	1.3	2.0	.	.	1.2	1.5	1.4
G16LL-10180	1.2	1.2	2.0	.	.	1.3	2.0	1.5
G17-11274	1.5	1.2	2.3	.	.	1.8	2.3	1.8
G17-3878R2	1.7	1.3	2.7	.	.	1.7	2.0	1.9
G17-6512R2	1.7	2.3	2.3	.	.	1.8	2.3	2.1
G17-7222HOLNR2	1.2	1.3	3.0	.	.	1.5	1.8	1.8
G17-8932LL	1.2	1.2	2.0	.	.	1.3	1.5	1.4
N14-8522	1.0	1.2	2.3	.	.	1.0	2.5	1.6
N14-8537	1.3	1.0	2.7	.	.	1.2	2.3	1.7
N16-9171	1.0	1.0	2.0	.	.	1.2	2.0	1.4
Mean	1.3	1.3	2.4	.	.	1.5	2.1	1.7
LSD(0.05)	0.5	0.6	0.7	.	.	0.4	0.9	0.3
CV(%)	23.7	27.2	17.6	.	.	18.5	20.6	23.2

TABLE 147 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Tifton, GA	Test Mean
AG79X9RR2X/SR	20.1	19.7	18.9	17.4	17.1	19.3	11.2	17.7
N8001	17.9	18.9	15.4	14.2	13.4	17.3	9.4	15.2
N8002	16.1	17.9	15.7	15.1	14.0	16.6	10.3	15.1
AGS 798R2	17.1	18.3	15.8	15.4	14.3	17.4	9.2	15.4
G15LL-9205	15.2	16.7	16.1	14.5	13.9	13.9	11.4	14.5
G16LL-10180	17.6	20.0	16.2	17.1	14.7	18.5	10.6	16.4
G17-11274	17.2	20.1	17.9	15.3	14.5	16.4	11.0	16.1
G17-3878R2	16.4	16.1	15.7	14.6	13.6	14.5	10.2	14.4
G17-6512R2	17.6	19.3	17.2	17.5	16.1	19.4	11.7	17.0
G17-7222HOLNR2	15.0	15.5	16.7	14.1	13.0	12.8	11.0	14.0
G17-8932LL	14.7	14.4	19.9	14.2	13.8	15.0	9.4	14.5
N14-8522	10.4	11.2	9.8	9.9	8.9	10.6	5.7	9.5
N14-8537	11.3	12.2	11.0	9.3	9.0	11.9	5.8	10.1
N16-9171	9.8	11.2	10.0	9.0	8.5	9.7	5.9	9.1
Mean	15.5	16.5	15.4	14.1	13.2	15.2	9.5	14.2
LSD(0.05)	1.4	1.0	3.3	1.1	1.2	0.8	1.5	1.1
CV(%)	5.3	3.6	12.8	3.6	4.1	3.0	7.2	9.4

TABLE 148 - OIL (%)†
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	17.9	18.4	18.6	17.6	18.6	18.6	18.3
N8001	18.1	17.3	18.0	16.9	17.7	18.4	17.7
N8002	18.1	18.2	18.9	16.1	18.4	19.3	18.2
AGS 798R2	18.8	18.8	19.5	17.0	18.5	19.7	18.7
G15LL-9205	20.5	19.1	20.6	19.4	20.5	21.1	20.2
G16LL-10180	19.1	18.0	19.3	18.3	18.8	19.2	18.8
G17-11274	19.6	18.7	20.2	19.4	19.9	20.2	19.6
G17-3878R2	18.7	18.2	18.9	17.7	18.7	19.2	18.5
G17-6512R2	18.3	18.6	19.2	18.2	18.3	19.2	18.6
G17-7222HOLNR2	19.1	18.1	19.1	18.5	19.1	20.2	19.0
G17-8932LL	18.7	18.0	18.7	17.4	18.8	19.0	18.4
N14-8522	18.2	17.7	18.4	17.4	18.0	18.5	18.0
N14-8537	18.3	18.0	18.5	16.9	17.4	18.4	17.9
N16-9171	17.1	17.2	17.3	16.7	17.0	16.7	17.0
Mean	18.6	18.1	18.9	17.7	18.5	19.1	18.5
LSD(0.05)	.	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	.	2.1

†Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 149 - PROTEIN (%)†
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Athens, GA(B)*	*Fairhope, AL*	*Jackson Springs, NC*	*Kinston, NC*	*Plains, GA*	*Test Mean*
AG79X9RR2X/SR	34.0	34.5	35.0	36.3	34.7	34.3	34.8
N8001	35.8	37.1	35.4	37.8	35.2	36.6	36.3
N8002	36.3	36.2	35.1	39.5	35.5	34.5	36.2
AGS 798R2	36.1	36.1	34.4	40.0	36.3	34.8	36.3
G15LL-9205	33.9	35.9	35.1	35.1	32.8	33.5	34.4
G16LL-10180	36.5	38.4	35.8	38.6	37.1	37.5	37.3
G17-11274	34.8	36.5	34.7	34.6	34.0	34.3	34.8
G17-3878R2	36.9	37.8	36.5	38.9	36.6	36.1	37.1
G17-6512R2	38.5	37.6	36.6	46.1	37.4	36.6	38.8
G17-7222HOLNR2	37.3	37.4	37.0	38.3	36.2	35.6	37.0
G17-8932LL	35.8	35.4	37.0	38.4	34.9	35.0	36.1
N14-8522	37.1	37.6	36.7	38.1	36.4	36.6	37.1
N14-8537	36.6	37.3	36.2	38.6	36.5	36.2	36.9
N16-9171	37.5	38.0	36.5	38.9	36.6	37.8	37.5
Mean	36.2	36.8	35.9	38.5	35.7	35.7	36.5
LSD(0.05)	.	.	.	.	.	.	1.2
CV(%)	.	.	.	.	.	.	2.9

†Protein percentage reported on a 13% moisture basis beginning in 2015.

TABLE 150 - ESTIMATED MEAL PROTEIN (%)†
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Athens, GA(B)*	*Fairhope, AL*	*Jackson Springs, NC*	*Kinston, NC*	*Plains, GA*	*Test Mean*
AG79X9RR2X/SR	45.0	45.9	46.7	47.8	46.3	45.9	46.3
N8001	47.6	48.8	46.9	49.4	46.4	48.8	48.0
N8002	48.1	48.1	47.0	51.2	47.4	46.5	48.0
AGS 798R2	48.3	48.3	46.5	52.4	48.5	47.2	48.5
G15LL-9205	46.4	48.1	48.0	47.4	44.8	46.2	46.8
G16LL-10180	49.0	50.8	48.2	51.4	49.6	50.4	49.9
G17-11274	47.1	48.8	47.2	46.7	46.1	46.7	47.1
G17-3878R2	49.3	50.2	49.0	51.3	48.9	48.6	49.6
G17-6512R2	51.2	50.2	49.2	61.2	49.8	49.2	51.8
G17-7222HOLNR2	50.1	49.6	49.8	51.0	48.7	48.5	49.6
G17-8932LL	47.8	46.8	49.5	50.5	46.7	46.9	48.0
N14-8522	49.2	49.6	48.8	50.2	48.2	48.8	49.1
N14-8537	48.6	49.5	48.3	50.4	48.0	48.3	48.8
N16-9171	49.2	49.8	48.0	50.8	47.9	49.3	49.2
Mean	48.3	48.9	48.1	50.8	47.7	47.9	48.6
LSD(0.05)	.	.	.	.	.	.	1.5
CV(%)	.	.	.	.	.	.	2.7

SUMMARY OF SEED FATTY ACIDS (%)
UNIFORM TEST VIII 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AG79X9RR2X/SR	11.8	3.6	19.1	57.6	7.9
N8001	12.4	3.4	18.4	56.5	9.3
G17-7222HOLNR2	7.4	2.9	79.3	8.0	2.5
Mean	10.5	3.3	38.9	40.7	6.6
LSD(0.05)	0.4	0.2	1.8	1.6	0.5
CV(%)	2.7	3.5	3.2	2.9	5.2

†Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	12.0	11.5	12.2	11.6	11.9	11.8
N8001	12.0	12.4	12.6	12.9	12.1	12.4
G17-7222HOLNR2	7.3	7.3	7.3	7.3	7.5	7.4
Mean	10.4	10.4	10.7	10.6	10.5	10.5
LSD(0.05)	.	.	.	.	.	0.4
CV(%)	.	.	.	.	.	2.7

SEED STEARIC ACID (%)
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	3.5	3.7	3.6	3.7	3.8	3.6
N8001	3.3	3.6	3.4	3.4	3.2	3.4
G17-7222HOLNR2	2.9	2.8	2.9	2.8	3.0	2.9
Mean	3.2	3.3	3.3	3.3	3.3	3.3
LSD(0.05)	.	.	.	.	.	0.2
CV(%)	.	.	.	.	.	3.5

SEED OLEIC ACID (%)
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	17.1	19.1	19.3	18.6	21.1	19.1
N8001	18.0	19.5	17.3	17.9	19.3	18.4
G17-7222HOLNR2	78.5	78.0	81.8	78.5	79.6	79.3
Mean	37.9	38.9	39.5	38.4	40.0	38.9
LSD(0.05)	.	.	.	.	.	1.8
CV(%)	.	.	.	.	.	3.2

SEED LINOLEIC ACID (%)
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	58.9	57.2	57.4	58.0	56.4	57.6
N8001	57.3	54.6	57.5	56.2	56.8	56.5
G17-7222HOLNR2	8.8	9.2	5.8	8.8	7.4	8.0
Mean	41.7	40.4	40.2	41.0	40.2	40.7
LSD(0.05)	.	.	.	.	.	1.6
CV(%)	.	.	.	.	.	2.9

SEED LINOLENIC ACID (%)
UNIFORM GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Athens, GA(B)	Fairhope, AL	Jackson Springs, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	8.6	8.4	7.5	8.1	6.8	7.9
N8001	9.3	9.9	9.2	9.5	8.8	9.3
G17-7222HOLNR2	2.5	2.8	2.2	2.5	2.4	2.5
Mean	6.8	7.0	6.3	6.7	6.0	6.6
LSD(0.05)	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	5.2

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TABLE 151 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP VIII 2021

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG79X9RR2X/SR	Commercial check	check		RRX	
2	N8001	Commercial check	check		CONV	
3	N8002	Commercial check	check		CONV	
4	AGS 798R2	Commercial check	check		RR2	
5	G17-7329HOLNR2	G10PR-56444R2-HOLL-A	Zenglu Li	BC3 F3d	RR2	HOLN
6	G17-7384HOLNR2	G10PR-56444R2-HOLL-B	Zenglu Li	BC3 F3d	RR2	HOLN
7	G18-12231	Woodruff x A5980	Zenglu Li	F5d	CONV	
8	G18-3311R2	G10PR-224R2 x NCC06-899	Zenglu Li	F6d	RR2	
9	G18-6624HOLNR2	[G11-1614R2(4) x TN10-5002LL] x {G11-1614R2(4) x [G00-3213 (4) x (17D x S08-14788)HO]}	Zenglu Li	BC3 F3d	RR2	HOLN
10	G18-8097LL	G12PR-214 x G13LL-44	Zenglu Li	F5d	LL	
11	G18-8335LL	Henderson x G13LL-7	Zenglu Li	F6d	LL	
12	G18-8508LL	TN08-100 x G13LL-7	Zenglu Li	F6d	LL	

† Conv= Conventional(non-transgenic),LL= Liberty Link®, RR1= Roundup Ready®, RR2= Roundup Ready 2 Yield®, and RRX= Roundup Ready 2 Xtend®

‡ AA= modified amino acids, DNC= Do not cross with this, FLS= Frogeye leaf spot resistance, LJ= Long juvenile, LN= low linolenic acid, LP= low phytate, HO= high oleic acid, HOLN= high oleic acid/low linolenic acid, SC= Southern stem canker, SCN= Soybean cyst nematode resistance, SR= Soybean rust resistance, and STS= sulfonylurea tolerant

TABLE 152 - GENERAL SUMMARY OF PERFORMANCE
PRELIMINARY TEST VIII 2021

STRAIN/	*SEED*		*AVG.*	*MAT.*			*SCN Cyst Score (1-5)‡*			*SC*	*SC*
VARIETY	*YIELD†*	*RANK*	*RANK*	*INDEX*	*LOD*	*HT*	*Race 2*	*Race 3*	*Race 5*	*RATING*	*SCORE*
AG79X9RR2X/SR	66.5	10	7	0	1.2	41	.	5	.	MS	4
N8001	67.7	7	8	-2	2.0	38	.	4	.	SS	3
N8002	71.7	2	5	1	2.4	38	.	2	.	S	5
AGS 798R2	67.2	8	8	-2	1.8	38	.	.	.	R	1
G17-7329HOLNR2	66.5	9	7	1	2.0	36	.	2	.	R	1
G17-7384HOLNR2	65.9	11	7	-6	1.9	35	.	1	.	MS	4
G18-12231	62.8	12	9	-5	1.8	39	.	3	.	MS	4
G18-3311R2	69.8	5	7	-3	1.8	42	.	3	.	MS	4
G18-6624HOLNR2	71.2	4	6	-5	1.6	40	.	2	.	MS	4
G18-8097LL	71.6	3	5	-4	1.9	41	.	4	.	MS	4
G18-8335LL	73.5	1	3	1	1.8	40	.	4	.	SS	3
G18-8508LL	67.8	6	6	-2	1.9	42	.	4	.	MS	4
Mean	68.5	.	.	-2	1.8	39	.	.	.		.
LSD(0.05)	7.8	.	.	3	0.5	3	.	.	.		.
CV(%)	10.8	.	.	99	25.0	7	.	.	.		.

† Data not included in the test mean: not applicable

‡The race 3 SCN population used in these tests was typed as HG (*Heterodera glycines*) Type 0.

TABLE 153 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST VIII 2021

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
AG79X9RR2X/SR	2.2	18.4	35.2	18.8	47.2			
N8001	2.0	15.9	35.6	18.0	47.1			
N8002	1.8	15.3	35.5	18.4	47.2			
AGS 798R2	1.7	16.0	36.0	18.9	48.2			
G17-7329HOLNR2	2.0	14.6	36.9	19.4	49.8	P	T	T
G17-7384HOLNR2	2.0	14.5	36.3	19.6	49.1	P	T	T
G18-12231	1.7	15.6	36.8	18.2	48.9	W	T	T
G18-3311R2	2.1	16.2	34.3	19.8	46.5	W	T	T
G18-6624HOLNR2	1.9	15.1	35.7	20.1	48.6	P	T	T
G18-8097LL	1.9	15.4	35.5	19.3	47.9	W	T	T
G18-8335LL	2.6	16.5	33.5	20.1	45.6	W	T	T
G18-8508LL	2.2	16.6	34.8	19.5	46.9	W	T	T
Mean	2.0	15.8	35.5	19.2	47.7			
LSD(0.05)	0.6	1.0	1.0	0.6	1.1			
CV(%)	24.6	6.6	2.2	2.4	1.9			

§ Protein percentage and oil percentage are reported on a 13% moisture basis beginning in 2015.

TABLE 154 - SEED YIELD (BUSHELS PER ACRE)
PRELIMINARY GROUP VIII 2021 †

STRAIN/ VARIETY	*Athens, GA(A)*	*Fairhope, AL*	*Jackson Springs, NC*	*Kinston, NC*	*Plains, GA*	*Test Mean*
AG79X9RR2X/SR	113.4	46.3	32.3	56.7	82.2	66.5
N8001	113.3	63.7	25.9	51.6	84.4	67.7
N8002	120.9	63.7	27.3	53.2	93.5	71.7
AGS 798R2	109.8	56.3	29.7	54.2	85.5	67.2
G17-7329HOLNR2	98.6	62.9	29.4	53.0	89.0	66.5
G17-7384HOLNR2	96.7	58.9	35.2	54.5	84.1	65.9
G18-12231	101.7	61.1	34.4	47.6	69.8	62.8
G18-3311R2	118.9	64.8	33.6	50.8	81.2	69.8
G18-6624HOLNR2	122.3	58.1	34.6	52.0	88.3	71.2
G18-8097LL	108.4	67.5	42.4	52.2	88.0	71.6
G18-8335LL	120.3	67.2	37.1	57.5	85.5	73.5
G18-8508LL	116.9	60.2	36.2	56.6	68.9	67.8
Mean	111.8	60.9	33.2	53.3	83.4	68.5
LSD(0.05)	13.9	4.5	4.9	6.4	9.2	7.8
LSD(0.10)	11.5	3.7	4.1	5.3	7.6	6.5
CV(%)	7.4	3.4	8.8	7.1	6.5	10.8

† Data not included in the test mean: not applicable

TABLE 156 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	*Athens, GA(A)*	*Fairhope, AL*	*Jackson Springs, NC*	*Kinston, NC*	*Plains, GA*	*Test Mean*
AG79X9RR2X/SR	10/28	10/31	.	10/29	.	10/30
N8001	-1	-4	.	-1	.	-2
N8002	2	0	.	1	.	1
AGS 798R2	-1	-5	.	1	.	-2
G17-7329HOLNR2	1	-2	.	4	.	1
G17-7384HOLNR2	-9	-7	.	-1	.	-6
G18-12231	-8	-4	.	-2	.	-5
G18-3311R2	0	-6	.	-2	.	-3
G18-6624HOLNR2	-7	-7	.	-3	.	-5
G18-8097LL	-7	-5	.	-1	.	-4
G18-8335LL	2	-1	.	1	.	1
G18-8508LL	0	-6	.	-2	.	-2
Mean	-2	-4	.	0	.	-2
LSD(0.05)	1	4	.	2	.	3
CV(%)	24	42	.	283	.	99

TABLE 156 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	45	32	34	48	44	41
N8001	41	35	33	42	41	38
N8002	43	31	29	41	42	38
AGS 798R2	42	30	36	44	38	38
G17-7329HOLNR2	38	31	34	41	38	36
G17-7384HOLNR2	36	26	32	41	38	35
G18-12231	41	34	34	44	43	39
G18-3311R2	47	37	40	47	40	42
G18-6624HOLNR2	42	33	34	47	42	40
G18-8097LL	42	35	36	48	44	41
G18-8335LL	43	36	32	44	42	40
G18-8508LL	48	31	37	49	44	42
Mean	42	32	34	45	42	39
LSD(0.05)	4	5	.	8	4	3
CV(%)	5	7	.	8	6	7

TABLE 157 - PLANT LODGING (1-5)
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	1.3	1.0	1.0	1.7	1.2	1.2
N8001	3.0	1.5	1.5	2.2	1.5	2.0
N8002	3.3	2.5	2.5	2.3	1.5	2.4
AGS 798R2	2.7	1.0	1.0	2.5	1.5	1.8
G17-7329HOLNR2	3.7	1.5	1.0	2.2	1.5	2.0
G17-7384HOLNR2	3.3	1.0	1.5	2.2	1.5	1.9
G18-12231	2.7	1.0	1.0	2.5	1.5	1.8
G18-3311R2	2.7	1.0	1.5	2.5	1.5	1.8
G18-6624HOLNR2	2.0	1.0	1.5	2.0	1.5	1.6
G18-8097LL	3.0	1.0	1.5	2.5	1.5	1.9
G18-8335LL	2.0	1.5	2.0	2.0	1.5	1.8
G18-8508LL	2.7	2.0	1.0	2.0	1.5	1.9
Mean	2.7	1.3	1.4	2.2	1.5	1.8
LSD(0.05)	0.8	0.9	.	0.5	0.1	0.5
CV(%)	17.6	30.6	.	10.2	5.7	25.0

TABLE 158 - SEED QUALITY (1-5)
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	1.0	4.0	.	.	1.8	2.2
N8001	1.0	3.3	.	.	1.7	2.0
N8002	1.0	3.2	.	.	1.3	1.8
AGS 798R2	1.2	2.3	.	.	1.7	1.7
G17-7329HOLNR2	1.0	3.3	.	.	1.7	2.0
G17-7384HOLNR2	1.5	3.0	.	.	1.5	2.0
G18-12231	1.3	2.3	.	.	1.5	1.7
G18-3311R2	1.2	3.8	.	.	1.5	2.1
G18-6624HOLNR2	1.0	3.0	.	.	1.7	1.9
G18-8097LL	1.7	2.8	.	.	1.3	1.9
G18-8335LL	1.7	4.0	.	.	2.2	2.6
G18-8508LL	1.2	4.0	.	.	1.5	2.2
Mean	1.2	3.2	.	.	1.6	2.0
LSD(0.05)	0.5	1.5	.	.	0.6	0.6
CV(%)	20.9	20.7	.	.	21.2	24.6

TABLE 159 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	19.2	18.1	18.8	17.5	18.5	18.4
N8001	17.1	16.1	15.3	13.8	17.0	15.9
N8002	15.5	13.7	15.4	14.0	17.3	15.3
AGS 798R2	17.1	14.5	14.8	15.6	17.5	16.0
G17-7329HOLNR2	15.2	15.4	13.0	13.9	15.4	14.6
G17-7384HOLNR2	15.6	14.4	13.7	14.1	14.8	14.5
G18-12231	15.8	15.9	16.0	15.0	15.6	15.6
G18-3311R2	16.2	17.7	15.4	15.1	16.6	16.2
G18-6624HOLNR2	16.0	14.9	15.1	13.7	15.8	15.1
G18-8097LL	15.2	16.1	14.8	14.6	16.3	15.4
G18-8335LL	16.2	15.9	16.4	15.2	18.6	16.5
G18-8508LL	17.5	16.6	16.9	15.5	16.6	16.6
Mean	16.4	15.8	15.4	14.8	16.7	15.8
LSD(0.05)	1.4	4.2	1.2	1.2	1.1	1.0
CV(%)	4.7	12.1	3.5	3.8	3.9	6.6

TABLE 160 - OIL (%)†
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	19.4	18.1	18.0	19.9	18.8	18.8
N8001	18.3	18.5	17.0	17.9	18.6	18.0
N8002	18.7	18.5	17.3	18.1	19.1	18.4
AGS 798R2	19.0	20.0	17.4	18.6	19.5	18.9
G17-7329HOLNR2	19.3	19.5	19.3	19.0	20.0	19.4
G17-7384HOLNR2	19.5	19.6	19.4	19.6	20.1	19.6
G18-12231	18.4	18.2	17.8	18.0	18.7	18.2
G18-3311R2	19.5	20.2	19.2	19.6	20.5	19.8
G18-6624HOLNR2	20.0	20.4	19.9	19.9	20.2	20.1
G18-8097LL	19.7	19.8	18.4	18.9	19.9	19.3
G18-8335LL	20.4	21.1	18.9	19.2	21.0	20.1
G18-8508LL	19.6	20.6	18.3	18.9	20.1	19.5
Mean	19.3	19.5	18.4	19.0	19.7	19.2
LSD(0.05)	.	.	.	.	.	0.6
CV(%)	.	.	.	.	.	2.4

† Oil percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 161 - PROTEIN (%)†
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	35.1	35.7	36.4	34.8	34.2	35.2
N8001	35.1	35.0	37.5	35.7	34.5	35.6
N8002	34.7	34.8	37.8	35.5	34.4	35.5
AGS 798R2	35.4	34.5	37.1	37.1	35.8	36.0
G17-7329HOLNR2	37.8	37.4	35.9	37.8	35.9	36.9
G17-7384HOLNR2	35.8	36.1	37.1	36.2	36.2	36.3
G18-12231	35.9	37.7	37.6	36.1	36.8	36.8
G18-3311R2	34.4	34.4	34.9	33.6	34.2	34.3
G18-6624HOLNR2	36.3	35.3	36.1	35.6	35.4	35.7
G18-8097LL	34.7	35.1	36.9	35.7	35.3	35.5
G18-8335LL	32.9	32.4	35.6	34.8	31.7	33.5
G18-8508LL	34.9	33.9	36.2	35.0	33.7	34.8
Mean	35.3	35.2	36.6	35.7	34.8	35.5
LSD(0.05)	.	.	.	.	.	1.0
CV(%)	.	.	.	.	.	2.2

† Protein percentage is reported on a 13% moisture basis beginning in 2015.

TABLE 162 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	47.4	47.4	48.2	47.2	45.7	47.2
N8001	46.7	46.6	49.1	47.3	46.0	47.1
N8002	46.5	46.5	49.7	47.1	46.2	47.2
AGS 798R2	47.5	46.9	48.8	49.5	48.3	48.2
G17-7329HOLNR2	50.8	50.4	48.4	50.7	48.8	49.8
G17-7384HOLNR2	48.3	48.8	50.0	48.9	49.3	49.1
G18-12231	47.9	50.0	49.7	47.8	49.1	48.9
G18-3311R2	46.5	46.9	46.9	45.4	46.8	46.5
G18-6624HOLNR2	49.2	48.2	49.0	48.3	48.2	48.6
G18-8097LL	46.9	47.6	49.1	47.9	47.9	47.9
G18-8335LL	45.0	44.7	47.7	46.8	43.6	45.6
G18-8508LL	47.2	46.4	48.2	46.9	45.9	46.9
Mean	47.5	47.5	48.7	47.8	47.2	47.7
LSD(0.05)	.	.	.	.	.	1.1
CV(%)	.	.	.	.	.	1.9

† Estimated meal protein percentage is reported on a 13% moisture basis.

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST VIII 2021 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AG79X9RR2X/SR	12.0	3.8	19.5	57.2	7.5
N8001	13.0	3.4	17.4	56.0	10.2
G17-7329HOLNR2	8.3	3.3	75.0	10.8	2.7
G17-7384HOLNR2	6.5	3.3	79.3	8.4	2.5
G18-6624HOLNR2	7.8	3.0	77.2	9.4	2.6
Mean	9.5	3.4	53.7	28.3	5.1
LSD(0.05)	2.2	0.3	4.1	3.4	0.7
CV(%)	17.4	5.9	5.7	9.1	9.5

† Fatty acid percentage in seed oil reported beginning in 2017.

SEED PALMITIC ACID (%)
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	12.1	12.0	11.6	11.8	12.5	12.0
N8001	13.3	12.8	12.9	13.2	12.5	13.0
G17-7329HOLNR2	8.0	8.6	7.9	7.8	9.0	8.3
G17-7384HOLNR2	8.1	7.8	8.1	8.6	0.1	6.5
G18-6624HOLNR2	7.6	7.6	7.5	7.6	8.5	7.8
Mean	9.8	9.8	9.6	9.8	8.5	9.5
LSD(0.05)	.	.	.	.	.	2.2
CV(%)	.	.	.	.	.	17.4

SEED STEARIC ACID (%)
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	3.5	3.7	4.3	3.9	3.7	3.8
N8001	3.7	3.3	3.5	3.3	3.2	3.4
G17-7329HOLNR2	3.1	3.3	3.6	3.3	3.2	3.3
G17-7384HOLNR2	3.4	3.1	3.2	3.4	3.3	3.3
G18-6624HOLNR2	3.0	2.9	2.9	3.1	3.2	3.0
Mean	3.3	3.3	3.5	3.4	3.3	3.4
LSD(0.05)	.	.	.	.	.	0.3
CV(%)	.	.	.	.	.	5.9

SEED OLEIC ACID (%)
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	18.9	19.8	20.7	19.0	19.3	19.5
N8001	17.4	19.0	18.1	17.0	15.5	17.4
G17-7329HOLNR2	81.1	69.5	77.0	78.5	69.1	75.0
G17-7384HOLNR2	79.1	81.9	78.7	78.3	78.4	79.3
G18-6624HOLNR2	79.4	81.3	78.6	77.7	68.9	77.2
Mean	55.2	54.3	54.6	54.1	50.2	53.7
LSD(0.05)	.	.	.	.	.	4.1
CV(%)	.	.	.	.	.	5.7

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	57.4	57.8	56.7	57.0	56.9	57.2
N8001	55.4	55.8	55.2	55.9	57.8	56.0
G17-7329HOLNR2	5.8	15.4	8.9	7.9	15.8	10.8
G17-7384HOLNR2	6.9	5.0	7.7	7.2	15.2	8.4
G18-6624HOLNR2	7.6	5.9	8.6	8.5	16.2	9.4
Mean	26.6	28.0	27.4	27.3	32.4	28.3
LSD(0.05)	.	.	.	.	.	3.4
CV(%)	.	.	.	.	.	9.1

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP VIII 2021

STRAIN/ VARIETY	Athens, GA(A)	Fairhope, AL	Jackson Springs, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	8.2	6.7	6.7	8.4	7.6	7.5
N8001	10.1	9.1	10.2	10.6	11.1	10.2
G17-7329HOLNR2	2.1	3.2	2.6	2.5	3.0	2.7
G17-7384HOLNR2	2.6	2.2	2.3	2.6	3.0	2.5
G18-6624HOLNR2	2.4	2.2	2.4	3.1	3.1	2.6
Mean	5.1	4.7	4.9	5.4	5.6	5.1
LSD(0.05)	.	.	.	.	.	0.7
CV(%)	.	.	.	.	.	9.5