UNIFORM SOYBEAN TESTS

SOUTHERN STATES

2020

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 2021

TABLE OF CONTENTS

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, AG43X7, AG45X8, LD06-7620, AG46X6, AG48X9, AG49x6, Ellis, AG53X9, AG55X7, TN09-008, TN11-5140, AG56X8, AG64X8 RR2X, NC-Dunphy (release of NCC07-8138), NC-Dilday (release of NCC06-1090), CZ6316LL, AGS-738RR, AG74X8 RR2X, N7003CN, NC-Wilder (release of NCC06-899), AGS 747LL, 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

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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- 2020

2020 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						
Tallassee,AL	Jenny Koebernick				U	P	P	U	P	U		U		U
Pine Tree,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													
Calhoun,GA	Daniel Mailhot									U		U		
Plains,GA	Zenglu Li										P	U	P	U
Tifton,GA	Daniel Mailhot									U		U		U
Ottawa,KS	W. T. Schapaugh, Jr.			P	U	P	P	U						
Manhattan,KS	W. T. Schapaugh, Jr.				U			U						
Bossier City,LA	Blair Buckley				U			U		U	P	U	P	
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											
Stoneville,MS	Anne Gillen	P	U	P	U	P	P	U						
Clayton,NC	Tommy Carter											U	P	U
Kinston,NC	Tommy Carter					P	P		P	U	P	U	P	U
Plymouth,NC	Rouf Mian							U	P		P	U		
Clemson,SC	Jeff McCall								P	U		U		
Florence,SC	TBD													
Jackson,TN	Prakash Arelli	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			U			U						
Suffolk,VA	David Holshouser							U						
Warsaw,VA	Bo Zhang				U	P	P	U						
Total Location Planted		8	9	7	15	10	8	17	5	7	5	10	5	6
TOTAL LOCATIONS REPORTING DATA		6	8	7	13	9	6	15	5	7	5	10	5	6

* U = Uniform Test; P = Preliminary Test

B. PLANTING DATES – 2020

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								28-Apr	19-May	20-May			
Tallassee,AL			NH	NH	6-May				NH	NH	6-May	NR	NR
Pine Tree,AR	3-Jun	6-Jun	12-Jun	12-Jun				3-Jun	12-Jun	6-Jun			
Stuttgart,AR	18-Jun	18-Jun	18-Jun	18-Jun					18-Jun	18-Jun			
Athens,GA(A)					1-Jun	1-Jun	1-Jun				1-Jun	1-Jun	1-Jun
Athens,GA(B)													
Calhoun,GA											8-Jun	8-Jun	
Plains,GA						13-May	13-May					13-May	13-May
Tifton,GA											2-Jun	2-Jun	2-Jun
Ottawa,KS		20-May	20-May	20-May					20-May	20-May			
Manhattan,KS									8-Jun	8-Jun			
Bossier City,LA						4-Jun	4-Jun		NH	1-Jun	1-Jun	1-Jun	
Portageville,MO(A)								27-May	27-May	27-May			
Portageville,MO(B)	12-Jun	12-Jun	12-Jun					12-Jun	12-Jun	12-Jun			
Columbia,MO	NH*							2-Jun					
Stoneville,MS	NH	6-May	6-May	NH				NH	6-May	6-May			
Clayton,NC							NR					NR	NR
Kinston,NC			NR	NR	NR	NR	NR				NR	NR	NR
Plymouth,NC					NR	NR				NR		NR	
Clemson,SC					NR						NR	NR	
Florence,SC**													
Jackson,TN	21-May	21-May	21-May					21-May	21-May	21-May			
Knoxville,TN	7-May	7-May	7-May	7-May				12-May	12-May	12-May			
Springfield,TN								12-May	12-May	12-May			
Orange,VA	13-May								13-May	13-May			
Suffolk,VA										NH			
Warsaw,VA			27-May	27-May					26-May	26-May			

*NH = Not Harvested; NR = Date not reported.

** Location not planted this year due to personnel changes

C. HARVEST DATES – 2020

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								varies	3-Nov	5-Nov			
Tallassee,AL			NH*	NH	2-Nov				NH	NH	2-Nov	2-Nov	18-Nov
Pine Tree,AR	16-Oct	6-Nov	7-Nov	7-Nov				16-Oct	6-Nov	6-Nov			
Stuttgart,AR	4-Nov	4-Nov	4-Nov	4-Nov					5-Nov	4-Nov			
Athens,GA(A)					30-Oct	2-Nov	2-Nov				30-Oct	2-Nov	2-Nov
Athens,GA(B)													
Calhoun,GA											22-Nov	22-Nov	
Plains,GA						5-Nov	5-Nov					5-Nov	5-Nov
Tifton,GA											3-Nov	3-Nov	3-Nov
Ottawa,KS		2-Nov	2-Nov	2-Nov					2-Nov	2-Nov			
Manhattan,KS									4-Nov	4-Nov			
Bossier City,LA						18-Nov	18-Nov		NH	13-Nov	13-Nov	13-Nov	
Portageville,MO(A)								7-Nov	7-Nov	7-Nov			
Portageville,MO(B)	26-Oct	26-Oct	5-Nov					5-Nov	5-Nov	5-Nov			
Columbia,MO	NH							4-Nov					
Stoneville,MS	NH	22-Oct	20-Oct	NH				NH	19-Oct	20-Oct			
Clayton,NC							NR					NR	NR
Kinston,NC			NR*	NR	NR	NR	NR				NR	NR	NR
Plymouth,NC					NR	NR				NR		NR	
Clemson,SC					NR						NR	NR	
Florence,SC**													
Jackson,TN	14-Oct	15-Oct	21-Oct					14-Oct	14-Oct	21-Oct			
Knoxville,TN	15-Oct	19-Oct	4-Nov	4-Nov				19-Oct	21-Oct	4-Nov			
Springfield,TN								9-Oct	9-Oct	15-Oct			
Orange,VA	27-Oct								27-Oct	27-Oct			
Suffolk,VA										NH			
Warsaw,VA			4-Nov	5-Nov					5-Nov	5-Nov			

*NR = Date not reported, trial harvested. NH = Not Harvested: Tallassee - herbicide damage; Bossier - delayed harvest due to weather; Columbia - poor field conditions; Stoneville - planting error and delayed harvest due to COVID restrictions; Suffolk - animal damage.

** Location not planted this year due to personnel changes

D. AGRONOMIC CHARACTERISTICS OF LOCATIONS – 2020

2020 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
Tallassee,AL	Cahaba fine sandy loam	36	20	20	Yes	No	4	2	Corn	Yes
Pine Tree, AR	Dewitt Silt Loam	30	15	15	Yes	No	4	2	Corn	Yes
Kibler,AR	Dardanelle-Roxane fine sandy loam	26	15	15	Yes	No	4	2	.	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)	Cecil coarse 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	Faceville sandy loam	30	16	12	Yes	Yes	4	2	Corn	Yes
Tifton,GA	Tifton sandy loam	36	21	18	Yes	Yes	4	2	Cotton	Yes
Ottawa,KS	Woodson silt loam	30	12	12	Yes	No	4	2	Corn	No
Manhattan,KS	Bismarckgrove-Kimo complex silty clay 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	Yes
Stoneville,MS	Sharkey clay	26	16.5	16.5	Yes	No	5	3	Soybean	Yes
Clayton,NC	Norfolk sandy loam	38	18	15	Yes	Yes	3	1	Cotton	Yes
Kinston,NC	Stallings loamy sand	38	18	15	Yes	Yes	3	1	Corn	No
Plymouth,NC	Portsmouth silt loam	38	19	15	Yes	Yes	3	1	Corn	No
Clemson,SC	Cartecay fine sandy loam	30	30	22	Yes	Yes	4	2	Corn	No
Florence,SC	Sandy Loam	30	20	18	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	22	16	12	Yes	Yes	3	3	Fallow/ Grass	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	Tillage radish	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/	
Pittsburg, KS	http://www.oznet.ksu.edu/wdl/	
Princeton, KY	http://www.nass.usda.gov/Statistics_by_State/Kentucky/Publications/Agri-News/oct226.pdf	
Alexandria, LA	www.lsuagcenter.com/weather	
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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. Reference varieties used in the different maturity groups were as follows: UIV-S (E) and PIV-S (E) - AG 4232; UIV-S (L) and PIV-S (L) - Ellis; UV and PV-E – Ellis; PV-L – UA5612; UVI and PVI – AG6534; UVII and PVII – AGS-738RR; and UVIII and PVIII – AGS828RR.

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) and to peanut root-knot nematode (*Meloidogyne arenaria* (Neal) Chitwood) (PRK) were conducted in a greenhouse at the University of Georgia.

Three seeds of each genotype were planted in Ray Leach Cone-tainers (20.6 cm long) filled with fumigated sandy loam soil to within 5 cm of the top and then covered with 2.5 cm of fumigated sand. Ten 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 (45) were placed on a greenhouse bench under supplemental light provided by 400-watt metal halide lamps and under an automatic irrigation system. Seven to 10 days after planting, plants were thinned to one seedling per Cone-tainer and inoculated with 3000 root-knot nematode eggs collected with 0.5% NaOCL (10% Clorox). The inoculum (3-5 ml depending on egg concentration) was placed with a digital dispensing pump in a soil at a depth of 2-3 cm. Plants were watered manually for 1-2 days following inoculation before turning on the automatic irrigation system. All plants were fertilized weekly with 20-20-20 (N = 20%, P = 8.7%, K = 16.6%) fertilizer solution.

Thirty days after inoculation, roots of two of the standard check plants were examined for galls to assess whether to begin the process of evaluating the entire test. For evaluation, 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 number of galls on the remainder of the susceptible and resistant check plants was used to develop a gall index for evaluating the genotypes. The gall indexes (based on the number of galls/plant) were as follows: *Meloidogyne incognita* (SRK): 1 = 0-10, 2 = 11-20, 3 = 21-30, 4 = 31-40, and 5 = 41+ galls; *M. arenaria* (PRK): 1 = 0-30, 2 = 31-60, 3 = 61-90, 4 = 91-120, and 5 = 121+ galls.

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 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 AG4632 were 5, 5, 1 and 2, 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) with variety as the fixed effect and replication as random. 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) with variety as a fixed effect and location replication(location) location*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 2020

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG43X7	Commercial check	Commercial		RRX	
2	AG45X8	Commercial check	Commercial		RRX	
3	AG38X8	Commercial check	Commercial		RRX	
4	LD06-7620	Commercial check	Commercial		Conv	
5	DA13086-011F	Osage x S09-10871	Gillen		Conv	
6	JTN-4119	5601T x PI 437655	Arelli	F9	Conv	new SCN resistance source
7	JTN-4619	5002T x PI 494182	Arelli	F10	Conv	new SCN resistance source
8	S09-13608C	LG04-6863 x S04-10364	Chen		Conv	SCN, SC
9	S16-5540R	S11-16653 x S11-20337RR1	Chen		RR1	RKN, SCN, RN, Excluder
10	S17-1344C	S11-16653 x S13-11434	Chen		Conv	RKN, SCN, SC
11	S17-17797C	R09-430 x S11-20124	Chen		Conv	RKN, SCN, SC, Excluder
12	S17-19874R	S13-13360 x S13-16712RR1	Chen		RR1	SCN, RN, HO
13	S17-2243C	S11-20124 x S13-11434	Chen		Conv	SC, Excluder
14	SA16-10735	LD07-3395bf x HM11-W193	Scaboo	F5	Conv	
15	SA16-11227	SA12-1532 x LD10-9409	Scaboo	F5	Conv	SCN
16	SA16-12348	SA12-1541 x LD08-1592	Scaboo	F5	Conv	SCN
17	V13-0113	V02-8659 x Schillinger 495	Zhang	F4	RR1	
18	V14-1219	B05-8046 x S04-12996	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 2 - GENERAL SUMMARY OF PERFORMANCE
UNIFORM TEST IV-S-EARLY 2020

STRAIN/		AVG.	YIELD†			PROTEIN‡			OIL‡		
VARIETY	RANK	RANK	2020	19-20	18-20	2020	19-20	18-20	2020	19-20	18-20
AG43X7	1	3	68.5	.	.	34.0	.	.	19.3	.	.
AG45X8	2	2	67.6	.	.	34.8	.	.	18.9	.	.
AG38X8	4	6	63.0	.	.	35.1	.	.	19.5	.	.
LD06-7620	16	14	42.9	42.9	45.4	35.0	35.0	35.8	19.5	19.5	19.9
DA13086-011F	9	10	55.7	.	.	35.7	.	.	18.9	.	.
JTN-4119	15	13	45.2	.	.	32.0	.	.	21.1	.	.
JTN-4619	18	17	38.0	.	.	35.3	.	.	18.8	.	.
S09-13608C	3	6	64.0	.	.	34.8	.	.	18.4	.	.
S16-5540R	6	7	60.9	63.4	.	35.6	35.7	.	18.9	19.2	.
S17-1344C	8	8	56.7	.	.	33.8	.	.	19.5	.	.
S17-17797C	7	6	59.7	.	.	34.5	.	.	19.6	.	.
S17-19874R	11	11	54.4	.	.	38.1	.	.	18.3	.	.
S17-2243C	5	6	61.2	.	.	33.7	.	.	20.2	.	.
SA16-10735	12	11	52.8	.	.	34.2	.	.	20.2	.	.
SA16-11227	13	11	51.7	.	.	35.7	.	.	18.9	.	.
SA16-12348	14	14	48.0	.	.	34.8	.	.	19.4	.	.
V13-0113	17	15	41.2	48.3	.	35.9	36.6	.	19.2	19.0	.
V14-1219	10	10	55.3	57.4	.	34.0	34.5	.	20.1	20.0	.
Mean	.	.	54.8	.	.	34.8	.	.	19.4	.	.
LSD(0.05)	.	.	8.7	.	.	0.9	.	.	0.6	.	.
CV(%)	.	.	16.8	.	.	3.0	.	.	3.1	.	.

†Data not included in the test mean: Belle Mina and Springfield. Certain field trials were damaged by dicamba, which 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 2020

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
AG43X7	45.7	0	2	37	1.8	14.8			
AG45X8	46.4	2	2	36	1.9	15.1			
AG38X8	47.3	-6	1	30	1.7	16.1			
LD06-7620	47.2	-5	1	23	2.2	14.0			
DA13086-011F	47.6	7	1	29	1.4	15.3	S	LT	T
JTN-4119	43.9	0	2	27	2.0	12.5	P	G	
JTN-4619	47.2	1	2	26	1.4	11.8	W	T	
S09-13608C	46.3	6	2	32	1.6	16.0	W	G	Br
S16-5540R	47.8	8	2	29	1.3	16.1	W	T	T
S17-1344C	45.4	5	2	31	1.6	15.2	P	T	Bl
S17-17797C	46.6	5	2	26	1.4	13.2	W	T	Bl
S17-19874R	50.7	8	2	38	1.5	14.1	W	T	T
S17-2243C	45.7	6	1	33	1.5	14.7	P	T	Bl
SA16-10735	46.5	-3	2	29	2.2	15.1	P	G	
SA16-11227	47.7	-6	2	27	1.7	12.8	W	G	
SA16-12348	46.9	-6	3	33	1.7	14.8	W	T	
V13-0113	48.2	5	2	31	1.7	14.9	P	T	
V14-1219	46.0	-1	1	31	1.4	12.9	P	T	
Mean	46.9	1	2	31	1.7	14.4			
LSD(0.05)	1.2	5	1	3	0.4	1.3			
CV(%)	2.7	365	40	12	28.0	10			

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

TABLE 4 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST IV-S-EARLY 2020

STRAIN/ VARIETY	SCN Cyst Score (1-5 Scale)†			PRK GA	SRK GA	SC RATING	SC SCORE
	Race 2	Race 3	Race 5				
AG43X7	5	.	5	.	5.0	R	1.0
AG45X8	4	.	4	.	4.0	R	1.0
AG38X8	4	.	5	.	5.0	R	1.0
LD06-7620	5	.	4	.	2.3	SS	3.0
DA13086-011F	4	.	5	.	4.0	R	1.0
JTN-4119	2	.	2	.	2.0	R	1.0
JTN-4619	2	.	2	.	5.0	R	1.0
S09-13608C	5	.	5	.	3.5	R	1.0
S16-5540R	2	.	2	.	1.3		.
S17-1344C	4	.	5	.	3.3	R	1.0
S17-17797C	3	.	2	.	1.0	R	1.0
S17-19874R	2	.	2	.	5.0	MS	4.0
S17-2243C	5	.	5	.	4.5	R	1.0
SA16-10735	5	.	4	.	3.0	R	1.0
SA16-11227	4	.	5	.	5.0	S	5.0
SA16-12348	4	.	5	.	5.0	S	5.0
V13-0113	4	.	5	.	5.0	R	1.0
V14-1219	4	.	5	.	5.0	R	1.0

†The race 2 and 5 SCN populations used in these tests were typed as HG (*Heterodera glycines*) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 5 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST IV-S-EARLY 2020 †

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pine Tree, AR	Portageville, MO(A)‡	Portageville, MO(B)‡	Springfield, TN	Test Mean
AG43X7	18.4	79.3	64.8	73.7	59.2	66.7	67.2	50.8	68.5
AG45X8	16.4	73.1	63.8	74.9	62.5	69.3	62.2	54.6	67.6
AG38X8	22.6	68.9	56.9	72.6	53.9	63.8	61.8	50.4	63.0
LD06-7620	22.5	50.0	50.8	52.2	55.6	27.9	21.1	39.8	42.9
DA13086-011F	22.3	64.0	50.6	72.6	58.5	53.9	34.6	48.2	55.7
JTN-4119	13.8	43.6	47.6	44.1	62.4	51.1	21.0	36.1	45.2
JTN-4619	16.3	.	40.5	41.9	45.4	28.7	27.9	39.5	38.0
S09-13608C	16.6	62.3	60.9	91.9	57.9	55.3	55.7	52.0	64.0
S16-5540R	26.8	68.3	53.8	82.2	54.0	61.6	45.7	59.0	60.9
S17-1344C	20.7	52.5	55.6	66.6	62.1	54.2	49.0	61.5	56.7
S17-17797C	24.0	66.3	58.2	78.1	62.2	44.6	48.8	54.6	59.7
S17-19874R	21.0	53.4	47.0	72.9	54.6	53.9	44.8	48.4	54.4
S17-2243C	22.9	65.8	64.1	66.3	65.6	57.3	48.0	48.4	61.2
SA16-10735	17.8	69.7	53.7	67.9	45.7	37.4	42.2	38.4	52.8
SA16-11227	26.0	65.6	58.6	51.1	49.9	40.1	45.2	35.8	51.7
SA16-12348	23.7	62.7	49.9	51.7	42.7	41.9	39.0	40.8	48.0
V13-0113	17.9		41.3	41.2	50.8	45.6	21.8	35.8	41.2
V14-1219	14.0	55.6	54.0	66.7	61.4	53.5	40.4	41.3	55.3
Mean	20.2	62.6	54.0	64.9	55.8	50.4	43.1	46.4	54.8
LSD(0.05)	5.5	11.6	12.6	15.5	7.8	8.6	8.2	12.3	8.7
LSD(0.10)	4.6	9.6	10.5	12.9	6.5	7.2	6.9	10.3	7.3
CV(%)	16.5	10.8	14.1	14.4	8.4	10.3	11.5	16.0	16.8

†Data not included in the test mean: Belle Mina and Springfield
‡ Field trials were damaged by Dicamba, which resulted in an unfair yield advantage for the AG check lines.

TABLE 6 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pine Tree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	9/3	10/11	10/2	9/25	10/5	10/7	10/19	9/21	9/30
AG45X8	0	1	2	4	1	5	0	1	2
AG38X8	-16	-2	-8	0	-4	-5	-9	-1	-6
LD06-7620	-20	-3	-10	-1	-4	-3	-2	-2	-5
DA13086-011F	23	1	3	6	3	12	4	1	7
JTN-4119	0	-1	-2	1	-2	4	-2	0	0
JTN-4619	19	0	-1	0	-4	-3	-4	0	1
S09-13608C	18	3	3	8	2	14	1	3	6
S16-5540R	23	7	3	9	4	9	6	3	8
S17-1344C	20	1	3	5	2	8	1	2	5
S17-17797C	22	5	3	6	2	3	-1	2	5
S17-19874R	24	7	1	8	-1	9	15	2	8
S17-2243C	24	1	3	7	2	9	3	2	6
SA16-10735	-7	-1	-8	3	-4	-4	-4	0	-3
SA16-11227	-16	-2	-11	-1	-4	-5	-6	-3	-6
SA16-12348	-14	-1	-13	0	-4	-5	-7	-1	-6
V13-0113	18	0	2	5	0	10	2	1	5
V14-1219	-1	0	2	1	-4	3	-3	-2	-1
Mean	6	1	-1	3	-1	3	0	1	1
LSD(0.05)	4	1	3	2	2	3	5	2	5
CV(%)	41	101	118	40	142	53	738	226	365

TABLE 7 - PLANT HEIGHT (INCHES)
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pine Tree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	37	34	46	31	38	41	36	36	37
AG45X8	37	33	46	29	36	39	34	35	36
AG38X8	31	29	37	24	30	32	29	31	30
LD06-7620	24	26	32	20	27	13	16	28	23
DA13086-011F	32	26	35	28	31	23	23	33	29
JTN-4119	29	21	36	21	35	25	20	33	27
JTN-4619	26	25	39	20	34	15	21	33	27
S09-13608C	38	28	40	31	32	26	27	34	32
S16-5540R	33	32	34	22	33	20	23	35	29
S17-1344C	34	26	39	28	35	23	26	37	31
S17-17797C	28	27	33	24	30	15	19	32	26
S17-19874R	36	34	45	40	43	30	31	41	38
S17-2243C	37	29	43	28	37	27	28	38	34
SA16-10735	30	30	40	24	34	17	22	32	29
SA16-11227	32	28	36	21	31	17	23	30	27
SA16-12348	36	33	50	28	38	19	24	37	33
V13-0113	32	30	43	23	36	27	23	36	31
V14-1219	33	26	42	31	35	23	23	33	31
Mean	33	29	40	26	34	24	25	34	31
LSD(0.05)	4	4	6	3	4	4	3	3	3
CV(%)	7	8	8	8	7	11	8	6	12

TABLE 8 - PLANT LODGING (1-5)
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pine Tree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	1.0	1.5	3.7	2.0	2.7	2.3	1.0	1.0	1.9
AG45X8	1.0	1.5	3.0	2.0	2.7	2.3	1.0	1.0	1.8
AG38X8	1.0	1.5	1.7	1.8	1.0	2.0	1.0	1.0	1.4
LD06-7620	1.0	1.5	1.3	1.5	2.0	1.0	1.0	1.0	1.3
DA13086-011F	1.0	1.7	1.3	2.0	1.0	1.7	1.0	1.0	1.3
JTN-4119	1.0	1.5	2.0	1.7	3.0	2.0	1.0	1.0	1.6
JTN-4619	1.0	2.8	2.3	1.5	3.7	1.0	1.3	1.0	1.8
S09-13608C	1.0	1.8	2.3	2.3	1.3	1.7	1.0	1.0	1.6
S16-5540R	1.0	2.3	3.3	2.3	3.7	1.7	2.0	1.0	2.2
S17-1344C	1.0	1.7	2.0	1.8	2.0	1.7	1.7	1.0	1.6
S17-17797C	1.0	4.0	3.3	2.0	3.7	1.0	2.0	1.0	2.2
S17-19874R	1.0	2.0	1.0	2.7	1.0	2.0	1.3	1.0	1.5
S17-2243C	1.0	1.7	2.0	1.7	1.3	1.7	1.0	1.0	1.4
SA16-10735	1.0	1.7	4.7	2.3	3.7	1.0	1.3	1.0	2.1
SA16-11227	1.0	2.0	3.3	2.0	3.0	1.3	2.0	1.0	2.0
SA16-12348	1.0	3.3	4.3	2.8	3.7	2.0	2.0	1.0	2.5
V13-0113	1.0	1.8	3.3	2.2	3.3	2.0	1.0	1.0	2.0
V14-1219	1.0	1.5	2.3	1.8	1.3	1.3	1.0	1.0	1.4
Mean	1.0	2.0	2.6	2.0	2.4	1.6	1.3	1.0	1.8
LSD(0.05)	.	0.8	1.0	0.6	1.8	0.7	0.6	.	0.6
CV(%)	0.0	24.0	22.3	17.5	43.6	24.8	27.4	0.0	40.3

TABLE 9 - SEED QUALITY (1-5)
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pine Tree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	3.0	1.0	2.0	1.0	2.0	2.3	2.0	1.0	1.8
AG45X8	3.0	1.0	2.0	1.2	2.0	3.0	2.0	1.0	1.9
AG38X8	1.0	1.0	2.0	1.0	2.0	3.0	2.0	1.3	1.7
LD06-7620	1.0	1.0	2.3	2.3	2.0	4.0	3.0	1.8	2.2
DA13086-011F	1.0	1.0	1.0	1.0	2.0	2.3	2.0	1.0	1.4
JTN-4119	2.0	1.0	2.3	2.5	2.0	3.0	2.0	1.3	2.0
JTN-4619	1.0	1.0	1.7	1.0	2.0	1.3	2.0	1.2	1.4
S09-13608C	1.0	1.0	1.3	1.5	2.0	2.7	2.0	1.2	1.6
S16-5540R	1.0	1.0	1.0	1.0	1.0	2.3	2.0	1.2	1.3
S17-1344C	1.3	1.0	2.0	1.2	2.0	2.0	2.0	1.3	1.6
S17-17797C	1.0	1.0	1.3	1.2	2.0	1.7	2.0	1.3	1.4
S17-19874R	1.0	1.0	1.7	1.0	1.0	2.7	2.3	1.0	1.5
S17-2243C	1.3	1.0	1.3	1.2	2.0	2.0	2.0	1.3	1.5
SA16-10735	1.7	1.0	2.3	2.2	2.0	3.3	2.0	2.5	2.2
SA16-11227	1.0	1.0	1.7	1.5	2.0	3.0	2.0	1.7	1.7
SA16-12348	1.0	1.0	2.0	1.5	2.0	2.7	2.0	1.7	1.7
V13-0113	1.0	1.0	1.7	1.0	2.0	2.7	2.7	1.5	1.7
V14-1219	1.3	1.0	1.3	1.0	2.0	2.0	2.0	1.0	1.4
Mean	1.4	1.0	1.7	1.3	1.9	2.6	2.1	1.4	1.7
LSD(0.05)	0.6	.	0.7	0.3	.	0.7	0.3	0.5	0.4
CV(%)	26.3	.	26.2	14.7	.	16.8	9.0	22.3	28.5

TABLE 10 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	*Belle Mina, AL*	*Columbia, MO*	*Jackson, TN*	*Knoxville, TN*	*Pine Tree, AR*	*Portageville, MO(A)*	*Portageville, MO(B)*	*Springfield, TN*	*Test Mean*
AG43X7	9.3	17.3	16.3	13.4	16.3	15.3	15.6	15.5	14.8
AG45X8	11.2	16.6	16.0	14.7	15.1	15.1	15.6	16.6	15.1
AG38X8	10.0	18.8	17.0	15.4	16.5	15.8	17.2	18.5	16.1
LD06-7620	9.2	16.6	14.3	13.3	14.6	13.6	15.3	15.3	14.0
DA13086-011F	17.7	15.2	14.8	13.2	16.2	15.0	16.2	13.7	15.3
JTN-4119	6.8	14.2	13.1	12.0	13.5	12.8	14.5	13.3	12.5
JTN-4619	10.7	12.2	11.1	11.1	12.1	11.9	13.2	11.7	11.8
S09-13608C	14.8	16.9	15.2	15.6	18.7	15.8	16.1	15.6	16.0
S16-5540R	16.5	16.1	14.8	15.2	16.9	16.3	17.4	15.5	16.1
S17-1344C	12.8	16.7	16.0	13.3	15.6	15.0	16.4	15.6	15.2
S17-17797C	13.6	13.9	12.2	12.5	14.4	12.0	14.3	13.2	13.2
S17-19874R	15.8	13.9	13.2	12.8	16.7	13.4	13.5	13.7	14.1
S17-2243C	14.5	15.6	14.8	13.6	15.6	14.5	15.3	13.7	14.7
SA16-10735	9.2	17.4	15.3	14.9	14.9	15.3	17.2	16.7	15.1
SA16-11227	8.2	14.7	13.0	12.5	13.4	12.8	14.2	13.4	12.8
SA16-12348	10.2	17.2	14.3	14.0	15.7	14.9	17.1	15.1	14.8
V13-0113	13.5	15.1	13.5	13.7	16.2	14.8	16.7	15.6	14.9
V14-1219	9.5	14.6	11.9	12.1	13.3	13.0	14.9	14.0	12.9
Mean	11.9	15.7	14.3	13.5	15.3	14.3	15.6	14.8	14.4
LSD(0.05)	1.9	.	1.0	0.8	.	1.0	1.1	1.4	1.3
CV(%)	9.8	.	4.0	3.7	.	4.4	4.1	5.6	10.0

TABLE 11 - OIL (%)†
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pine Tree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	19.6	17.8	19.7	20.2	18.8	19.5	.	19.7	19.3
AG45X8	19.6	17.8	19.5	19.8	18.1	18.7	.	18.5	18.9
AG38X8	19.1	18.4	20.5	20.3	19.6	19.9	.	19.1	19.5
LD06-7620	20.3	18.7	20.4	20.8	19.0	18.3	.	19.1	19.5
DA13086-011F	19.4	17.6	19.8	19.4	18.7	18.3	.	18.9	18.8
JTN-4119	20.4	20.0	21.3	22.4	20.8	20.8	.	21.6	21.0
JTN-4619	20.1	17.0	18.8	19.9	18.8	18.3	.	19.0	18.8
S09-13608C	19.4	17.4	18.7	19.1	18.1	17.6	.	18.2	18.4
S16-5540R	20.0	17.1	19.9	19.5	18.3	18.6	.	19.3	18.9
S17-1344C	20.7	18.2	19.8	20.5	19.0	18.8	.	19.4	19.5
S17-17797C	20.3	18.2	20.1	20.2	19.9	19.0	.	19.7	19.6
S17-19874R	19.5	16.2	19.6	18.8	17.7	17.8	.	18.3	18.2
S17-2243C	20.4	19.1	20.6	21.9	19.6	19.4	.	20.3	20.2
SA16-10735	19.4	19.6	21.2	22.0	20.1	20.0	.	19.2	20.2
SA16-11227	18.2	18.2	20.0	20.3	18.9	18.9	.	17.8	18.9
SA16-12348	19.2	18.1	20.6	20.5	19.1	19.1	.	19.2	19.4
V13-0113	20.7	18.1	19.3	20.1	18.4	18.3	.	19.8	19.3
V14-1219	20.6	18.5	20.2	21.3	19.9	19.9	.	20.2	20.1
Mean	19.8	18.1	20.0	20.4	19.0	19.0	.	19.3	.
LSD(0.05)	1.1	0.4	.	0.8	.	0.6	.	.	.
CV(%)	3.1	1.2	.	2.5	.	1.9	.	.	.

†Oil percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial were reported for some locations in 2021.

TABLE 12 - PROTEIN (%)†
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pine Tree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	32.0	35.0	34.4	33.3	36.3	33.0	.	34.2	33.9
AG45X8	32.9	34.9	34.4	33.5	36.6	33.9	.	37.2	34.6
AG38X8	34.5	35.2	34.6	34.3	36.2	34.3	.	36.5	35.0
LD06-7620	32.0	34.9	34.6	34.8	36.7	35.9	.	36.5	35.0
DA13086-011F	35.8	34.7	34.7	34.7	38.0	35.2	.	36.4	35.6
JTN-4119	30.5	31.7	32.9	31.4	33.7	30.8	.	33.0	31.9
JTN-4619	32.5	34.5	36.0	35.0	37.2	36.4	.	35.7	35.2
S09-13608C	34.0	34.5	34.8	33.5	36.7	34.7	.	35.6	34.7
S16-5540R	35.6	34.8	35.0	35.4	38.0	35.4	.	35.3	35.6
S17-1344C	32.0	32.9	34.4	32.6	36.1	33.7	.	34.9	33.6
S17-17797C	34.7	33.7	34.2	33.9	35.6	34.6	.	34.6	34.5
S17-19874R	37.9	38.6	37.2	38.1	39.9	37.3	.	37.8	38.2
S17-2243C	34.6	33.1	34.3	31.2	35.1	33.2	.	34.3	33.6
SA16-10735	33.2	33.6	33.5	32.9	35.0	34.4	.	37.2	34.1
SA16-11227	35.0	35.3	34.2	34.4	36.5	35.5	.	38.9	35.6
SA16-12348	33.9	35.2	33.1	34.2	36.4	34.7	.	35.9	34.8
V13-0113	33.0	36.1	36.0	35.2	38.3	36.8	.	35.7	35.8
V14-1219	31.7	35.1	33.8	32.4	36.4	33.2	.	35.4	33.8
Mean	33.7	34.6	34.6	33.9	36.6	34.6	.	35.8	
LSD(0.05)	1.5	1.0	.	1.5	.	1.3	.	.	
CV(%)	2.6	1.8	.	2.6	.	2.3	.	.	

†Protein percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial in some locations were reported in 2020.

TABLE 13 - MEAL (%)†
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pine Tree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	43.2	46.3	46.6	44.6	48.5	44.5	.	46.3	45.7
AG45X8	44.5	46.2	46.5	46.4	48.6	45.4	.	49.6	46.4
AG38X8	46.3	46.8	47.4	47.2	48.9	46.6	.	49.1	47.3
LD06-7620	43.6	46.7	47.2	48.8	49.2	47.8	.	49.1	47.2
DA13086-011F	48.3	45.8	47.0	47.1	50.8	46.9	.	48.8	47.6
JTN-4119	41.7	43.1	45.4	44.1	46.3	42.4	.	45.8	43.9
JTN-4619	44.2	45.2	48.2	47.9	49.8	48.4	.	47.9	47.2
S09-13608C	45.9	45.4	46.5	45.4	48.7	45.8	.	47.2	46.3
S16-5540R	48.4	45.7	47.5	48.1	50.5	47.2	.	47.5	47.8
S17-1344C	43.9	43.7	46.7	45.5	48.4	45.0	.	47.1	45.4
S17-17797C	47.4	44.7	46.5	46.7	48.3	46.4	.	46.8	46.6
S17-19874R	51.2	50.1	50.3	50.1	52.7	49.3	.	50.3	50.7
S17-2243C	47.2	44.4	46.9	43.1	47.4	44.7	.	46.7	45.7
SA16-10735	44.7	45.3	46.1	46.0	47.7	46.7	.	50.0	46.5
SA16-11227	46.5	46.9	46.5	47.0	48.9	47.6	.	51.5	47.7
SA16-12348	45.6	46.7	45.2	45.3	48.9	46.7	.	48.3	46.9
V13-0113	45.3	47.9	48.5	47.8	51.0	49.0	.	48.4	48.2
V14-1219	43.4	46.8	46.0	44.6	49.4	45.0	.	48.3	46.0
Mean	45.6	46.0	46.9	46.4	49.1	46.4	.	48.3	46.9
LSD(0.05)	1.8	1.3	.	.	.	1.6	.	.	1.2
CV(%)	2.3	1.7	.	.	.	2.1	.	.	2.7

†Meal percentage reported on a 13% moisture basis beginning in 2018.
Protein and oil data from all replicates of a trial were reported for some locations in 2020.

SUMMARY OF SEED FATTY ACIDS (%)
UNIFORM TEST IV-S-EARLY 2020 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AG43X7	10.7	3.8	23.0	54.7	7.7
AG45X8	10.5	3.6	21.8	56.2	7.9
AG38X8	11.8	3.9	23.8	53.7	6.7
S17-19874R	7.7	2.9	78.4	5.4	5.6
Mean	10.2	3.5	36.8	42.5	7.0
LSD(0.05)	0.3	0.2	2.5	1.8	0.8
CV(%)	3.1	5.1	6.5	4.1	10.4

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

SEED PALMITIC ACID (%)
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pinetree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	11.3	10.8	10.5	10.4	10.7	10.5	10.9	10.6	10.7
AG45X8	10.0	10.4	10.6	10.3	11.1	10.5	10.7	10.7	10.5
AG38X8	12.2	12.4	11.5	11.7	12.0	11.8	11.5	11.5	11.8
S17-19874R	8.2	7.4	7.4	7.6	7.8	8.0	8.1	7.4	7.7
Mean	10.4	10.3	10	10	10.4	10.2	10.3	10	10.2
LSD(0.05)	.	.	.	.	.	.	.	.	0.3
CV(%)	.	.	.	.	.	.	.	.	3.1

SEED STEARIC ACID (%)
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pinetree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	3.7	4.0	3.6	3.7	3.7	3.6	3.7	4.1	3.8
AG45X8	3.6	3.8	3.6	3.6	3.4	3.4	3.3	3.7	3.6
AG38X8	4.6	4.2	3.8	3.8	3.7	3.6	3.5	4.2	3.9
S17-19874R	2.9	3.0	2.9	2.7	2.8	2.9	3.0	3.3	2.9
Mean	3.7	3.8	3.5	3.5	3.4	3.4	3.4	3.8	3.5
LSD(0.05)	.	.	.	.	.	.	.	.	0.2
CV(%)	.	.	.	.	.	.	.	.	5.1

SEED OLEIC ACID (%)
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pinetree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	22.3	19.9	21.2	23.2	27.5	21.4	21.8	26.9	23.0
AG45X8	24.9	20.1	19.7	23.0	20.0	21.9	20.6	24.2	21.8
AG38X8	26.0	18.3	23.3	23.4	23.6	20.6	23.5	31.9	23.8
S17-19874R	75.7	78.3	80.3	80.7	81.9	76.5	74.2	79.2	78.4
Mean	37.2	34.2	36.1	37.6	38.3	35.1	35	40.6	36.8
LSD(0.05)	.	.	.	.	.	.	.	.	2.5
CV(%)	.	.	.	.	.	.	.	.	6.5

SEED LINOLEIC ACID (%)
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pinetree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	54.2	56.1	57.4	55.6	51.6	56.2	55.0	51.7	54.7
AG45X8	54.8	56.9	58.7	55.6	57.0	55.5	56.9	54.1	56.2
AG38X8	51.3	56.3	55.0	54.8	54.4	56.7	54.6	46.7	53.7
S17-19874R	6.4	5.9	4.4	4.4	3.2	6.4	7.6	4.9	5.4
Mean	41.7	43.8	43.9	42.6	41.6	43.7	43.5	39.4	42.5
LSD(0.05)	.	.	.	.	.	.	.	.	1.8
CV(%)	.	.	.	.	.	.	.	.	4.1

SEED LINOLENIC ACID (%)
UNIFORM GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Belle Mina, AL	Columbia, MO	Jackson, TN	Knoxville, TN	Pinetree, AR	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Test Mean
AG43X7	8.5	9.1	7.3	7.1	6.5	8.3	8.5	6.7	7.7
AG45X8	6.6	8.8	7.5	7.4	8.5	8.7	8.5	7.3	7.9
AG38X8	5.8	8.8	6.3	6.4	6.4	7.2	7.0	5.9	6.7
S17-19874R	6.8	5.4	4.9	4.6	4.3	6.2	7.1	5.2	5.6
Mean	6.9	8	6.5	6.4	6.4	7.6	7.8	6.3	7
LSD(0.05)	.	.	.	.	.	.	.	.	0.8
CV(%)	.	.	.	.	.	.	.	.	10.4

INTENTIONALLY BLANK

TABLE 14 - PARENTAGE OF ENTRIES
UNIFORM GROUP IV-S-LATE 2020

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	Ellis	Commercial check	Pantalone		Conv	
2	AG 46X6	Commercial check	Commercial		RRX	
3	AG 48X9	Commercial check	Commercial		RRX	
4	AG 49X6	Commercial check	Commercial		RRX	
5	DA1221-01-597	DB04-10836 x (DA10c53-F2-B5-066)	Gillen		Conv	HO, 50% meal protein
6	DA13076-042F	(DB05c023-26F) x JTN-5203	Gillen		Conv	
7	DS1260-260	(PI 587982A x DT97-4290) x LD00-3309	Rusty Smith	F5	Conv	heat tolerant
8	S16-14161C	S08-17361 x LG09-6212	Chen		Conv	SCN, SC
9	S16-3747RY	S11-16653 x S11-5727RR2	Chen		RR2	RKN, SCN, SC, Excluder
10	S16-5503R	S11-16653 x S11-20337RR1	Chen		RR1	RKN, SCN, Excluder
11	S16-7922C	S11-16653 x S11-20124	Chen		Conv	RKN, SCN, RN, SC, Excluder
12	S16-8898C	R09-430 x S11-20124	Chen		Conv	RKN, SCN, Excluder
13	S16-9892C	LG10-2695 x S08-17361	Chen		Conv	SCN, SC, Excluder
14	TN17-4416	S09-14175 x Ellis	Pantalone		Conv	
15	TN18-4110	[Ellis(4) x TN13-5001-ln] x[Ellis(4) x TN10-4037-HO]	Pantalone		Conv	50% meal protein HOLN
16	V15-0057DI	Ozark x PI 200508	Zhang	F4	Conv	
17	V15-1407DI	Glenn x G08-PR-394	Zhang	F4	Conv	
18	V15-2259ST	Hanover x V09-0673	Zhang	F4	Conv	
19	V16-0293	S08-17361 x JTN-4307	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 2020

STRAIN/		AVG.	YIELD†			PROTEIN‡			OIL‡		
VARIETY	RANK	RANK	2020	19-20	18-20	2020	19-20	18-20	2020	19-20	18-20
Ellis	13	10	53.4	55.3	56.4	35.0	35.4	35.1	18.6	18.7	19.0
AG 46X6	1	6	62.9	.	.	35.0	.	.	19.4	.	.
AG 48X9	2	6	62.3	.	.	34.6	.	.	19.7	.	.
AG 49X6	19	15	47.2	.	.	33.6	.	.	19.8	.	.
DA1221-01-597	12	11	54.2	54.4	.	36.0	36.7	.	18.6	19.0	.
DA13076-042F	18	14	50.9	.	.	34.1	.	.	18.9	.	.
DS1260-260	17	15	51.0	.	.	35.2	.	.	18.2	.	.
S16-14161C	8	10	56.5	.	.	35.5	.	.	19.0	.	.
S16-3747RY	7	8	57.5	.	.	34.0	.	.	18.9	.	.
S16-5503R	5	8	59.1	.	.	35.1	.	.	18.7	.	.
S16-7922C	4	7	60.2	61.0	.	34.9	35.2	.	19.2	19.4	.
S16-8898C	3	6	60.5	.	.	34.1	.	.	19.9	.	.
S16-9892C	9	10	56.1	.	.	34.1	.	.	19.2	.	.
TN17-4416	11	10	55.0	.	.	34.9	.	.	18.8	.	.
TN18-4110	16	12	51.4	.	.	35.3	.	.	19.1	.	.
V15-0057DI	10	8	55.2	.	.	35.2	.	.	18.4	.	.
V15-1407DI	15	13	52.1	.	.	35.6	.	.	18.5	.	.
V15-2259ST	14	12	53.2	.	.	36.7	.	.	17.3	.	.
V16-0293	6	8	57.9	.	.	34.1	.	.	19.5	.	.
Mean	.	.	55.6	.	.	34.9	.	.	18.9	.	.
LSD(0.05)	.	.	5.3	.	.	0.5	.	.	0.3	.	.
CV(%)	.	.	14.4	.	.	2.2	.	.	2.3	.	.

†Data not included in the test mean: None excluded. Certain field trials were damaged by dicamba, which 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 2020

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
Ellis	46.6	0	1	26	1.3	13.0			
AG 46X6	47.2	-3	2	36	1.8	17.9			
AG 48X9	46.9	-4	1	37	1.6	16.6			
AG 49X6	45.6	-2	1	33	1.7	15.2			
DA1221-01-597	48.0	-1	2	33	1.4	13.2	P	T	T
DA13076-042F	45.6	-3	2	28	1.4	12.2	W	T	T
DS1260-260	46.7	-5	1	33	1.5	12.4	P	G	Tn
S16-14161C	47.5	-1	2	35	1.9	17.2	W	G	
S16-3747RY	45.5	2	2	32	1.7	15.0	W	Lt	T
S16-5503R	46.9	-1	2	33	1.6	14.7	W	T	T
S16-7922C	46.9	2	2	33	1.6	15.0	W	T	T
S16-8898C	46.3	-2	2	34	1.7	15.7	P	T	T
S16-9892C	45.8	-1	2	35	1.4	14.3	W	Lt	T
TN17-4416	46.7	-2	1	27	1.4	13.4			
TN18-4110	47.4	1	1	25	1.6	12.4			
V15-0057DI	47.0	-1	1	25	1.6	13.0	W	G	
V15-1407DI	47.4	-1	1	27	1.6	14.4	W	T	
V15-2259ST	48.2	2	1	27	1.5	12.8	P	G	
V16-0293	46.1	0	2	36	1.5	17.3	W	T	
Mean	46.8	-1	2	31	1.6	14.5			
LSD(0.05)	0.6	2	0	3	0.3	0.7			
CV(%)	1.9	248	39	13	30.0	7.7			

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

TABLE 17 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST IV-S-LATE 2020

STRAIN/ VARIETY	SCN Cyst Score (1-5 Scale)†			PRK	SRK	SC	SC
	Race 2	Race 3	Race 5	GA	GA	RATING	SCORE
Ellis	5	.	5	.	1.5	R	1.0
AG 46X6	5	.	5	.	5.0	R	1.0
AG 48X9	4	.	4	.	5.0	R	1.0
AG 49X6	4	.	4	.	5.0	R	1.0
DA1221-01-597	5	.	4	.	1.0	R	1.0
DA13076-042F	4	.	5	.	5.0		.
DS1260-260	4	.	4	.	5.0		.
S16-14161C	4	.	4	.	5.0	R	1.0
S16-3747RY	4	.	4	.	1.0	R	1.0
S16-5503R	4	.	1	.	1.0	S	5.0
S16-7922C	1	.	3	.	1.3	R	1.0
S16-8898C	2	.	1	.	1.8	SS	3.0
S16-9892C	5	.	4	.	4.5	R	1.0
TN17-4416	3	.	1	.	5.0	R	1.0
TN18-4110	5	.	5	.	1.3	R	1.0
V15-0057DI	5	.	5	.	1.0		.
V15-1407DI	4	.	4	.	4.5	R	1.0
V15-2259ST	4	.	4	.	5.0	R	1.0
V16-0293	4	.	4	.	5.0	R	1.0

†The race 2 and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 18 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST IV-S-LATE 2020 †

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	29.2	59.9	45.2	63.9	58.3	43.7	67.7
AG 46X6	34.0	55.7	70.2	69.0	54.9	46.2	63.7
AG 48X9	34.9	61.9	83.2	71.8	47.6	48.1	62.1
AG 49X6	31.1	40.8	58.6	61.0	39.6	.	60.8
DA1221-01-597	36.0	55.1	60.8	55.2	60.5	33.9	51.3
DA13076-042F	28.6	53.1	60.4	54.5	53.5	40.7	51.6
DS1260-260	27.5	51.1	65.2	51.3	46.4	29.5	58.5
S16-14161C	29.7	56.8	71.7	69.6	52.7	41.5	55.3
S16-3747RY	35.8	63.1	72.7	61.9	63.2	42.9	64.8
S16-5503R	28.7	55.6	76.8	62.7	62.4	45.4	63.7
S16-7922C	27.9	68.0	78.6	66.6	52.4	42.3	65.2
S16-8898C	28.3	66.2	75.2	63.4	58.6	42.7	64.6
S16-9892C	32.5	57.0	68.6	62.0	54.6	39.6	54.4
TN17-4416	37.0	64.2	54.6	63.5	48.2	41.6	65.2
TN18-4110	33.7	59.0	44.2	63.4	62.5	40.9	63.8
V15-0057DI	32.2	58.1	48.8	66.7	59.8	46.6	66.5
V15-1407DI	33.4	51.2	50.9	58.3	53.5	40.4	61.0
V15-2259ST	31.3	54.6	67.0	52.1	62.7	36.0	65.8
V16-0293	26.7	54.9	70.7	65.2	50.1	40.5	67.4
Mean	31.5	57.2	64.4	62.2	54.8	41.3	61.7
LSD(0.05)	8.0	7.4	12.4	6.0	9.6	4.5	7.8
LSD(0.10)	6.7	6.2	10.3	5.0	8.0	3.7	6.5
CV(%)	15.0	7.8	11.6	5.9	10.5	6.5	7.6

†Data not included in the test mean: None excluded.

TABLE 18 - SEED YIELD (BUSHELS PER ACRE) (continued)
UNIFORM TEST IV-S-LATE 2020 †

STRAIN/ VARIETY	Portageville, MO(A)‡	Portageville, MO(B)‡	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	37.3	39.9	50.3	75.2	52.9	71.4	53.4
AG 46X6	77.1	71.5	74.5	69.9	62.0	68.6	62.9
AG 48X9	73.2	68.8	54.6	76.2	58.3	69.8	62.3
AG 49X6	58.4	18.4	31.8	72.3	40.2	67.9	47.2
DA1221-01-597	47.8	48.5	60.2	69.0	51.9	74.2	54.2
DA13076-042F	29.5	42.9	54.7	67.0	50.9	73.8	50.9
DS1260-260	52.5	48.7	45.2	70.0	48.9	68.7	51.0
S16-14161C	59.0	49.9	60.0	64.7	52.3	71.6	56.5
S16-3747RY	44.6	44.2	57.6	67.5	53.9	74.8	57.5
S16-5503R	59.4	51.0	69.5	66.8	53.7	72.9	59.1
S16-7922C	57.3	52.5	67.8	67.6	59.2	77.6	60.2
S16-8898C	60.6	53.8	69.1	74.6	55.5	73.5	60.5
S16-9892C	59.6	51.9	57.0	67.7	52.4	71.4	56.1
TN17-4416	49.4	43.5	55.3	68.1	48.8	75.1	55.0
TN18-4110	24.7	36.5	49.4	66.9	53.9	70.2	51.4
V15-0057DI	30.8	48.0	52.8	77.4	54.7	75.3	55.2
V15-1407DI	38.3	47.2	54.5	70.2	45.8	72.4	52.1
V15-2259ST	40.9	48.0	42.6	66.9	52.5	71.6	53.2
V16-0293	59.2	56.5	56.5	75.5	55.0	74.6	57.9
Mean	50.5	48.5	56.0	70.2	52.8	72.4	55.6
LSD(0.05)	10.3	6.7	10.6	10.9	6.0	6.4	5.3
LSD(0.10)	8.6	5.6	8.8	9.0	5.0	5.3	4.4
CV(%)	12.4	8.4	11.5	9.0	6.9	5.3	14.4

‡ Field trials were damaged by Dicamba, which resulted in an unfair yield advantage for the AG check lines.

TABLE 19 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Manhattan, KS	Ottawa, KS	Pine Tree, AR	Portageville, MO(A)
Ellis	10/8	10/8	10/5	10/20	10/5	10/15	10/15
AG 46X6	1	-3	-2	-4	-3	-1	1
AG 48X9	1	-2	-2	-4	-5	-1	0
AG 49X6	3	2	-2	-2		1	-1
DA1221-01-597	3	-2	0	4	0	0	-2
DA13076-042F	2	-6	-1	0	-1	-3	-1
DS1260-260	2	-7	-5	-3	-4	-4	-2
S16-14161C	1	0	0	-4	-5	0	8
S16-3747RY	3	2	3	5	-1	0	2
S16-5503R	-2	-3	-1	0	-1	-2	2
S16-7922C	1	2	4	4	2	0	4
S16-8898C	-2	-6	-1	-1	-2	-3	2
S16-9892C	5	-3	-3	-2	-5	-1	7
TN17-4416	0	-1	-1	-2	-3	-1	-1
TN18-4110	3	0	3	0	0	0	-1
V15-0057DI	2	0	-1	-2	-1	-1	-2
V15-1407DI	0	-1	-1	2	0	0	-2
V15-2259ST	3	-1	3	3	3	2	3
V16-0293	4	1	-1	-4	0	1	7
Mean	2	-2	0	0	-1	-1	1
LSD(0.05)	7	3	3	3	3	2	2
CV(%)	240	136	424	417	116	146	108

TABLE 19 - RELATIVE MATURITY (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Warsaw, VA	Test Mean
Ellis	10/28	10/3	10/2	10/9	10/11
AG 46X6	-8	-3	-4	-5	-3
AG 48X9	-9	-3	-13	-2	-4
AG 49X6	-8	-5	-3	-2	-2
DA1221-01-597	-7	-3	-6	4	-1
DA13076-042F	-8	-4	-9	-2	-3
DS1260-260	-8	-5	-17	-1	-5
S16-14161C	-3	-1	-1	-3	-1
S16-3747RY	-3	-1	-1	8	2
S16-5503R	-4	-1	-5	1	-1
S16-7922C	-3	0	-2	5	2
S16-8898C	-5	-4	-5	0	-2
S16-9892C	-6	-4	-5	0	-1
TN17-4416	-7	-1	-2	-1	-2
TN18-4110	5	0	-1	1	1
V15-0057DI	-4	0	-1	0	-1
V15-1407DI	-2	-4	-5	0	-1
V15-2259ST	-3	-1	-1	9	2
V16-0293	-5	-3	-3	3	0
Mean	-5	-2	-4	1	-1
LSD(0.05)	4	2	2	2	2
CV(%)	50	52	32	156	248

TABLE 20 - PLANT HEIGHT (INCHES)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	33	31	15	38	.	31	31
AG 46X6	31	42	27	45	.	41	37
AG 48X9	36	41	28	46	.	42	36
AG 49X6	33	36	24	44	.	.	33
DA1221-01-597	31	35	23	49	.	43	39
DA13076-042F	32	31	21	40	.	37	34
DS1260-260	33	35	30	45	.	38	36
S16-14161C	34	42	31	46	.	39	35
S16-3747RY	37	36	23	46	.	42	38
S16-5503R	34	37	24	47	.	42	38
S16-7922C	32	40	25	38	.	40	37
S16-8898C	38	44	25	41	.	40	37
S16-9892C	36	41	25	47	.	41	38
TN17-4416	36	31	16	41	.	31	31
TN18-4110	32	28	15	37	.	33	33
V15-0057DI	31	29	14	36	.	34	31
V15-1407DI	35	26	16	40	.	34	29
V15-2259ST	32	29	19	42	.	35	31
V16-0293	34	42	28	46	.	39	39
Mean	34	36	23	43	.	38	35
LSD(0.05)	7	5	3	6	.	3	4
CV(%)	13	9	8	8	.	6	7

TABLE 20 - PLANT HEIGHT (INCHES) (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	14	17	25	19	24	30	26
AG 46X6	40	32	35	34	32	32	36
AG 48X9	43	32	36	40	27	35	37
AG 49X6	35	27	31	36	26	34	33
DA1221-01-597	18	25	35	37	31	37	33
DA13076-042F	13	19	27	25	28	30	28
DS1260-260	24	25	36	34	29	36	33
S16-14161C	26	26	38	37	30	39	35
S16-3747RY	18	21	35	28	26	35	32
S16-5503R	20	23	36	31	29	32	33
S16-7922C	19	24	38	32	33	38	33
S16-8898C	24	27	35	26	32	36	34
S16-9892C	27	27	36	37	28	35	35
TN17-4416	14	19	26	18	26	32	27
TN18-4110	12	17	24	20	21	29	25
V15-0057DI	12	18	25	17	23	32	25
V15-1407DI	16	19	26	23	24	30	27
V15-2259ST	15	22	26	23	25	29	27
V16-0293	30	28	40	40	32	35	36
Mean	22	24	32	29	28	34	31
LSD(0.05)	4	4	3	.	4	3	3
CV(%)	10	9	6	.	9	6	13

TABLE 21 - PLANT LODGING (1-5)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	1.0	1.0	1.5	2.0	.	1.0	1.0
AG 46X6	1.0	2.3	3.0	1.0	.	1.0	1.7
AG 48X9	1.0	2.3	2.5	1.0	.	1.0	1.3
AG 49X6	1.0	1.7	2.8	1.0	.	.	1.0
DA1221-01-597	1.0	2.3	2.5	2.3	.	1.0	4.0
DA13076-042F	1.0	2.0	2.3	3.0	.	1.0	4.0
DS1260-260	1.0	1.7	2.5	1.0	.	1.0	1.0
S16-14161C	1.0	2.7	2.7	1.0	.	1.0	1.7
S16-3747RY	1.0	2.7	2.3	2.7	.	1.3	3.7
S16-5503R	1.0	3.0	3.2	2.7	.	1.7	4.7
S16-7922C	1.0	3.3	2.7	3.0	.	2.3	3.7
S16-8898C	1.0	4.0	3.2	2.0	.	1.0	4.3
S16-9892C	1.0	2.3	3.5	1.3	.	1.0	2.3
TN17-4416	1.0	1.0	1.7	1.7	.	1.0	1.7
TN18-4110	1.0	1.0	1.5	2.0	.	1.0	3.0
V15-0057DI	1.0	1.0	1.7	2.0	.	1.0	1.7
V15-1407DI	1.0	1.0	1.8	2.0	.	1.0	1.7
V15-2259ST	1.0	1.0	2.0	1.7	.	1.0	1.3
V16-0293	1.0	3.0	2.8	1.0	.	1.0	2.0
Mean	1.0	2.1	2.4	1.8	.	1.1	2.4
LSD(0.05)		0.8	0.5	0.5	.	0.4	1.1
CV(%)	0.0	22.2	12.8	17.9	.	20.9	28.7

TABLE 21 - PLANT LODGING (1-5) (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	1.0	1.0	1.0	1.0	1.0	1.4	1.2
AG 46X6	2.3	1.7	1.0	1.7	1.3	1.7	1.6
AG 48X9	2.0	1.0	1.0	1.0	1.7	1.3	1.4
AG 49X6	2.0	1.3	1.0	1.0	1.3	1.5	1.4
DA1221-01-597	1.0	1.0	1.0	2.0	1.7	2.0	1.8
DA13076-042F	1.0	1.0	1.0	1.0	2.0	2.1	1.8
DS1260-260	1.0	1.0	1.0	1.7	2.0	1.2	1.3
S16-14161C	1.7	1.0	1.0	1.3	2.0	1.4	1.5
S16-3747RY	1.0	1.0	1.0	1.0	1.5	1.9	1.8
S16-5503R	1.3	3.3	1.0	2.0	1.3	1.9	2.3
S16-7922C	1.0	2.0	1.0	2.0	2.0	3.3	2.3
S16-8898C	1.3	2.3	1.0	2.0	3.0	2.3	2.3
S16-9892C	1.3	2.0	1.0	1.7	1.3	1.6	1.7
TN17-4416	1.0	1.0	1.0	1.0	1.3	1.3	1.2
TN18-4110	1.0	1.0	1.0	1.0	1.0	1.6	1.3
V15-0057DI	1.0	1.0	1.0	1.0	1.0	1.7	1.3
V15-1407DI	1.0	1.0	1.0	1.0	1.3	1.9	1.3
V15-2259ST	1.0	1.0	1.0	1.0	1.7	1.4	1.3
V16-0293	1.0	2.0	1.0	2.7	1.0	1.2	1.6
Mean	1.3	1.4	1.0	1.4	1.6	1.7	1.6
LSD(0.05)	0.5	0.4		0.6	1.0	0.4	0.4
CV(%)	23.4	18.9	0.0	26.0	38.0	15.3	38.8

TABLE 22 - SEED QUALITY (1-5)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	1.0	1.0	.	1.7	1.0	1.3	1.0
AG 46X6	2.0	1.7	.	1.7	2.3	1.3	2.0
AG 48X9	1.7	1.7	.	1.3	1.0	1.7	2.0
AG 49X6	2.3	1.3	.	2.0	1.3		1.0
DA1221-01-597	1.0	1.0	.	1.7	1.0	1.7	1.0
DA13076-042F	1.7	1.7	.	1.7	1.0	1.3	1.0
DS1260-260	2.0	1.7	.	2.0	1.0	1.7	1.0
S16-14161C	3.0	2.0	.	2.0	1.3	1.7	2.0
S16-3747RY	1.7	1.3	.	1.7	1.3	2.0	2.0
S16-5503R	2.0	1.3	.	2.0	1.0	2.0	1.0
S16-7922C	2.3	1.0	.	1.7	1.3	2.0	1.0
S16-8898C	2.0	2.0	.	2.0	1.0	2.3	2.0
S16-9892C	1.7	1.3	.	2.0	1.0	2.0	1.0
TN17-4416	1.7	1.0	.	1.7	1.0	1.7	1.0
TN18-4110	2.0	1.3	.	2.0	1.0	2.0	2.0
V15-0057DI	2.7	1.3	.	1.7	1.3	2.0	1.0
V15-1407DI	2.0	1.7	.	1.7	1.0	1.7	2.0
V15-2259ST	1.3	1.0	.	2.0	1.7	1.7	1.0
V16-0293	2.3	1.7	.	1.7	1.3	1.7	1.0
Mean	1.9	1.4	.	1.8	1.2	1.8	1.4
LSD(0.05)	1.3	0.8	.	0.7	0.8	0.8	.
CV(%)	41.5	32.3	.	24.5	40.9	27.1	.

TABLE 22 - SEED QUALITY (1-5) (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	2.3	2.0	1.0	.	1.0	1.0	1.3
AG 46X6	2.0	2.0	1.0	.	2.0	2.7	1.8
AG 48X9	2.0	2.0	1.0	.	2.0	2.0	1.6
AG 49X6	2.0	2.0	1.0	.	2.0	2.0	1.7
DA1221-01-597	2.3	2.0	1.0	.	2.0	1.0	1.4
DA13076-042F	2.0	2.0	1.0	.	1.0	1.0	1.4
DS1260-260	2.0	2.0	1.0	.	1.0	1.0	1.5
S16-14161C	2.0	2.0	1.3	.	2.0	2.0	1.9
S16-3747RY	2.0	2.0	1.3	.	1.0	2.0	1.7
S16-5503R	2.0	2.0	1.0	.	1.0	1.7	1.6
S16-7922C	2.0	2.0	1.2	.	1.0	1.3	1.6
S16-8898C	2.0	2.0	1.2	.	1.0	1.7	1.7
S16-9892C	2.0	1.0	1.0	.	1.0	1.0	1.4
TN17-4416	2.0	2.0	1.3	.	1.0	1.0	1.4
TN18-4110	2.0	2.0	1.2	.	1.0	1.0	1.6
V15-0057DI	2.0	2.0	1.0	.	1.0	1.0	1.6
V15-1407DI	2.0	2.0	1.0	.	1.0	1.3	1.6
V15-2259ST	2.0	1.7	1.7	.	1.0	1.0	1.5
V16-0293	2.0	2.0	1.0	.	1.0	1.0	1.5
Mean	2.0	1.9	1.1	.	1.3	1.4	1.6
LSD(0.05)	0.3	0.2	0.3	.	.	0.5	0.3
CV(%)	9.2	6.9	15.7	.	.	21.1	29.5

TABLE 23 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	17.3	13.6	.	10.3	12.7	11.3	13.1
AG 46X6	17.6	17.7	.	15.0	19.3	16.0	20.5
AG 48X9	19.6	18.0	.	14.3	18.0	14.3	18.2
AG 49X6	18.7	15.0	.	14.0	15.7		15.2
DA1221-01-597	16.0	13.1	.	12.3	13.3	13.0	15.0
DA13076-042F	15.4	12.2	.	10.7	12.0	10.0	13.1
DS1260-260	17.2	12.1	.	11.7	12.3	11.0	13.4
S16-14161C	21.0	17.4	.	16.0	18.3	13.7	17.7
S16-3747RY	17.4	15.3	.	14.7	14.0	11.7	16.8
S16-5503R	17.9	13.1	.	13.0	14.7	12.5	16.4
S16-7922C	19.4	15.3	.	13.7	14.0	12.7	15.9
S16-8898C	19.1	15.9	.	14.3	15.7	13.3	17.5
S16-9892C	17.3	13.9	.	14.7	14.3	11.7	16.5
TN17-4416	17.0	13.8	.	11.3	13.7	12.0	14.0
TN18-4110	16.0	13.0	.	10.3	12.3	11.0	13.2
V15-0057DI	19.7	13.5	.	10.7	12.0	11.3	13.4
V15-1407DI	19.1	14.4	.	12.7	13.3	13.3	15.7
V15-2259ST	17.1	12.4	.	11.0	13.0	12.0	13.8
V16-0293	21.2	16.5	.	16.0	17.3	15.0	20.1
Mean	18.1	14.5	.	13.0	14.5	12.5	15.8
LSD(0.05)	3.3	1.0	.	1.8	1.2	1.0	.
CV(%)	10.9	4.2	.	8.5	5.2	4.7	.

TABLE 23 - SEED SIZE (GRAMS PER 100 SEED) (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	12.4	14.1	14.0	.	11.8	11.6	13.0
AG 46X6	18.7	18.2	19.6	.	17.8	17.2	17.9
AG 48X9	16.4	15.9	17.4	.	15.5	15.4	16.6
AG 49X6	14.7	17.4	15.0	.	13.8	13.7	15.2
DA1221-01-597	11.6	13.8	12.3	.	12.7	12.6	13.2
DA13076-042F	12.5	13.5	12.1	.	12.3	11.2	12.2
DS1260-260	12.1	12.5	10.8	.	11.9	11.5	12.4
S16-14161C	17.9	18.2	16.6	.	15.7	16.1	17.2
S16-3747RY	14.9	16.7	14.7	.	15.1	14.1	15.0
S16-5503R	15.8	16.4	14.6	.	13.5	13.9	14.7
S16-7922C	14.6	15.4	15.5	.	13.9	14.2	15.0
S16-8898C	15.2	16.6	15.3	.	14.8	15.2	15.7
S16-9892C	13.7	14.6	13.9	.	13.3	14.1	14.3
TN17-4416	12.0	14.3	14.0	.	12.1	12.8	13.4
TN18-4110	11.2	13.1	13.6	.	11.4	11.4	12.4
V15-0057DI	11.8	13.2	13.1	.	11.4	12.0	13.0
V15-1407DI	13.3	15.4	13.7	.	14.2	13.3	14.4
V15-2259ST	13.5	13.1	11.1	.	12.3	11.6	12.8
V16-0293	17.2	18.5	16.7	.	16.2	15.7	17.3
Mean	14.2	15.3	14.4	.	13.7	13.6	14.5
LSD(0.05)	0.9	0.8	1.1	.	.	0.8	0.7
CV(%)	3.6	3.1	4.5	.	.	3.6	7.7

TABLE 24 - OIL (%)†
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	18.4	18.5	19.7	17.1	17.8	19.2	18.6
AG 46X6	19.5	20.0	20.3	19.6	18.7	19.8	18.8
AG 48X9	20.0	21.1	20.8	19.3	18.5	19.6	19.4
AG 49X6	19.9	20.1	20.6	18.8	18.9	21.0	19.3
DA1221-01-597	19.2	19.1	19.3	17.0	17.8	19.1	18.4
DA13076-042F	19.2	18.8	19.1	18.0	18.1	19.5	18.5
DS1260-260	18.0	18.6	19.2	17.1	16.8	18.3	18.3
S16-14161C	19.3	19.8	20.4	18.3	18.4	19.1	18.1
S16-3747RY	19.2	19.5	19.9	17.6	17.6	19.4	18.1
S16-5503R	19.1	18.7	19.3	17.3	17.6	19.2	19.2
S16-7922C	19.2	19.4	19.5	17.6	18.5	19.4	19.0
S16-8898C	20.0	20.3	21.0	18.3	19.0	19.6	20.2
S16-9892C	18.9	19.7	20.2	18.3	18.9	20.0	18.4
TN17-4416	18.9	19.1	19.5	17.5	17.7	19.7	18.2
TN18-4110	19.3	19.7	19.5	17.5	18.7	19.6	18.9
V15-0057DI	18.6	18.6	19.0	17.3	17.6	18.7	18.3
V15-1407DI	19.0	18.8	19.1	17.5	16.6	18.7	18.2
V15-2259ST	17.9	17.7	17.0	16.7	16.5	18.0	17.4
V16-0293	19.1	19.9	20.8	19.1	19.0	20.2	18.0
Mean	19.1	19.3	19.7	17.9	18.0	19.4	18.6
LSD(0.05)	0.7	.	0.5	0.5	.	0.5	.
CV(%)	2.1	.	1.5	1.6	.	1.5	.

†Oil percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial were reported for some locations in 2021.

TABLE 24 - OIL (%)† (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	18.4	.	18.7	19.7	18.6	18.3	18.6
AG 46X6	18.9	.	19.4	19.9	18.7	19.7	19.5
AG 48X9	19.0	.	19.8	21.0	19.1	19.0	19.7
AG 49X6	19.4	.	20.4	20.9	19.5	19.0	19.8
DA1221-01-597	18.5	.	18.5	19.7	18.4	18.5	18.6
DA13076-042F	18.8	.	19.3	20.1	18.7	19.3	19.0
DS1260-260	17.9	.	18.5	18.9	18.4	18.0	18.2
S16-14161C	17.8	.	19.1	20.4	18.8	18.6	19.0
S16-3747RY	18.8	.	19.4	20.0	19.2	18.5	18.9
S16-5503R	18.1	.	18.9	19.8	18.6	18.3	18.6
S16-7922C	18.7	.	19.7	20.3	19.1	19.4	19.1
S16-8898C	19.5	.	20.6	21.3	19.8	19.6	19.9
S16-9892C	18.7	.	19.1	19.6	19.6	19.4	19.2
TN17-4416	18.6	.	19.0	20.1	19.0	18.5	18.8
TN18-4110	18.9	.	19.3	19.4	19.4	18.9	19.1
V15-0057DI	18.2	.	18.6	19.2	18.8	18.4	18.4
V15-1407DI	18.3	.	19.0	19.7	18.6	18.1	18.5
V15-2259ST	17.1	.	17.9	17.2	17.2	17.0	17.3
V16-0293	19.0	.	20.0	20.1	19.4	18.9	19.5
Mean	18.6	.	19.2	19.8	18.9	18.7	18.9
LSD(0.05)	0.6	.	.	.	.	0.4	0.3
CV(%)	1.9	.	.	.	.	1.3	2.3

TABLE 25 - PROTEIN (%)†
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	36.2	36.4	34.2	34.0	34.0	33.1	35.2
AG 46X6	38.1	35.3	33.6	31.7	34.7	32.8	36.4
AG 48X9	37.7	34.1	33.3	32.5	34.7	33.7	35.2
AG 49X6	35.9	33.3	33.1	32.5	32.8	31.0	34.7
DA1221-01-597	35.9	36.7	35.8	34.7	35.5	34.2	37.7
DA13076-042F	36.2	35.3	34.4	32.1	32.8	31.9	35.7
DS1260-260	37.5	35.7	33.9	34.5	35.7	34.1	36.3
S16-14161C	37.1	37.6	33.8	33.4	35.4	33.5	38.1
S16-3747RY	35.8	34.7	33.4	32.5	33.6	32.0	36.3
S16-5503R	35.9	35.8	35.3	33.4	34.6	33.2	35.8
S16-7922C	35.8	36.1	35.2	33.2	33.6	32.8	36.3
S16-8898C	35.5	34.9	33.8	32.8	32.9	33.3	35.8
S16-9892C	36.6	34.8	33.0	32.5	32.9	32.0	36.4
TN17-4416	37.0	36.0	34.9	33.3	34.5	32.3	35.8
TN18-4110	36.7	35.5	35.7	34.5	34.0	33.6	36.9
V15-0057DI	36.5	36.5	35.3	33.7	34.8	34.1	36.4
V15-1407DI	37.0	35.8	34.9	34.0	35.4	34.3	37.9
V15-2259ST	37.5	37.4	37.2	34.3	35.3	34.8	38.7
V16-0293	37.6	34.4	33.5	32.5	32.7	31.9	37.0
Mean	36.7	35.6	34.4	33.3	34.2	33.1	36.5
LSD(0.05)	1.2	.	0.7	0.8	.	0.9	
CV(%)	1.9	.	1.2	1.4	.	1.5	

†Protein percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial in some locations were reported in 2020.

TABLE 25 - PROTEIN (%)† (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	34.6	.	35.8	36.2	35.5	34.2	34.9
AG 46X6	35.5	.	36.1	35.8	35.5	34.2	34.9
AG 48X9	34.9	.	35.5	34.3	34.6	34.5	34.7
AG 49X6	33.7	.	33.8	34.8	34.6	32.9	33.6
DA1221-01-597	35.3	.	37.1	36.7	36.4	35.5	35.9
DA13076-042F	34.1	.	33.3	36.1	34.6	32.2	34.0
DS1260-260	34.2	.	35.4	35.2	35.1	34.6	35.2
S16-14161C	36.1	.	35.9	34.6	35.4	34.5	35.4
S16-3747RY	34.0	.	33.8	34.3	33.9	33.2	33.9
S16-5503R	35.7	.	35.5	35.3	35.5	35.0	35.1
S16-7922C	35.8	.	34.8	35.2	35.4	34.6	34.9
S16-8898C	34.2	.	33.7	34.0	34.8	33.3	34.1
S16-9892C	33.8	.	35.1	35.0	33.5	33.2	34.0
TN17-4416	34.6	.	35.7	34.8	35.1	34.4	34.8
TN18-4110	35.3	.	36.1	35.5	35.0	34.4	35.3
V15-0057DI	35.3	.	35.8	34.7	34.8	34.7	35.2
V15-1407DI	35.6	.	35.5	35.5	36.1	34.7	35.5
V15-2259ST	37.6	.	36.0	38.6	37.2	35.5	36.6
V16-0293	34.3	.	33.8	35.2	33.8	33.2	34.2
Mean	35.0	.	35.2	35.4	35.1	34.1	34.9
LSD(0.05)	1.2	.	.	.	.	0.9	0.5
CV(%)	2.1	.	.	.	.	1.6	2.2

TABLE 26 - MEAL (%)†
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	48.4	48.6	47.5	44.6	44.9	44.5	46.9
AG 46X6	50.4	48.0	47.3	42.9	46.4	44.4	48.7
AG 48X9	50.6	47.0	46.4	43.7	46.2	45.5	47.5
AG 49X6	50.8	45.3	46.0	43.5	43.9	42.7	46.8
DA1221-01-597	48.2	49.3	48.2	45.4	46.9	45.9	50.2
DA13076-042F	48.4	47.2	46.3	42.5	43.5	43.1	47.5
DS1260-260	49.9	47.7	45.8	45.2	46.7	45.3	48.3
S16-14161C	49.9	50.9	45.9	44.4	47.2	45.0	50.6
S16-3747RY	48.6	46.8	45.9	42.8	44.3	43.1	48.2
S16-5503R	48.3	47.9	47.8	44.0	45.6	44.6	48.2
S16-7922C	48.5	48.7	47.9	43.8	44.8	44.1	48.7
S16-8898C	49.1	47.5	45.9	43.7	44.2	45.1	48.7
S16-9892C	49.0	47.1	45.5	43.3	44.1	43.4	48.5
TN17-4416	49.8	48.4	46.8	43.8	45.6	43.7	47.6
TN18-4110	49.0	48.1	48.2	45.5	45.5	45.5	49.5
V15-0057DI	47.8	48.7	47.4	44.2	45.9	45.6	48.4
V15-1407DI	50.3	47.9	47.4	44.8	46.1	45.8	50.3
V15-2259ST	51.1	49.4	48.6	44.8	45.9	46.1	50.9
V16-0293	49.5	46.7	45.2	43.6	43.8	43.5	49.1
Mean	49.3	48.0	46.8	44.0	45.3	44.6	48.7
LSD(0.05)	.	.	.	0.9	.	1.1	
CV(%)	.	.	.	1.3	.	1.4	

†Meal percentage reported on a 13% moisture basis beginning in 2018.
Protein and oil data from all replicates of a trial were reported for some locations in 2020.

TABLE 26 - MEAL (%)† (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	46.1	.	47.9	48.9	47.5	45.6	46.6
AG 46X6	47.6	.	48.6	48.6	47.5	46.3	47.2
AG 48X9	46.9	.	48.1	47.2	46.5	46.4	46.9
AG 49X6	45.5	.	46.2	47.8	46.8	44.1	45.6
DA1221-01-597	47.0	.	49.5	49.7	48.5	47.3	48.0
DA13076-042F	45.6	.	44.9	49.1	46.3	43.3	45.6
DS1260-260	45.3	.	47.2	47.2	46.7	45.9	46.7
S16-14161C	47.7	.	48.2	47.3	47.4	46.1	47.5
S16-3747RY	45.5	.	45.6	46.6	45.6	44.2	45.5
S16-5503R	47.4	.	47.6	47.9	47.4	46.5	46.9
S16-7922C	47.8	.	47.1	48.0	47.6	46.6	46.9
S16-8898C	46.2	.	46.2	46.9	47.2	45.0	46.3
S16-9892C	45.1	.	47.2	47.3	45.3	44.8	45.8
TN17-4416	46.2	.	47.9	47.3	47.1	45.9	46.7
TN18-4110	47.3	.	48.6	47.9	47.2	46.0	47.4
V15-0057DI	46.9	.	47.9	46.6	46.5	46.2	47.0
V15-1407DI	47.4	.	47.7	48.1	48.3	46.0	47.4
V15-2259ST	49.3	.	47.7	50.6	48.9	46.4	48.2
V16-0293	46.0	.	46.0	47.9	45.5	44.5	46.1
Mean	46.7	.	47.4	47.9	47.0	45.6	46.8
LSD(0.05)	1.4	.	.	.	.	1.1	0.6
CV(%)	1.8	.	.	.	.	1.5	1.9

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SUMMARY OF SEED FATTY ACIDS (%)
UNIFORM TEST IV-S-LATE 2020 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
Ellis	10.5	3.6	24.3	54.1	7.4
AG 46X6	11.6	3.7	20.2	57.3	7.2
AG 48X9	11.4	3.7	22.4	55.4	7.0
DA1221-01-597	7.6	3.1	77.0	7.3	5.0
TN18-4110	7.4	2.6	80.7	6.8	2.5
Mean	9.7	3.3	44.9	36.2	5.8
LSD(0.05)	0.4	0.2	4.8	4.1	0.6
CV(%)	5.0	7.2	12.4	12.9	11.1

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

SEED PALMITIC ACID (%)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(A)	Portageville, MO(B)
Ellis	10.9	10.3	10.8	10.5	10.8	9.9	10.8
AG 46X6	10.5	11.3	11.9	11.3	11.8	11.3	11.7
AG 48X9	11.2	10.8	11.5	11.3	11.3	11.1	12.1
DA1221-01-597	7.4	8.8	7.1	6.9	7.4	7.5	7.5
TN18-4110	6.9	6.7	7.0	7.0	7.5	7.2	7.7
Mean	9.4	9.6	9.7	9.4	9.8	9.4	10.0
LSD(0.05)							
CV(%)							

SEED STEARIC ACID (%)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(A)	Portageville, MO(B)
Ellis	4.2	3.4	3.5	4.1	3.5	3.6	3.7
AG 46X6	4.4	3.9	3.6	4.4	3.3	3.5	3.4
AG 48X9	4.0	3.6	3.4	4.3	3.7	3.7	3.6
DA1221-01-597	3.2	3.0	2.7	4.1	3.2	3.0	3.1
TN18-4110	3.0	2.4	2.4	2.4	2.5	2.6	2.6
Mean	3.8	3.3	3.1	3.9	3.2	3.3	3.3
LSD(0.05)							
CV(%)							

SEED PALMITIC ACID (%) (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	*Springfield, TN*	*Stoneville, MS*	*Stuttgart, AR*	*Warsaw, VA*	*Test Mean*
Ellis	10.1	10.2	11.2	10.0	10.5
AG 46X6	11.2	12.6	11.5	12.3	11.6
AG 48X9	11.4	11.4	11.8	11.5	11.4
DA1221-01-597	7.7	7.8	7.4	7.8	7.6
TN18-4110	8.5	.	7.3	8.3	7.4
Mean	9.8	10.5	9.8	10.0	9.7
LSD(0.05)					0.4
CV(%)					5.0

SEED STEARIC ACID (%) (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	*Springfield, TN*	*Stoneville, MS*	*Stuttgart, AR*	*Warsaw, VA*	*Test Mean*
Ellis	4.3	3.3	3.3	3	4
AG 46X6	3.8	3.7	3.1	4	4
AG 48X9	4.0	3.6	3.3	4	4
DA1221-01-597	3.4	2.9	2.7	3	3
TN18-4110	2.8	.	2.6	3	3
Mean	3.7	3.4	3.0	3	3
LSD(0.05)					0
CV(%)					7

SEED OLEIC ACID (%)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(A)	Portageville, MO(B)
Ellis	21.5	19.0	18.4	19.3	19.0	33.2	18.7
AG 46X6	25.6	21.2	18.3	22.0	22.1	17.5	18.3
AG 48X9	27.0	27.0	21.1	20.7	22.5	20.1	19.7
DA1221-01-597	75.0	63.5	80.6	76.5	79.8	77.2	76.8
TN18-4110	84.6	85.7	85.9	82.7	84.1	83.4	82.9
Mean	46.7	43.3	44.9	44.2	45.5	46.3	43.3
LSD(0.05)							
CV(%)							

SEED LINOLEIC ACID (%)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(A)	Portageville, MO(B)
Ellis	56.4	59.9	59.7	58.0	59.0	45.3	58.3
AG 46X6	53.3	57.1	59.1	55.3	56.2	59.1	58.2
AG 48X9	52.2	52.4	57.1	56.1	55.1	57.2	56.8
DA1221-01-597	8.2	19.8	5.1	7.3	5.0	6.9	6.7
TN18-4110	3.5	3.2	2.8	5.2	3.9	4.5	4.4
Mean	34.7	38.5	36.8	36.4	35.8	34.6	36.9
LSD(0.05)							
CV(%)							

SEED LINOLENIC ACID (%)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Belle Mina, AL	Jackson, TN	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(A)	Portageville, MO(B)
Ellis	7.0	7.4	7.6	8.0	7.7	8.1	8.5
AG 46X6	6.4	6.5	7.0	7.0	6.6	8.5	8.5
AG 48X9	5.6	6.1	6.9	7.6	7.4	7.9	7.8
DA1221-01-597	6.2	4.9	4.5	5.2	4.6	5.5	5.9
TN18-4110	2.0	1.9	1.9	2.8	2.1	2.3	2.5
Mean	5.4	5.4	5.6	6.1	5.7	6.5	6.6
LSD(0.05)							
CV(%)							

SEED OLEIC ACID (%) (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	25.4	38.8	18.0	36.3	24.3
AG 46X6	22.5	17.3	19.4	18.2	20.2
AG 48X9	23.8	22.1	20.4	22.5	22.4
DA1221-01-597	77.1	81.8	80.7	77.9	77.0
TN18-4110	66.5	.	84.8	66.3	80.7
Mean	43.1	40.0	44.7	44.2	44.9
LSD(0.05)					4.8
CV(%)					12.4

SEED LINOLEIC ACID (%) (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	53.1	42.8	59.2	43.7	54.1
AG 46X6	55.7	59.8	58.7	57.5	57.3
AG 48X9	54.2	56.9	57.4	54.2	55.4
DA1221-01-597	6.8	4.1	4.4	6.4	7.3
TN18-4110	18.4		3.3	18.4	6.8
Mean	37.6	40.9	36.6	36.0	36.2
LSD(0.05)					4.1
CV(%)					12.9

SEED LINOLENIC ACID (%) (continued)
UNIFORM GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	7.1	4.9	8.3	7.0	7.4
AG 46X6	6.8	6.5	7.2	8.5	7.2
AG 48X9	6.7	6.0	7.1	8.1	7.0
DA1221-01-597	5.1	3.5	4.7	5.2	5.0
TN18-4110	3.8		2.0	4.3	2.5
Mean	5.9	5.2	5.9	6.6	5.8
LSD(0.05)					0.6
CV(%)					11.1

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TABLE 27 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP IV-S-EARLY 2020

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG43X7	Commercial check	Commercial		RRX	
2	AG45X8	Commercial check	Commercial		RRX	
3	AG38X8	Commercial check	Commercial		RRX	
4	LD06-7620	Commercial check	Commercial		Conv	
5	DA13086-048F	Osage x S09-10871	Gillen		Conv	
6	DS1062-11	R99-1613F x JTN 5203	Rusty Smith	F5	Conv	
7	DS174	[DT97-4290(2) x PI 587982A] x LG01-5087-5	Rusty Smith	F8	Conv	low seed damage
8	DS227	SS93-6181 x DT97-4290	Rusty Smith	F6	Conv	MR charcoal rot
9	S16-12137C	S08-17361 x NCC09-2007	Chen		Conv	SC, Excluder
10	S17-13405C	Ellis x S11-20124	Chen		Conv	RKN, Excluder
11	S17-1695C	S11-16653 x S13-3851	Chen		Conv	SC, Excluder
12	S17-17612C	R09-430 x S11-20124	Chen		Conv	RKN, Excluder
13	S17-1946C	S11-16653 x S13-8585	Chen		Conv	SC, Excluder
14	S17-20605C	S12-16675 x S13-10592	Chen		Conv	SC, HO
15	SA17-15682	Ellis x LG09-7163	Scaboo	F5	Conv	
16	SA17-19304	LS09-1803 x LD09-10911	Scaboo	F5	Conv	
17	SA17-21156	LG11-6208 x HM11-W193	Scaboo	F5	Conv	
18	SA17-29905	134137 x LD11-11299	Scaboo	F5	Conv	
19	SA17-5569	HM11-W193 x A12-961044	Scaboo	F5	Conv	HOLL
20	SA17-8882	SA13-2699 x A12-961044	Scaboo	F5	Conv	HOLL
21	TN17-4051	TN12-4075 x HR09-008	Pantalone		Conv	
22	TN18-4007	S09-9943 x 13-531-261 BC1F3	Pantalone		Conv	HOLL
23	TN19-4003	LG11-6760 x TN15-4038	Pantalone		Conv	
24	TN19-4021	HM11-W193 x 13-530-214 BC1F3	Pantalone		Conv	HOLL

† 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 2020

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
AG43X7	73.8	1	3	0	2.7	40	4	.	5	R	1
AG45X8	73.0	2	3	2	2.2	35	3	.	4	R	1
AG38X8	64.4	5	7	-4	1.8	30	4	.	4	R	1
LD06-7620	46.8	23	20	-4	1.5	25	4	.	5		.
DA13086-048F	56.7	12	11	1	1.4	29	4	.	5	R	1
DS1062-11	58.1	11	14	-2	2.0	36	4	.	2	R	1
DS174	48.9	22	19	-3	2.9	32	5	.	5	R	1
DS227	49.5	20	16	-4	3.0	31	4	.	4	R	1
S16-12137C	62.1	7	10	3	2.8	40	4	.	5	R	1
S17-13405C	64.5	4	6	6	2.4	31	4	.	5	MR	2
S17-1695C	58.4	10	10	0	2.0	32	4	.	5	R	1
S17-17612C	59.8	8	13	3	3.4	29	3	.	5	R	1
S17-1946C	63.1	6	8	5	3.7	40	3	.	4	R	1
S17-20605C	66.9	3	5	3	3.3	34	4	.	5	R	1
SA17-15682	53.5	15	16	-3	2.6	28	4	.	5	R	1
SA17-19304	54.9	14	15	-6	3.4	29	3	.	5	R	1
SA17-21156	59.4	9	10	-5	2.4	30	3	.	5	R	1
SA17-29905	52.2	16	18	-5	1.9	29	4	.	5	R	1
SA17-5569	50.0	19	16	-5	2.7	29	4	.	5	R	1
SA17-8882	55.7	13	14	-4	2.2	29	3	.	5	R	1
TN17-4051	51.5	18	15	-2	1.5	22	4	.	4		.
TN18-4007	49.3	21	17	-1	1.8	30	4	.	4	R	1
TN19-4003	52.1	17	14	0	1.4	31	4	.	5	R	1
TN19-4021	39.4	24	23	-4	2.3	24	2	.	4	R	1
Mean	56.8	.	.	-1	2.4	31	.	.	.		.
LSD(0.05)	11.9	.	.	4	0.9	4	.	.	.		.
CV(%)	17.4	.	.	-291	34	11	.	.	.		.

† Data not included in the test mean: Knoxville,TN; Orange,VA and Stuttgart,AR

‡The race 2 and 5 SCN populations used in these tests were typed as HG (*Heterodera glycines*) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 29 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST IV-S-EARLY 2020

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
AG43X7	2.0	15.0	34.9	18.7	46.6			
AG45X8	1.6	15.2	35.3	18.5	47			
AG38X8	1.6	16.2	35.4	19.6	47.8			
LD06-7620	2.4	14.4	36.1	19.2	48.6			
DA13086-048F	1.5	14.6	37.7	17.9	49.9	S	T	T
DS1062-11	1.4	13.8	34.9	20.2	47.5	P	Tw	Tn
DS174	1.6	13.0	35.3	18.2	46.8	P	G	Br
DS227	1.6	15.7	36.2	18.5	48.2	P	Tw	Tn
S16-12137C	1.4	18.1	33.6	19.6	45.4	P	T	T
S17-13405C	1.4	13.9	34.3	19.4	46.3	W	G	T
S17-1695C	1.5	16.8	34.0	19.5	45.9	W	T	Bl
S17-17612C	1.2	12.4	34.8	19.4	46.9	W	T	Bl
S17-1946C	1.4	14.7	35.6	18.9	47.8	W	T	T
S17-20605C	1.6	14.7	35.3	19.8	47.9	W	G	T
SA17-15682	1.9	15.9	35.7	20.4	48.7	P	T	
SA17-19304	2.2	14.5	33.0	20.7	45.3	P	T	
SA17-21156	2.0	15.2	35.2	19.8	47.7	W	T	
SA17-29905	2.0	17.4	36.1	19.4	48.6	P	T	
SA17-5569	2.1	16.2	36.6	20.1	49.8	P	T	
SA17-8882	1.6	15.4	36.7	19.7	49.7	P	T	
TN17-4051	1.1	14.3	37.6	18.3	50.1			
TN18-4007	1.7	17.1	38.5	18.6	51.4			
TN19-4003	1.7	14.2	35.6	18.2	47.3			
TN19-4021	1.5	13.7	35.6	20.8	48.8			
Mean	1.7	15.1	35.6	19.3	47.9			
LSD(0.05)	0.4	0.9	0.9	0.5	1.1			
CV(%)	25.8	5.6	2.1	2.1	2			

§ 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 2020 †

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Orange, VA	Pine Tree, AR	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG43X7	66.1	90.6	75.8	56.9	81.6	52.4	73.8
AG45X8	73.4	83.3	90.1	61.3	73.9	54.8	73.0
AG38X8	55.3	72.6	66.7	58.4	71.4	52.6	64.4
LD06-7620	45.5	45.5	47.4	54.7	41.6	40.0	46.8
DA13086-048F	53.2	61.8	70.7	62.4	49.3	41.5	56.7
DS1062-11	47.0	79.7	51.4	53.7	51.7	51.8	58.1
DS174	45.8	55.5	54.3	41.6	52.8	42.0	48.9
DS227	52.6	53.4	56.1	36.1	56.0	53.6	49.5
S16-12137C	51.8	79.9	66.1	49.8	66.7	54.3	62.1
S17-13405C	57.5	82.4	71.3	61.3	56.8	53.8	64.5
S17-1695C	53.2	65.4	63.3	59.7	55.4	49.9	58.4
S17-17612C	49.8	87.8	45.9	56.4	45.2	52.1	59.8
S17-1946C	60.9	80.7	65.5	52.4	58.3	51.7	63.1
S17-20605C	58.4	93.6	62.5	56.8	58.8	56.1	66.9
SA17-15682	51.0	73.8	50.0	39.3	50.0	48.1	53.5
SA17-19304	51.0	71.5	69.0	40.9	56.0	39.4	54.9
SA17-21156	53.7	66.7	57.0	54.8	62.2	56.3	59.4
SA17-29905	46.9	68.8	58.6	49.0	43.9	48.4	52.2
SA17-5569	55.7	52.9	53.7	45.4	46.0	52.9	50.0
SA17-8882	50.1	64.4	64.5	50.7	57.6	48.0	55.7
TN17-4051	50.4	51.4	71.7	57.7	46.4	42.6	51.5
TN18-4007	48.7	63.8	65.9	55.8	28.9	38.5	49.3
TN19-4003	51.2	48.8	73.4	62.4	45.8	42.1	52.1
TN19-4021	40.1	40.9	43.0	49.3	27.5	29.4	39.4
Mean	52.9	68.1	62.2	52.8	53.5	48.0	56.8
LSD(0.05)	14.7	21.8	21.0	8.3	12.3	16.1	11.9
LSD(0.10)	12.2	18.0	17.4	6.9	10.2	13.4	9.9
CV(%)	13.5	15.4	16.3	7.6	11.1	16.3	17.4

† Data not included in the test mean: Knoxville,TN; Orange,VA and Stuttgart,AR

TABLE 31 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Orange, VA	Pine Tree, AR	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG43X7	9/30	9/24	.	10/2	10/19	.	10/4
AG45X8	2	5	.	4	0	.	2
AG38X8	-9	1	.	-1	-8	.	-4
LD06-7620	-14	4	.	-1	-4	.	-4
DA13086-048F	2	1	.	4	-3	.	1
DS1062-11	-3	1	.	-1	-3	.	-2
DS174	-9	3	.	-1	-5	.	-3
DS227	-3	0	.	-1	-12	.	-4
S16-12137C	2	5	.	3	1	.	3
S17-13405C	4	10	.	6	3	.	6
S17-1695C	-1	2	.	1	-3	.	0
S17-17612C	3	8	.	3	-2	.	3
S17-1946C	4	8	.	5	4	.	5
S17-20605C	-1	8	.	1	5	.	3
SA17-15682	-11	1	.	-1	-1	.	-3
SA17-19304	-16	0	.	-1	-5	.	-6
SA17-21156	-16	1	.	-1	-3	.	-5
SA17-29905	-14	0	.	-1	-5	.	-5
SA17-5569	-16	2	.	-1	-7	.	-5
SA17-8882	-11	1	.	-1	-5	.	-4
TN17-4051	-6	2	.	-1	-4	.	-2
TN18-4007	-1	1	.	-1	-5	.	-1
TN19-4003	-1	3	.	-1	0	.	0
TN19-4021	-9	0	.	0	-7	.	-4
Mean	-5	3	.	0	-3	.	-1
LSD(0.05)	5	4	.	2	4	.	4
CV(%)	47	69	.	207	69	.	291

TABLE 32 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Orange, VA	Pine Tree, AR	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG43X7	46	37	.	41	43	33	40
AG45X8	43	27	.	40	39	28	35
AG38X8	36	24	.	33	30	27	30
LD06-7620	30	19	.	32	20	26	25
DA13086-048F	36	24	.	33	29	23	29
DS1062-11	41	33	.	43	34	32	36
DS174	38	26	.	37	30	31	32
DS227	37	25	.	36	31	29	31
S16-12137C	53	37	.	43	34	32	40
S17-13405C	39	25	.	38	24	27	31
S17-1695C	36	26	.	38	27	32	32
S17-17612C	32	25	.	38	23	27	29
S17-1946C	50	41	.	46	31	34	40
S17-20605C	43	33	.	37	29	29	34
SA17-15682	34	26	.	34	22	27	28
SA17-19304	35	24	.	39	26	24	29
SA17-21156	38	26	.	35	25	30	30
SA17-29905	33	29	.	32	25	26	29
SA17-5569	37	24	.	38	23	24	29
SA17-8882	39	23	.	36	26	24	29
TN17-4051	27	17	.	29	21	20	22
TN18-4007	38	26	.	38	23	26	30
TN19-4003	39	21	.	42	26	28	31
TN19-4021	30	19	.	30	22	22	24
Mean	38	26	.	37	27	27	31
LSD(0.05)	6	8	.	4	5	6	4
CV(%)	7	14	.	5	10	11	11

TABLE 33 - PLANT LODGING (1-5)
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Orange, VA	Pine Tree, AR	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG43X7	3.5	2.5	.	2.5	2.5	2.5	2.7
AG45X8	3.0	2.0	.	2.5	2.0	1.5	2.2
AG38X8	2.5	1.8	.	1.0	1.5	2.0	1.8
LD06-7620	2.0	1.5	.	2.0	1.0	1.0	1.5
DA13086-048F	1.5	2.0	.	1.0	1.0	1.5	1.4
DS1062-11	2.0	2.0	.	1.0	2.0	3.0	2.0
DS174	2.5	2.8	.	4.5	1.5	3.0	2.9
DS227	3.0	3.0	.	4.5	1.5	3.0	3.0
S16-12137C	3.5	3.0	.	3.5	2.0	2.0	2.8
S17-13405C	3.0	2.0	.	4.5	1.5	1.0	2.4
S17-1695C	2.0	2.3	.	2.0	1.0	2.5	2.0
S17-17612C	3.0	2.3	.	5.0	3.5	3.0	3.4
S17-1946C	4.0	2.8	.	4.5	4.0	3.0	3.7
S17-20605C	4.0	3.7	.	3.0	3.5	2.0	3.3
SA17-15682	4.0	2.0	.	4.0	1.0	2.0	2.6
SA17-19304	4.5	3.0	.	5.0	1.5	3.0	3.4
SA17-21156	3.0	2.5	.	4.0	1.0	1.5	2.4
SA17-29905	2.5	2.3	.	1.5	1.0	2.0	1.9
SA17-5569	3.5	2.3	.	3.5	1.5	2.5	2.7
SA17-8882	2.5	2.0	.	3.5	1.0	2.0	2.2
TN17-4051	1.0	1.5	.	2.5	1.0	1.5	1.5
TN18-4007	1.5	2.5	.	2.0	1.0	2.0	1.8
TN19-4003	1.5	1.5	.	2.0	1.0	1.0	1.4
TN19-4021	2.0	2.0	.	4.0	1.0	2.5	2.3
Mean	2.7	2.3	.	3.1	1.6	2.1	2.4
LSD(0.05)	1.0	0.9	.	1.5	1.2	1.3	0.9
CV(%)	17.5	18.8	.	24.1	34.6	30.4	34.1

TABLE 34 - SEED QUALITY (1-5)
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Orange, VA	Pine Tree, AR	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG43X7	2.0	1.5	1.5	3	2	2.0	2.0
AG45X8	1.5	1.0	1.0	2	2	2.0	1.6
AG38X8	2.0	1.0	1.0	2	2	2	1.6
LD06-7620	2.5	1.8	1.5	3	3	3.0	2.4
DA13086-048F	2.0	1.0	1.0	2	2	1.0	1.5
DS1062-11	2.0	1.0	1.0	2	2	1.0	1.4
DS174	1.5	1.0	2.0	1	2	2.0	1.6
DS227	1.5	1.0	1.0	2	2	2.0	1.6
S16-12137C	2.0	1.0	1.0	1	2	1.0	1.4
S17-13405C	1.0	1.3	1.0	2	2	1.0	1.4
S17-1695C	2.0	1.0	1.0	1	2	2.0	1.5
S17-17612C	1.0	1.0	1.0	1	2	1.0	1.2
S17-1946C	1.5	1.0	1.0	1	2	2.0	1.4
S17-20605C	1.5	2.0	1.0	1	2	2.0	1.6
SA17-15682	2.0	2.0	1.5	2	2	2.0	1.9
SA17-19304	2.0	2.0	1.5	3	2	3.0	2.2
SA17-21156	2.0	1.3	1.5	3	2	3.0	2.0
SA17-29905	2.0	1.5	1.0	3	2	3.0	2.0
SA17-5569	2.0	1.8	1.5	3	2	3.0	2.1
SA17-8882	1.5	1.3	1.0	2	2	2.0	1.6
TN17-4051	1.0	1.0	1.0	1	2	1.0	1.1
TN18-4007	2.0	1.5	1.0	2	2	2.0	1.7
TN19-4003	2.0	1.3	1.5	2	2	1.0	1.7
TN19-4021	1.0	1.2	1.5	1	2	2.0	1.5
Mean	1.7	1.3	1.2	2	2	1.9	1.7
LSD(0.05)	0.8	0.6	1.0	.	0	.	0.4
CV(%)	22.6	21.9	41.4	.	10	.	25.8

TABLE 35 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Orange, VA	Pine Tree, AR	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG43X7	15.1	14.3	14.5	16	15	15.2	15.0
AG45X8	16.0	14.3	14.0	17	15	15.6	15.2
AG38X8	16.7	15.6	15.5	16	17	16.8	16.2
LD06-7620	14.5	13.7	14.0	14	16	14.5	14.4
DA13086-048F	14.3	14.0	13.0	16	16	14.6	14.6
DS1062-11	14.2	13.4	12.5	14	16	12.7	13.8
DS174	13.1	12.6	12.0	12	15	13.3	13.0
DS227	16.3	15.0	16.0	14	16	16.0	15.7
S16-12137C	18.9	17.2	16.5	17	21	17.7	18.1
S17-13405C	13.8	14.7	12.5	14	15	13.4	13.9
S17-1695C	16.2	17.2	15.5	16	19	16.5	16.8
S17-17612C	12.0	12.8	10.0	14	14	12.4	12.4
S17-1946C	14.6	14.3	13.5	16	16	14.3	14.7
S17-20605C	14.6	14.3	12.5	15	17	14.9	14.7
SA17-15682	15.3	16.6	15.0	15	18	15.6	15.9
SA17-19304	13.6	14.6	15.0	13	16	14.2	14.5
SA17-21156	14.3	14.7	15.0	15	17	15.0	15.2
SA17-29905	16.9	16.5	17.5	16	19	18.3	17.4
SA17-5569	16.7	15.8	15.0	15	17	17.0	16.2
SA17-8882	15.2	15.2	15.5	15	17	14.9	15.4
TN17-4051	14.5	13.2	14.0	14	16	13.9	14.3
TN18-4007	18.4	16.2	14.5	18	18	17.9	17.1
TN19-4003	14.3	13.5	13.5	14	16	13.7	14.2
TN19-4021	14.2	12.7	12.0	14	16	13.9	13.7
Mean	15.2	14.7	14.1	15	17	15.1	15.1
LSD(0.05)	1.1	1.5	1.7		1		0.9
CV(%)	3.3	5.0	5.8		3		5.6

TABLE 36 - OIL (%)†
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Orange, VA	Pine Tree, AR	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG43X7	19.6	20.1	19.0	18.2	17.3	18.0	18.7
AG45X8	20.0	19.7	18.2	18.0	17.1	17.7	18.5
AG38X8	20.5	20.3	19.7	19.9	17.7	19.4	19.6
LD06-7620	19.8	20.6	19.7	18.6	17.2	19.3	19.2
DA13086-048l	18.2	18.8	17.3	18.1	16.6	18.3	17.9
DS1062-11	20.6	21.0	20.0	20.9	18.6	19.9	20.2
DS174	18.7	18.9	18.2	17.9	16.8	18.5	18.2
DS227	19.0	19.8	18.0	18.5	17.3	18.4	18.5
S16-12137C	20.4	20.5	19.4	19.9	18.0	19.4	19.6
S17-13405C	20.3	20.7	18.4	19.0	18.1	19.7	19.4
S17-1695C	20.0	20.5	19.0	19.7	17.9	19.6	19.5
S17-17612C	20.7	20.4	18.2	19.5	18.6	19.3	19.4
S17-1946C	19.6	20.5	17.8	19.2	17.6	18.7	18.9
S17-20605C	.	20.9	19.4	19.9	18.2	19.8	19.8
SA17-15682	21.3	20.9	20.7	20.5	18.7	20.3	20.4
SA17-19304	21.9	21.6	20.1	20.6	19.6	20.5	20.7
SA17-21156	21.3	20.6	20.0	19.3	17.5	20.1	19.8
SA17-29905	20.5	20.0	19.7	18.9	18.4	18.8	19.4
SA17-5569	21.1	20.6	19.8	19.4	18.8	20.8	20.1
SA17-8882	20.4	20.2	19.5	20.1	18.1	19.9	19.7
TN17-4051	19.1	18.5	18.3	18.1	17.3	18.5	18.3
TN18-4007	18.7	19.5	18.8	18.8	17.3	18.6	18.6
TN19-4003	18.8	19.1	18.5	18.1	16.1	18.5	18.2
TN19-4021	21.7	21.7	20.2	20.8	19.3	20.9	20.8
Mean	20.1	20.2	19.1	19.3	17.8	19.3	19.3
LSD(0.05)	.	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	.	2.1

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

TABLE 37 - PROTEIN (%)†
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Orange, VA	Pine Tree, AR	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG43X7	34.0	34.8	32.0	37.0	35.7	35.7	34.9
AG45X8	35.0	33.7	33.5	36.8	36.3	36.4	35.3
AG38X8	34.3	35.9	33.6	34.7	37.4	36.3	35.4
LD06-7620	35.4	36.8	33.4	37.4	37.4	36.2	36.1
DA13086-048l	38.0	37.7	35.3	38.2	40.6	36.6	37.7
DS1062-11	34.7	34.5	32.3	36.0	37.1	34.8	34.9
DS174	34.9	34.8	33.2	36.3	36.9	35.5	35.3
DS227	35.4	36.2	34.6	37.3	36.0	37.6	36.2
S16-12137C	33.8	33.5	31.4	34.2	33.7	34.7	33.6
S17-13405C	33.2	34.4	33.1	35.8	35.5	34.1	34.3
S17-1695C	33.9	34.1	32.0	34.7	35.1	34.1	34.0
S17-17612C	35.1	33.9	33.3	36.2	34.8	35.4	34.8
S17-1946C	35.4	37.1	33.1	36.7	35.7	35.9	35.6
S17-20605C	.	35.2	34.0	35.8	37.1	35.2	35.3
SA17-15682	34.6	36.7	32.9	36.5	37.3	36.1	35.7
SA17-19304	31.5	33.9	32.6	33.3	33.3	33.6	33.0
SA17-21156	33.8	34.4	32.7	37.4	37.8	35.4	35.2
SA17-29905	34.4	35.6	34.1	37.2	37.8	37.3	36.1
SA17-5569	35.5	36.6	35.7	38.3	37.4	36.0	36.6
SA17-8882	35.4	37.3	35.1	37.3	38.3	36.9	36.7
TN17-4051	36.9	38.5	36.1	37.7	39.3	37.3	37.6
TN18-4007	38.6	37.6	38.0	38.8	39.8	38.3	38.5
TN19-4003	35.1	34.7	33.4	36.6	38.0	35.8	35.6
TN19-4021	34.6	35.6	34.6	35.8	37.2	35.5	35.6
Mean	34.9	35.6	33.7	36.5	36.9	35.9	35.6
LSD(0.05)	.	.	.	.	.	.	0.9
CV(%)	.	.	.	.	.	.	2.1

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

TABLE 38 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Orange, VA	Pine Tree, AR	Portageville, MO(B)	Stuttgart, AR	Test Mean
AG43X7	46.0	47.3	42.9	49.2	46.9	47.3	46.6
AG45X8	47.5	45.6	44.5	48.8	47.5	48.1	47.0
AG38X8	46.9	48.9	45.4	47.2	49.5	48.9	47.8
LD06-7620	48.0	50.4	45.2	50.0	49.1	48.7	48.6
DA13086-048l	50.5	50.4	46.4	50.6	52.9	48.7	49.9
DS1062-11	47.5	47.4	43.8	49.4	49.5	47.2	47.5
DS174	46.7	46.6	44.2	48.1	48.2	47.3	46.8
DS227	47.5	49.0	45.8	49.8	47.3	50.0	48.2
S16-12137C	46.1	45.9	42.3	46.5	44.7	46.8	45.4
S17-13405C	45.2	47.2	44.1	48.1	47.1	46.2	46.3
S17-1695C	46.0	46.6	42.9	46.9	46.5	46.1	45.9
S17-17612C	48.0	46.3	44.3	48.8	46.5	47.6	46.9
S17-1946C	47.9	50.7	43.7	49.3	47.1	47.9	47.8
S17-20605C	.	48.4	45.8	48.6	49.3	47.7	47.9
SA17-15682	47.7	50.4	45.0	49.9	49.8	49.2	48.7
SA17-19304	43.8	47.0	44.4	45.6	45.0	45.9	45.3
SA17-21156	46.6	47.1	44.4	50.3	49.8	48.1	47.7
SA17-29905	47.1	48.4	46.2	49.9	50.3	50.0	48.6
SA17-5569	48.9	50.1	48.4	51.7	50.1	49.4	49.8
SA17-8882	48.3	50.7	47.4	50.7	50.9	50.0	49.7
TN17-4051	49.5	51.3	48.1	50.0	51.6	49.8	50.1
TN18-4007	51.6	50.8	50.9	51.9	52.2	51.1	51.4
TN19-4003	47.0	46.6	44.5	48.5	49.3	47.7	47.3
TN19-4021	48.0	49.4	47.2	49.2	50.1	48.8	48.8
Mean	47.5	48.4	45.3	49.1	48.8	48.3	47.9
LSD(0.05)	.	.	.	.	.	.	1.1
CV(%)	.	.	.	.	.	.	2.0

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

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST IV-S-EARLY 2020 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AG43X7	10.7	3.7	23.6	54.4	7.5
AG45X8	10.9	3.5	20.1	57.2	8.3
AG38X8	11.7	3.7	23.7	54.2	6.7
S17-20605C	7.3	2.8	81.3	4.4	4.2
SA17-5569	8.2	3.8	69.4	15.3	3.3
SA17-8882	8.0	3.3	78.8	7.4	2.4
TN18-4007	7.3	3.1	82.0	3.8	3.7
TN19-4021	7.8	3.1	78.5	6.6	4.0
Mean	9.0	3.4	57.2	25.4	5.0
LSD(0.05)	0.7	0.3	11.1	9.4	1.2
CV(%)	6.5	6.3	16.5	31.5	20.7

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

SEED PALMITIC ACID (%)
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Knoxville, TN	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
AG43X7	10.8	10.7	10.5	10.9	10.9	.	10.6	10.7
AG45X8	10.5	10.7	10.9	11.0	11.2	.	10.9	10.9
AG38X8	12.0	11.8	11.3	11.7	12.1	.	11.5	11.7
S17-20605C	7.2	7.6	7.2	7.6	7.2	.	7.2	7.3
SA17-5569	10.9	7.7	7.5	8.2	7.5	.	7.2	8.2
SA17-8882	7.7	8.9	7.7	8.4	8.0	.	7.6	8.0
TN18-4007	7.2	7.0	7.5	7.9	7.3	.	7.1	7.3
TN19-4021	7.1	7.9	7.5	7.6	8.2	.	8.3	7.8
Mean	9.2	9.0	8.8	9.2	9.1	.	8.8	9.0
LSD(0.05)	.	.	.	.	.	.	.	0.7
CV(%)	.	.	.	.	.	.	.	6.5

SEED STEARIC ACID (%)
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Knoxville, TN	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
AG43X7	4.3	3.4	3.8	3.8	3.6	.	3.5	3.7
AG45X8	3.8	3.6	3.5	3.3	3.3	.	3.5	3.5
AG38X8	4.3	3.5	3.6	3.9	3.5	.	3.3	3.7
S17-20605C	2.7	2.7	2.7	3.0	2.7	.	2.7	2.8
SA17-5569	3.6	3.5	4.1	3.8	4.1	.	4.0	3.8
SA17-8882	3.4	3.4	3.3	3.2	3.4	.	3.1	3.3
TN18-4007	3.4	2.9	3.2	3.0	3.0	.	3.0	3.1
TN19-4021	2.9	3.1	3.2	3.1	3.0	.	3.4	3.1
Mean	3.6	3.3	3.4	3.4	3.3	.	3.3	3.4
LSD(0.05)	.	.	.	.	.	.	.	0.3
CV(%)	.	.	.	.	.	.	.	6.3

SEED OLEIC ACID (%)
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Knoxville, TN	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
AG43X7	20.9	23.0	24.9	24.9	19.2	.	28.8	23.6
AG45X8	19.8	20.8	20.8	19.8	19.2	.	20.5	20.1
AG38X8	19.6	22.1	30.4	25.8	20.0	.	24.1	23.7
S17-20605C	76.9	81.8	83.8	80.8	83.8	.	80.9	81.3
SA17-5569	19.7	81.9	80.6	71.7	80.6	.	82.1	69.4
SA17-8882	76.8	69.8	83.2	82.1	77.7	.	83.5	78.8
TN18-4007	82.3	84.4	85.8	72.0	82.6	.	84.8	82.0
TN19-4021	81.3	83.8	84.4	84.3	68.0	.	69.1	78.5
Mean	49.7	58.4	61.7	57.7	56.4	.	59.2	57.2
LSD(0.05)	.	.	.	.	.	.	.	11.1
CV(%)	.	.	.	.	.	.	.	16.5

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Knoxville, TN	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
AG43X7	55.6	55.9	54.3	53.3	57.6	.	50.0	54.4
AG45X8	57.3	57.3	57.1	57.0	57.6	.	57.0	57.2
AG38X8	56.2	56.3	49.1	52.3	56.8	.	54.6	54.2
S17-20605C	7.0	3.9	3.0	4.8	3.0	.	4.4	4.4
SA17-5569	56.4	5.4	5.8	13.4	5.8	.	4.9	15.3
SA17-8882	9.4	15.1	3.5	4.3	8.3	.	3.9	7.4
TN18-4007	2.8	2.5	0.3	13.2	2.6	.	1.6	3.8
TN19-4021	3.6	1.9	1.6	1.7	15.8	.	15.0	6.6
Mean	31.0	24.8	21.8	25.0	25.9	.	23.9	25.4
LSD(0.05)	.	.	.	.	.	.	.	9.4
CV(%)	.	.	.	.	.	.	.	31.5

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP IV-S-EARLY 2020

STRAIN/ VARIETY	Columbia, MO	Jackson, TN	Knoxville, TN	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
AG43X7	8.4	7.0	6.6	7.1	8.7	.	7.0	7.5
AG45X8	8.6	7.6	7.7	8.9	8.7	.	8.1	8.3
AG38X8	7.9	6.3	5.6	6.3	7.5	.	6.5	6.7
S17-20605C	6.2	4.1	3.3	3.9	3.3	.	4.8	4.2
SA17-5569	9.4	1.6	2.0	2.9	2.0	.	1.8	3.3
SA17-8882	2.8	2.8	2.3	2.1	2.6	.	2.0	2.4
TN18-4007	4.3	3.1	3.1	3.9	4.4	.	3.5	3.7
TN19-4021	5.1	3.3	3.3	3.3	5.0	.	4.1	4.0
Mean	6.6	4.5	4.2	4.8	5.3	.	4.7	5.0
LSD(0.05)	.	.	.	.	.	.	.	1.2
CV(%)	.	.	.	.	.	.	.	20.7

TABLE 39 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP IV-S-LATE 2020

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	Ellis	Commercial check	Pantalone		Conv	
2	AG 46X6	Commercial check	Commercial		RRX	
3	AG 48X9	Commercial check	Commercial		RRX	
4	AG 49X6	Commercial check	Commercial		RRX	
5	DA13062-004F	DA09c20-2-22-B4-B5 x DA09c002-30-24-B4-B5	Gillen		Conv	LN
6	DA13062-015F	DA09c20-2-22-B4-B5 x DA09c002-30-24-B4-B5	Gillen		Conv	LN
7	DA13092-015F	DB04-10836 x JTN-5203	Gillen		Conv	
8	DA13092-039F	DB04-10836 x JTN-5203	Gillen		Conv	
9	DA1486-10F	Freedom x S11-17025	Gillen		Conv	
10	DA1488-0228F	JTN-4307 x S11-17025	Gillen		Conv	
11	DS1169-323	(DT98-9102 x PI 587982A) x Osage	Rusty Smith	F6	Conv	heat tolerant
12	K17-4383	TN11-5102 /435.TCS	Schapaugh		Conv	STS
13	R15-2422	LEO 2939-04S809 x UA5612	Mozzoni		Conv	
14	R16-253	S09-10871 x R11-1617	Mozzoni		Conv	
15	R16-259	S09-10871 x R11-1617	Mozzoni		Conv	
16	S16-13165C	S11-16653 x LG09-8545	Chen		Conv	SCN, SC, Excluder
17	S16-9666C	S11-20124 x S08-17361	Chen		Conv	SC
18	S17-13455C	Ellis x S11-20124	Chen		Conv	RKN, SC, Excluder
19	S17-17195C	S11-16653 x S09-13185	Chen		Conv	SC, Excluder
20	S17-19933R	S11-16653 x S13-16712RR1	Chen		RR1	SCN, SC, HO
21	S17-2193C	S11-20124 x S13-11434	Chen		Conv	SC, Excluder
22	TN18-4047	NCC09-200719-1-37 x 2013-50,454	Pantalone		Conv	meal protein
23	TN18-5001	DB06x038-70 x HM11-W193	Pantalone		Conv	diversity
24	TN19-4032	TN14-4402 x 2014-30,233	Pantalone		Conv	HOLN
25	TN19-4750R1	S12-2418 x S12-8223	Pantalone		RR1	meal protein
26	TN19-4782R1	S12-2336 x S12-8223	Pantalone		RR1	meal protein, HOLN
27	V16-0262DI	R99-1613F x R05-4114	Zhang	F4	Conv	
28	V17-0437	R05-3239 x TN09-008	Zhang	F4	Conv	
29	V17-0454	R05-3239 x TN09-008	Zhang	F4	Conv	
30	V17-0462	V10-1687 x R05-3239	Zhang	F4	Conv	
31	V17-2478R	S10-11200 x V11-3163	Zhang	F4	RR1	
32	V17-2918R	V11-2149 x S08-942RR	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 2020

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	65.0	4	10	0	1.1	26	4	.	5	R	1
AG 46X6	68.5	2	6	-6	1.6	35	4	.	5	R	1
AG 48X9	71.3	1	3	-5	1.8	37	3	.	2	R	1
AG 49X6	53.0	32	27	-3	1.7	33	3	.	3	R	1
DA13062-004F	60.9	14	16	-6	1.6	30	4	.	4	R	1
DA13062-015F	55.5	27	25	-5	1.8	31	4	.	4	SS	3
DA13092-015F	61.7	10	14	-2	2.0	29	2	.	2	R	1
DA13092-039F	61.1	13	14	-2	1.3	26	3	.	2	R	1
DA1486-10F	58.0	22	21	0	2.2	26	4	.	3	MR	2
DA1488-0228F	55.4	28	24	-7	1.8	27	1	.	1	R	1
DS1169-323	55.1	30	25	-6	2.1	35	3	.	4	R	1
K17-4383	61.9	8	13	-7	1.3	28	3	.	4	R	1
R15-2422	57.3	24	20	-7	2.3	35	3	.	5	R	1
R16-253	55.2	29	23	-4	1.5	31	2	.	3	R	1
R16-259	56.3	25	24	-6	1.4	34	3	.	4	R	1
S16-13165C	61.1	12	16	-4	1.9	42	1	.	2	R	1
S16-9666C	59.4	18	17	-4	2.1	38	2	.	4	R	1
S17-13455C	66.3	3	6	-4	2.5	32	3	.	5	R	1
S17-17195C	61.8	9	13	-4	2.3	37	1	.	4	R	1
S17-19933R	62.5	7	13	-1	2.8	33	1	.	3	SS	3
S17-2193C	64.9	5	9	-4	1.8	37	3	.	5	R	1
TN18-4047	60.5	15	15	-4	1.1	25	2	.	4	R	1
TN18-5001	61.7	11	12	-4	1.6	30	2	.	5	S	5
TN19-4032	57.7	23	20	0	1.1	30	3	.	4	R	1
TN19-4750R1	56.0	26	23	-2	1.5	32	2	.	3	R	1
TN19-4782R1	53.0	31	27	-4	1.7	33	3	.	4	R	1
V16-0262DI	59.4	20	17	-4	1.5	35	2	.	5	R	1
V17-0437	63.5	6	11	-5	1.6	29	1	.	1	R	1
V17-0454	60.1	17	15	-7	1.2	27	2	.	4	R	1
V17-0462	59.2	21	18	-4	1.4	27	3	.	4	R	1
V17-2478R	60.2	16	14	-6	1.8	36	3	.	4	R	1
V17-2918R	59.4	19	17	-5	2.4	39	2	.	2	R	1
Mean	60.1	.	.	-4	1.7	32	.	.	.		.
LSD(0.05)	5.0	.	.	3	0.6	3	.	.	.		.
CV(%)	10.7	.	.	-66	39	10	.	.	.		.

† Data not included in the test mean: NA

‡The race 2 and 5 SCN populations used in these tests were typed as HG (*Heterodera glycines*) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 41 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST IV-S-LATE 2020

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
Ellis	1.0	12.8	34.9	18.7	46.7			
AG 46X6	2.0	18.4	35.3	19.3	47.5			
AG 48X9	1.8	16.5	34.3	19.7	46.5			
AG 49X6	1.7	14.7	33.7	20.0	45.7			
DA13062-004F	1.6	13.0	35.1	18.8	47.0	W	T	T
DA13062-015F	1.5	11.3	36.4	18.2	48.4	P	T	T
DA13092-015F	1.5	12.2	35.3	18.6	47.2	S	T	T
DA13092-039F	1.6	12.0	35.1	18.4	46.8	P	T	T
DA1486-10F	1.5	16.6	36.1	19.3	48.6	W	G	BR
DA1488-0228F	1.4	15.1	36.2	19.7	49.0	P	T	T
DS1169-323	1.5	11.3	37.7	17.6	49.7	W	G	Tn
K17-4383	1.7	14.4	36.1	19.4	48.7			
R15-2422	1.5	13.9	36.1	19.1	48.5	P	G	Tn
R16-253	2.0	15.7	35.5	18.6	47.4	W	T	Tn
R16-259	1.9	15.4	35.5	19.2	47.8	P	T	Tn
S16-13165C	2.0	16.2	35.4	19.1	47.6	P	G	T
S16-9666C	1.8	16.0	32.9	19.9	44.7	W	T	T
S17-13455C	1.5	12.5	34.6	18.8	46.3	W	G	Bl
S17-17195C	2.1	16.1	34.4	20.0	46.8	W	T	T
S17-19933R	1.5	14.3	36.5	18.5	48.6	W	T	Bl
S17-2193C	1.7	14.7	33.9	19.5	45.8	P	T	Bl
TN18-4047	1.6	14.1	34.3	19.4	46.3			
TN18-5001	1.5	16.0	33.7	20.1	45.9			
TN19-4032	1.3	11.4	34.8	18.4	46.4			
TN19-4750R1	1.4	14.4	35.8	18.7	47.9			
TN19-4782R1	1.5	13.0	35.8	18.8	47.9			
V16-0262DI	1.8	16.0	35.0	19.8	47.4	P	T	
V17-0437	1.6	15.7	34.2	19.7	46.3	P	T	
V17-0454	1.6	15.6	35.2	19.3	47.4	P	T	
V17-0462	1.7	14.7	36.6	19.5	49.4	P	T	
V17-2478R	1.6	14.7	34.4	19.0	46.1	P	G	
V17-2918R	1.6	13.3	34.0	20.2	46.3	P	G	
Mean	1.6	14.4	35.2	19.2	47.3			
LSD(0.05)	0.5	1.0	0.8	0.4	1.0			
CV(%)	26.3	6.6	2.2	1.9	1.9			

§ 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 2020 †

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	61.4	93.3	47.9	74.8	49.2	75.8	52.9	65.0
AG 46X6	66.7	76.1	51.9	71.1	71.3	78.7	63.7	68.5
AG 48X9	67.4	88.6	48.7	76.2	76.2	80.0	62.1	71.3
AG 49X6	46.2	73.7	.	50.9	39.0	78.4	46.9	53.0
DA13062-004F	62.7	88.9	43.2	59.4	49.0	72.2	50.7	60.9
DA13062-015F	47.1	74.5	41.3	56.7	49.0	73.7	46.2	55.5
DA13092-015F	59.9	75.7	42.1	64.1	53.2	82.0	55.1	61.7
DA13092-039F	54.5	78.5	36.2	68.1	52.7	80.9	56.7	61.1
DA1486-10F	56.6	75.3	39.8	53.5	46.1	78.8	55.6	58.0
DA1488-0228F	53.5	70.7	41.5	59.2	45.6	65.7	51.3	55.4
DS1169-323	48.7	69.8	36.6	55.2	50.8	73.6	51.2	55.1
K17-4383	60.9	83.1	38.9	64.1	59.1	74.2	53.2	61.9
R15-2422	43.3	78.7	47.0	57.4	46.1	79.9	48.2	57.3
R16-253	48.4	78.5	37.3	55.0	50.6	74.5	41.7	55.2
R16-259	52.2	78.2	36.1	58.1	50.6	72.6	46.0	56.3
S16-13165C	54.4	76.0	39.9	64.5	64.8	69.8	58.5	61.1
S16-9666C	53.4	82.4	43.3	58.4	54.8	75.7	47.9	59.4
S17-13455C	59.7	79.8	53.4	70.2	56.1	85.0	59.9	66.3
S17-17195C	60.3	76.3	46.7	64.9	54.8	73.9	55.8	61.8
S17-19933R	57.3	86.0	38.7	63.4	47.9	85.4	58.6	62.5
S17-2193C	57.2	85.8	41.4	68.8	56.5	88.2	56.0	64.9
TN18-4047	52.1	76.8	43.3	67.5	47.6	79.6	56.3	60.5
TN18-5001	49.0	77.0	51.2	68.3	48.1	81.5	56.8	61.7
TN19-4032	48.3	77.0	44.7	63.8	50.3	68.7	51.0	57.7
TN19-4750R1	46.8	80.0	36.5	64.3	47.7	67.0	49.8	56.0
TN19-4782R1	43.5	75.7	36.8	57.6	38.5	75.4	43.7	53.0
V16-0262DI	51.2	79.7	42.6	62.3	53.2	75.0	51.9	59.4
V17-0437	63.8	76.8	49.4	71.1	55.5	72.7	55.2	63.5
V17-0454	54.9	80.9	42.1	65.2	46.6	77.2	54.0	60.1
V17-0462	60.4	76.3	40.3	67.8	41.5	77.0	51.2	59.2
V17-2478R	53.5	81.4	47.9	61.2	54.9	65.0	57.6	60.2
V17-2918R	62.0	74.6	44.0	59.2	57.2	64.9	54.0	59.4
Mean	54.9	78.9	42.9	63.2	52.0	75.7	53.1	60.1
LSD(0.05)	12.6	15.1	6.8	10.4	9.1	21.2	5.6	5.0
LSD(0.10)	10.5	12.6	5.7	8.6	7.6	17.6	4.7	4.2
CV(%)	11.3	9.4	7.8	8.0	8.6	13.7	5.2	10.7

† Data not included in the test mean: None excluded

TABLE 43 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	10/11	10/8	10/5	10/14	11/1	10/2	.	10/12
AG 46X6	-4	-10	-6	-3	-11	-4	.	-6
AG 48X9	-1	-3	-6	-2	-13	-6	.	-5
AG 49X6	1	-4		1	-11	-4	.	-3
DA13062-004F	-7	-5	-4	-5	-12	-6	.	-6
DA13062-015F	-7	-5	1	-5	-10	-5	.	-5
DA13092-015F	-4	-5	2	2	-4	-3	.	-2
DA13092-039F	-5	-5	3	2	-6	-3	.	-2
DA1486-10F	2	0	2	1	-4	1	.	0
DA1488-0228F	-9	-10	-4	-4	-11	-7	.	-7
DS1169-323	-9	-9	5	-6	-12	-7	.	-6
K17-4383	-7	-11	-4	-2	-13	-5	.	-7
R15-2422	-11	-9	-4	-3	-9	-5	.	-7
R16-253	-4	-5	-3	-4	-7	-4	.	-4
R16-259	-7	-12	-5	-3	-2	-6	.	-6
S16-13165C	-7	-5	-3	-1	-6	-5	.	-4
S16-9666C	-7	-7	-3	-3	-4	-2	.	-4
S17-13455C	-7	-3	-3	-2	-5	-4	.	-4
S17-17195C	-5	-5	-4	-1	-8	-5	.	-4
S17-19933R	2	-1	2	-1	-6	-1	.	-1
S17-2193C	-1	-3	-7	-2	-6	-4	.	-4
TN18-4047	-7	-2	-1	-1	-7	-6	.	-4
TN18-5001	-5	-3	-6	2	-9	-2	.	-4
TN19-4032	-4	0	1	2	0	0	.	0
TN19-4750R1	-1	-5	-3	-2	-1	-3	.	-2
TN19-4782R1	-5	-6	-4	-3	-1	-5	.	-4
V16-0262DI	-7	-5	1	-5	-5	-5	.	-4
V17-0437	-7	-5	-3	-3	-8	-7	.	-5
V17-0454	-7	-12	-6	-3	-7	-7	.	-7
V17-0462	-5	-7	-1	-3	-8	-2	.	-4
V17-2478R	-5	-13	-4	0	-8	-6	.	-6
V17-2918R	-3	-5	-6	-2	-7	-5	.	-5
Mean	-5	-6	-2	-2	-7	-4	.	-4
LSD(0.05)	4	4	2	2	5	2	.	3
CV(%)	-41	-35	-47	-74	-33	-23	.	-64

TABLE 44 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	27	22	36	31	20	21	23	26
AG 46X6	39	30	42	35	33	36	34	35
AG 48X9	40	30	44	38	36	37	32	37
AG 49X6	35	29		36	27	38	30	33
DA13062-004F	35	26	41	32	21	29	28	30
DA13062-015F	33	24	42	38	22	30	30	31
DA13092-015F	31	25	37	30	24	31	28	29
DA13092-039F	25	23	34	26	23	27	24	26
DA1486-10F	29	22	32	30	22	23	26	26
DA1488-0228F	28	24	35	31	23	21	25	27
DS1169-323	37	30	44	38	30	41	27	35
K17-4383	29	25	39	30	24	21	26	28
R15-2422	37	37	44	36	26	42	30	35
R16-253	35	26	38	33	28	36	26	31
R16-259	39	33	40	33	26	36	30	34
S16-13165C	50	41	47	42	33	47	37	42
S16-9666C	43	36	44	36	30	46	37	38
S17-13455C	35	24	43	36	25	27	31	32
S17-17195C	46	37	42	39	29	36	28	37
S17-19933R	34	29	41	38	27	30	33	33
S17-2193C	40	30	45	40	31	42	34	37
TN18-4047	25	21	33	28	22	23	24	25
TN18-5001	34	25	41	29	24	29	30	30
TN19-4032	33	25	37	34	27	27	25	30
TN19-4750R1	40	31	39	32	25	35	27	32
TN19-4782R1	38	32	41	33	27	42	26	33
V16-0262DI	39	35	41	36	27	37	30	35
V17-0437	33	25	40	30	22	27	28	29
V17-0454	29	25	36	23	23	23	27	27
V17-0462	29	26	38	27	22	27	24	27
V17-2478R	41	35	42	37	29	37	32	36
V17-2918R	44	36	48	40	33	44	34	39
Mean	35	29	40	33	26	33	29	32
LSD(0.05)	7	5	4	6	5		5	3
CV(%)	10	9	5	8	10		9	10

TABLE 45 - PLANT LODGING (1-5)
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.1
AG 46X6	2.5	2.5	1.0	1.0	2.0	1.0	1.0	1.6
AG 48X9	2.5	2.5	1.0	1.0	1.5	2	2.0	1.8
AG 49X6	1.5	2.7	.	1.0	1.5	1.0	3.0	1.7
DA13062-004F	1.5	2.5	1.0	2.0	1.0	1.0	2.5	1.6
DA13062-015F	1.5	2.7	1.0	2.5	1.5	1.0	2.0	1.8
DA13092-015F	2.0	2.2	1.0	4.5	1.5	1.0	1.5	2.0
DA13092-039F	1.0	2.5	1.0	1.5	1.0	1.0	1.0	1.3
DA1486-10F	2.5	2.5	1.0	5.0	1.0	1.0	2.5	2.2
DA1488-0228F	2.5	2.0	1.0	2.5	1.0	1.5	2.0	1.8
DS1169-323	2.5	2.7	1.0	2.5	2.0	2.0	2.0	2.1
K17-4383	1.5	2.2	1.0	1.0	1.0	1.0	1.5	1.3
R15-2422	2.0	4.2	1.0	2.5	1.0	4.0	1.0	2.3
R16-253	2.0	2.7	1.0	1.0	1.5	1.0	1.5	1.5
R16-259	1.5	2.0	1.0	1.0	1.0	2.0	1.5	1.4
S16-13165C	2.0	2.7	1.0	1.5	2.0	2.0	2.0	1.9
S16-9666C	2.5	2.5	1.0	2.0	2.0	3.0	2.0	2.1
S17-13455C	2.0	3.0	3.0	3.0	2.5	1.5	2.5	2.5
S17-17195C	3.0	3.7	1.0	3.0	1.5	3.0	1.0	2.3
S17-19933R	2.5	2.7	3.0	2.5	3.5	3.0	2.0	2.8
S17-2193C	2.0	2.7	1.0	1.5	2.0	2.5	1.0	1.8
TN18-4047	1.0	1.7	1.0	1.0	1.0	1.0	1.0	1.1
TN18-5001	1.5	2.2	1.0	2.0	1.0	1.0	2.5	1.6
TN19-4032	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.1
TN19-4750R1	2.0	2.2	1.0	1.0	1.0	2.0	1.5	1.5
TN19-4782R1	1.5	2.5	1.3	1.5	1.5	2.0	1.5	1.7
V16-0262DI	1.0	3.0	1.0	1.0	1.5	1.5	1.5	1.5
V17-0437	1.0	2.5	1.0	3.0	1.0	1.0	2.0	1.6
V17-0454	1.0	1.7	1.0	1.0	1.0	1.0	1.5	1.2
V17-0462	1.5	2.2	1.0	1.5	1.0	1.0	1.5	1.4
V17-2478R	2.0	3.2	1.0	2.0	1.5	2	1.0	1.8
V17-2918R	2.5	3.5	1.0	3.0	2.0	3.0	2.0	2.4
Mean	1.8	2.6	1.1	1.9	1.5	1.6	1.7	1.7
LSD(0.05)	1.4	0.7	0.1	1.2	0.8	0.5	1.1	0.6
CV(%)	38.3	13.3	5.6	31.2	28.5	15.9	31.1	38.5

TABLE 46 - SEED QUALITY (1-5)
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	1.0	1.0	1.0	1.0	1.0	.	1.0	1.0
AG 46X6	2.5	1.3	2.0	2.0	2.0	.	2.0	2.0
AG 48X9	2.0	1.8	2.0	2.0	2.0	.	1.0	1.8
AG 49X6	2.0	1.3		2.0	2.0	.	1.0	1.7
DA13062-004F	1.5	1.3	2.0	2.0	2.0	.	1.0	1.6
DA13062-015F	1.0	1.0	2.0	1.0	2.0	.	2.0	1.5
DA13092-015F	1.5	1.0	2.0	1.0	1.5	.	2.0	1.5
DA13092-039F	1.5	1.0	2.0	1.0	2.0	.	2.0	1.6
DA1486-10F	1.5	1.0	2.0	2.0	1.0	.	2.0	1.5
DA1488-0228F	2.0	1.0	2.0	1.0	1.5	.	1.0	1.4
DS1169-323	2.0	1.0	2.0	1.0	2.0	.	1.0	1.5
K17-4383	2.0	1.3	2.0	2.0	1.0	.	2.0	1.7
R15-2422	2.0	1.0	1.0	2.0	2.0	.	1.0	1.5
R16-253	2.0	1.0	3.0	2.0	2.0	.	2.0	2.0
R16-259	2.0	1.0	2.0	2.0	2.5	.	2.0	1.9
S16-13165C	2.0	1.8	2.0	2.0	2.0	.	2.0	2.0
S16-9666C	2.0	1.0	2.0	2.0	2.0	.	2.0	1.8
S17-13455C	1.0	1.3	2.0	3.0	1.0	.	1.0	1.5
S17-17195C	2.0	1.0	3.0	3.0	2.0	.	2.0	2.1
S17-19933R	1.0	1.0	2.0	2.0	2.0	.	1.0	1.5
S17-2193C	2.0	1.0	2.0	2.0	2.0	.	1.0	1.7
TN18-4047	1.5	1.0	2.0	1.0	2.0	.	2.0	1.6
TN18-5001	1.0	1.0	2.0	2.0	2.0	.	1.0	1.5
TN19-4032	1.5	1.0	1.0	1.0	2.0	.	1.0	1.3
TN19-4750R1	1.0	1.3	2.0	1.0	2.0	.	1.0	1.4
TN19-4782R1	2.0	1.0	1.0	2.0	2.0	.	1.0	1.5
V16-0262DI	2.0	1.0	2.0	2.0	2.0	.	2.0	1.8
V17-0437	1.5	1.0	2.0	2.0	1.5	.	2.0	1.6
V17-0454	1.5	1.0	2.0	2.0	2.0	.	1.0	1.6
V17-0462	2.0	1.3	2.0	2.0	1.0	.	2.0	1.7
V17-2478R	2.0	1.0	2.0	2.0	1.0	.	2.0	1.6
V17-2918R	1.5	1.0	2.0	2.0	2.0	.	1.0	1.6
Mean	1.7	1.1	1.9	1.8	1.8	.	1.5	1.6
LSD(0.05)	0.8	0.4			0.5	.		0.5
CV(%)	23.2	16.5			14.0	.		26.3

TABLE 47 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	14.2	12.8	11.0	13.9	12.9	.	.	12.8
AG 46X6	18.9	18.6	15.0	20.6	19.2	.	17.5	18.4
AG 48X9	18.5	16.4	13.0	17.5	16.7	.	16.4	16.5
AG 49X6	15.1	13.1		15.7	17.7	.	13.8	14.7
DA13062-004F	13.0	12.7	11.0	14.1	14.1	.	13.1	13.0
DA13062-015F	11.1	10.6	10.0	12.8	12.6	.	10.7	11.3
DA13092-015F	12.9	11.5	11.0	14.2	12.4	.	11.1	12.2
DA13092-039F	12.4	11.2	10.0	14.9	12.0	.	12.1	12.0
DA1486-10F	17.8	15.3	12.0	18.6	19.7	.	15.8	16.6
DA1488-0228F	17.1	13.9	13.0	16.3	15.8	.	14.1	15.1
DS1169-323	11.3	10.0	11.0	12.9	12.2	.		11.3
K17-4383	15.8	14.3	13.0	15.7	14.7	.	13.0	14.4
R15-2422	13.2	12.7	12.0	17.7	15.5	.	12.8	13.9
R16-253	16.1	13.8	14.0	18.7	16.7	.	15.1	15.7
R16-259	14.4	13.4	14.0	18.6	17.3	.	15.0	15.4
S16-13165C	15.4	14.4	14.0	20.4	18.0	.	15.7	16.2
S16-9666C	16.7	14.4	14.0	17.2	18.2	.	15.5	16.0
S17-13455C	12.6	11.9	11.0	13.6	14.2	.	11.5	12.5
S17-17195C	16.6	14.9	13.0	18.8	18.0	.	15.1	16.1
S17-19933R	16.0	14.3	12.0	14.7	15.2	.	12.9	14.3
S17-2193C	16.0	14.5	14.0	16.0	13.9	.	13.7	14.7
TN18-4047	14.0	13.6	12.0	14.6	16.4	.	13.9	14.1
TN18-5001	14.8	15.3	15.0	18.4	17.6	.	15.5	16.0
TN19-4032	11.6	10.8	11.0	12.3	12.6	.	10.4	11.4
TN19-4750R1	14.6	12.9	13.0	15.5	16.7	.	13.4	14.4
TN19-4782R1	13.3	11.8	10.0	14.3	15.8	.	12.5	13.0
V16-0262DI	17.6	15.5	14.0	16.7	17.5	.	14.2	16.0
V17-0437	17.0	15.1	12.0	17.7	16.8	.	15.4	15.7
V17-0454	16.8	14.9	12.0	17.5	16.8	.	15.6	15.6
V17-0462	15.6	13.6	11.0	16.8	16.3	.	14.6	14.7
V17-2478R	15.0	14.2	12.0	17.2	15.6	.	14.4	14.7
V17-2918R	14.0	12.8	11.0	14.6	14.5	.	12.6	13.3
Mean	15.0	13.6	12.3	16.2	15.8	.	13.9	14.4
LSD(0.05)	1.4	1.4			1.2	.		1.0
CV(%)	4.5	4.9			3.8	.		6.6

TABLE 48 - OIL (%)†
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	19.0	19.4	18.7	18.5	17.1	19.5	18.8	18.7
AG 46X6	18.5	20.2	19.7	18.9	18.0	20.8	18.8	19.3
AG 48X9	20.0	20.5	19.2	19.7	18.0	21.5	19.3	19.7
AG 49X6	19.9	20.7	20.6	19.8	18.5	21.1	19.2	20.0
DA13062-004F	18.7	19.6	18.8	18.8	17.3	19.6	18.9	18.8
DA13062-015F	18.0	18.3	19.0	18.1	17.1	18.6	18.4	18.2
DA13092-015F	18.7	19.0	18.7	18.3	17.4	19.3	18.4	18.6
DA13092-039F	18.8	18.7	19.0	18.2	16.9	19.2	18.3	18.4
DA1486-10F	19.9	20.1	20.0	19.0	17.4	19.5	19.2	19.3
DA1488-0228F	20.1	20.3	20.2	19.2	18.7	20.1	19.3	19.7
DS1169-323	17.5	18.1	17.7	17.5	16.3	18.3	17.8	17.6
K17-4383	20.0	20.2	19.0	19.5	17.7	20.2	19.2	19.4
R15-2422	19.2	20.0	19.7	18.8	17.2	19.5	18.9	19.1
R16-253	19.0	19.3	19.1	18.2	16.7	19.2	19.0	18.6
R16-259	19.2	19.9	19.9	19.4	17.6	19.5	18.9	19.2
S16-13165C	19.7	20.2	19.3	18.8	16.9	20.2	18.7	19.1
S16-9666C	19.9	21.2	20.1	19.3	18.3	20.9	19.8	19.9
S17-13455C	19.1	19.8	18.8	18.3	17.3	20.0	18.2	18.8
S17-17195C	20.0	21.4	20.0	19.3	18.7	21.2	19.6	20.0
S17-19933R	18.6	19.2	18.3	18.7	16.8	19.5	18.3	18.5
S17-2193C	19.8	20.9	19.6	19.3	17.8	20.0	19.2	19.5
TN18-4047	19.7	19.6	19.5	19.2	17.7	21.2	19.1	19.4
TN18-5001	20.3	20.8	19.4	20.2	18.4	21.3	20.2	20.1
TN19-4032	18.6	18.5	19.0	17.4	16.3	20.6	18.1	18.4
TN19-4750R1	18.8	19.5	18.9	18.4	16.9	19.8	18.5	18.7
TN19-4782R1	18.4	20.0	19.0	18.8	17.0	20.0	18.7	18.8
V16-0262DI	20.3	20.9	19.6	19.0	17.8	20.8	19.8	19.8
V17-0437	20.4	20.4	19.3	19.7	18.1	20.3	19.8	19.7
V17-0454	19.3	20.1	19.6	18.9	17.6	19.9	19.4	19.3
V17-0462	20.0	20.1	20.2	19.1	18.1	19.7	19.3	19.5
V17-2478R	19.4	20.1	19.9	18.2	17.5	.	18.1	19.0
V17-2918R	20.6	21.4	20.6	19.6	18.6	.	19.9	20.2
Mean	19.4	19.9	19.4	18.9	17.5	20.0	19.0	19.2
LSD(0.05)	.	.	.	.	.	.	.	0.4
CV(%)	.	.	.	.	.	.	.	1.9

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

TABLE 49 - PROTEIN (%)†
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	34.7	34.6	34.2	35.5	36.6	33.9	35.0	34.9
AG 46X6	36.1	36.2	32.8	36.5	36.0	34.5	35.1	35.3
AG 48X9	33.6	34.0	34.0	36.0	35.2	32.3	35.3	34.3
AG 49X6	33.6	33.3	31.4	34.1	36.3	33.1	34.0	33.7
DA13062-004F	33.5	35.0	34.2	36.3	36.6	34.8	35.3	35.1
DA13062-015F	36.8	36.7	34.5	37.5	36.9	36.3	36.4	36.4
DA13092-015F	36.1	36.1	33.5	36.9	35.8	34.6	34.4	35.3
DA13092-039F	34.8	35.5	32.6	38.5	36.2	33.4	35.0	35.1
DA1486-10F	35.3	36.2	33.0	38.1	38.4	35.8	35.9	36.1
DA1488-0228F	36.2	36.3	33.5	38.0	36.7	36.5	36.4	36.2
DS1169-323	38.0	37.8	35.7	38.9	39.0	36.9	37.3	37.7
K17-4383	35.1	35.1	36.2	36.8	38.5	35.4	35.6	36.1
R15-2422	36.1	34.5	34.0	38.2	38.1	36.2	35.6	36.1
R16-253	34.8	36.7	32.5	37.1	37.6	35.4	34.5	35.5
R16-259	35.8	35.1	32.5	35.8	37.2	36.5	35.7	35.5
S16-13165C	35.9	35.2	33.3	36.4	36.1	35.3	35.7	35.4
S16-9666C	33.6	31.4	31.0	34.2	34.3	32.8	33.3	32.9
S17-13455C	34.6	34.5	32.8	36.3	36.0	33.3	34.8	34.6
S17-17195C	35.3	33.0	32.8	36.9	35.1	34.6	33.4	34.4
S17-19933R	36.7	37.5	34.5	37.1	37.9	35.5	36.2	36.5
S17-2193C	33.5	33.2	32.5	35.0	35.1	34.2	33.8	33.9
TN18-4047	33.9	34.4	33.4	34.9	35.6	34.5	33.9	34.3
TN18-5001	34.0	33.4	33.8	34.8	35.0	32.1	33.1	33.7
TN19-4032	34.4	35.2	32.3	36.2	36.8	34.4	34.6	34.8
TN19-4750R1	36.5	35.6	33.4	36.7	37.7	35.4	35.4	35.8
TN19-4782R1	37.7	34.3	33.1	36.5	38.0	35.3	35.9	35.8
V16-0262DI	34.3	33.8	33.2	36.9	38.3	34.6	34.0	35.0
V17-0437	33.1	34.1	33.2	35.6	35.2	34.9	33.5	34.2
V17-0454	35.2	33.9	33.9	36.0	36.2	35.8	35.3	35.2
V17-0462	36.0	36.2	34.1	37.9	37.8	37.1	36.8	36.6
V17-2478R	34.0	33.8	31.5	36.6	35.3	.	35.4	34.4
V17-2918R	33.1	33.3	32.2	36.0	35.5	.	34.1	34.0
Mean	35.1	34.9	33.3	36.5	36.6	34.9	35.0	35.2
LSD(0.05)	.	.	.	.	.	.	.	0.8
CV(%)	.	.	.	.	.	.	.	2.2

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

TABLE 50 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	46.5	46.7	45.7	47.4	48.1	45.7	46.8	46.7
AG 46X6	48.1	49.4	44.5	48.9	47.7	47.4	46.9	47.5
AG 48X9	45.6	46.5	45.7	48.7	46.7	44.8	47.5	46.5
AG 49X6	45.6	45.6	43.0	46.2	48.3	45.6	45.7	45.7
DA13062-004F	44.9	47.3	45.7	48.6	48.1	47.1	47.4	47.0
DA13062-015F	48.9	48.9	46.3	49.7	48.4	48.5	48.5	48.4
DA13092-015F	48.3	48.4	44.8	49.1	47.1	46.7	45.9	47.2
DA13092-039F	46.6	47.4	43.8	51.1	47.3	45.0	46.6	46.8
DA1486-10F	47.8	49.2	44.9	51.1	50.6	48.4	48.2	48.6
DA1488-0228F	49.2	49.5	45.6	51.1	49.0	49.7	49.1	49.0
DS1169-323	50.1	50.2	47.2	51.2	50.6	49.1	49.3	49.7
K17-4383	47.6	47.8	48.6	49.7	50.8	48.2	47.9	48.7
R15-2422	48.6	46.9	46.0	51.1	50.1	48.9	47.7	48.5
R16-253	46.6	49.4	43.6	49.3	49.0	47.6	46.2	47.4
R16-259	48.2	47.7	44.0	48.3	49.1	49.2	47.9	47.8
S16-13165C	48.6	47.9	44.8	48.7	47.2	48.1	47.7	47.6
S16-9666C	45.6	43.3	42.2	46.0	45.6	45.1	45.1	44.7
S17-13455C	46.5	46.7	43.9	48.3	47.3	45.3	46.3	46.3
S17-17195C	47.9	45.6	44.6	49.7	46.9	47.8	45.1	46.8
S17-19933R	48.9	50.5	45.9	49.5	49.4	48.0	48.1	48.6
S17-2193C	45.4	45.6	43.9	47.1	46.4	46.5	45.5	45.8
TN18-4047	45.9	46.4	45.1	47.0	47.0	47.5	45.5	46.3
TN18-5001	46.3	45.8	45.5	47.5	46.6	44.3	45.1	45.9
TN19-4032	45.9	46.9	43.3	47.6	47.8	47.1	46.0	46.4
TN19-4750R1	48.9	48.0	44.8	48.9	49.2	48.0	47.3	47.9
TN19-4782R1	50.1	46.6	44.4	48.8	49.7	47.9	48.0	47.9
V16-0262DI	46.7	46.4	44.9	49.5	50.6	47.4	46.0	47.4
V17-0437	45.1	46.5	44.7	48.1	46.7	47.6	45.5	46.3
V17-0454	47.5	46.1	45.9	48.2	47.8	48.5	47.6	47.4
V17-0462	48.9	49.3	46.4	50.9	50.2	50.3	49.5	49.4
V17-2478R	45.8	46.0	42.7	48.6	46.5	.	47.0	46.1
V17-2918R	45.3	46.1	44.1	48.7	47.4	.	46.3	46.3
Mean	47.2	47.3	44.9	48.9	48.2	47.4	47.0	47.3
LSD(0.05)	.	.	.	.	.	.	.	1.0
CV(%)	.	.	.	.	.	.	.	1.9

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

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST IV-S-LATE 2020 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
Ellis	10.4	3.5	27.9	51.3	7.0
AG 46X6	11.9	3.6	19.9	57.3	7.3
AG 48X9	11.5	3.6	21.0	56.8	7.1
DA13062-004F	11.6	4.0	20.4	60.9	3.1
DA13062-015F	11.3	3.9	22.1	60.2	2.5
S17-19933R	7.7	3.2	71.5	11.9	5.6
TN19-4032	10.5	3.6	20.1	61.2	4.6
TN19-4782R1	11.8	4.0	19.9	56.7	7.5
Mean	10.9	3.7	27.8	52.1	5.6
LSD(0.05)	0.6	0.2	6.8	5.8	0.8
CV(%)	4.9	5.6	22.5	10.3	13.4

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

SEED PALMITIC ACID (%)
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	10.8	9.1	10.5	10.4	11.1	9.9	10.8	10.4
AG 46X6	12.1	11.6	12.0	11.3	11.9	13.0	11.8	11.9
AG 48X9	11.1	11.1	11.5	12.1	11.3	11.6	11.5	11.5
DA13062-004F	12.0	11.3	11.6	11.4	11.7	11.8	11.4	11.6
DA13062-015F	10.9	11.0	11.1	11.4	11.4	12.1	11.5	11.3
S17-19933R	7.2	7.0	6.8	9.8	7.4	8.6	7.2	7.7
TN19-4032	10.2	10.6	10.5	11.0	10.7	9.8	10.8	10.5
TN19-4782R1	11.7	11.9	11.7	12.0	11.6	12.2	11.9	11.8
Mean	10.7	10.5	10.7	11.2	10.9	11.1	10.9	10.9
LSD(0.05)	.	.	.	.	.	.	.	0.6
CV(%)	.	.	.	.	.	.	.	4.9

SEED STEARIC ACID (%)
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	3.5	3.0	4.5	3.3	3.5	3.4	3.4	3.5
AG 46X6	3.7	3.4	3.9	3.8	3.6	3.4	3.3	3.6
AG 48X9	3.4	3.6	4.2	3.4	3.5	3.8	3.2	3.6
DA13062-004F	3.9	3.6	5.0	3.8	3.9	3.8	3.6	4.0
DA13062-015F	3.5	3.7	5.0	3.7	4.1	3.3	3.7	3.9
S17-19933R	3.0	3.0	4.0	3.0	3.3	3.2	2.9	3.2
TN19-4032	3.3	3.2	4.3	3.5	3.5	3.7	3.5	3.6
TN19-4782R1	4.1	3.8	4.4	4.0	3.9	4.0	3.8	4.0
Mean	3.5	3.4	4.4	3.6	3.7	3.6	3.4	3.7
LSD(0.05)	.	.	.	.	.	.	.	0.2
CV(%)	.	.	.	.	.	.	.	5.6

SEED OLEIC ACID (%)
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	21.0	49.1	20.2	29.1	19.7	39.2	16.8	27.9
AG 46X6	19.7	18.9	19.7	22.8	17.6	19.8	20.4	19.9
AG 48X9	20.5	24.4	21.2	21.9	18.7	21.5	18.9	21.0
DA13062-004F	19.9	20.3	23.0	20.6	18.8	18.4	22.0	20.4
DA13062-015F	23.8	24.2	23.5	20.7	20.9	20.2	21.3	22.1
S17-19933R	79.0	81.1	76.0	46.3	73.3	65.1	79.8	71.5
TN19-4032	18.6	18.6	22.5	18.3	18.6	25.7	18.5	20.1
TN19-4782R1	18.9	21.4	20.9	19.3	18.9	22.0	17.6	19.9
Mean	27.7	32.2	28.4	24.9	25.8	29.0	26.9	27.8
LSD(0.05)	.	.	.	.	.	.	.	6.8
CV(%)	.	.	.	.	.	.	.	22.5

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	57.5	33.7	57.1	50.1	57.5	42.7	60.4	51.3
AG 46X6	57.6	58.8	56.5	55.4	57.9	57.8	57.3	57.3
AG 48X9	58.1	54.7	55.8	55.3	58.4	56.9	58.6	56.8
DA13062-004F	61.6	61.1	57.3	61.4	62.4	62.1	60.4	60.9
DA13062-015F	59.5	58.7	57.9	61.6	60.8	62.2	61.0	60.2
S17-19933R	5.3	4.6	7.6	33.7	8.8	18.5	5.0	11.9
TN19-4032	64.2	63.1	58.1	62.8	62.5	55.7	62.3	61.2
TN19-4782R1	58.4	55.3	55.0	57.2	57.2	55.7	58.3	56.7
Mean	52.8	48.7	50.7	54.7	53.2	51.4	52.9	52.1
LSD(0.05)	.	.	.	.	.	.	.	5.8
CV(%)	.	.	.	.	.	.	.	10.3

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP IV-S-LATE 2020

STRAIN/ VARIETY	Jackson, TN	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Test Mean
Ellis	7.2	5.1	7.8	7.2	8.2	4.8	8.6	7.0
AG 46X6	6.9	7.2	7.8	6.7	9.1	6.0	7.3	7.3
AG 48X9	6.9	6.3	7.3	7.3	8.0	6.3	7.7	7.1
DA13062-004F	2.6	3.7	3.1	2.7	3.2	4.0	2.6	3.1
DA13062-015F	2.3	2.4	2.6	2.6	2.8	2.2	2.5	2.5
S17-19933R	5.4	4.3	5.6	7.3	7.2	4.5	5.1	5.6
TN19-4032	3.8	4.5	4.7	4.4	4.7	5.1	4.9	4.6
TN19-4782R1	7.0	7.6	8.0	7.4	8.4	6.0	8.4	7.5
Mean	5.3	5.1	5.9	5.7	6.5	4.9	5.9	5.6
LSD(0.05)	.	.	.	.	.	.	.	0.8
CV(%)	.	.	.	.	.	.	.	13.4

TABLE 51 - PARENTAGE OF ENTRIES
UNIFORM GROUP V 2020

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	Ellis	Commercial check	Pantalone		Conv	
2	AG 53X9	Commercial check	Commercial		RRX	
3	AG 55X7	Commercial check	Commercial		RRX	
4	TN09-008	Commercial check	Pantalone		Conv	SCN check
5	TN11-5140	Commercial check	Pantalone		Conv	
6	AG 56X8	Commercial check	Commercial		RRX	
7	DA1134-015F	DB03-1381 x S05-11482	Gillen		Conv	
8	DA13099-008F	(DA07x22-23) x 5002T	Gillen		Conv	Diversity
9	K15-1809	NCC05-1261 / 435.TCS	Schapaugh		Conv	STS
10	N16-590	N08-145 x Pro5-1	Mian		Conv	
11	N16-8531	Osage x Holiday	Carter	F4	Conv	elevated protein
12	N16-8564	Osage x Holiday	Carter	F4	Conv	elevated protein
13	N17-2520	R09-4095 x NC-Miller	Mian		Conv	
14	N17-882	Highpro1 x R09-3789	Mian		Conv	
15	NDPJE-14-194	N07-14221 x Clifford	Carter	F4	Conv	diversity
16	NDPJE-14-217	N07-14221 x Clifford	Carter	F4	Conv	diversity
17	Osage	Public cultivar	Carter		Conv	elevated protein
18	R13-13997	S07-2680 x R08-409	Mozzoni		Conv	
19	R13-14635RR	LEO 2939-04S809 x R04-572	Mozzoni		RR1	
20	R14-1422	R06-4433 x S05-11482	Mozzoni		Conv	
21	R15-1587	S05-11482 x R07-1685	Mozzoni		Conv	
22	S16-14801C	S11-16653 x S11-20124	Chen		Conv	RKN, SCN, SC, Excluder
23	S16-14869C	S11-16653 x S11-20124	Chen		Conv	RKN, SCN, SC, Excluder
24	S16-3739RY	S11-16653 x S11-5727RR2	Chen		RR2	RKN, SCN
25	S16-7840C	S11-16653 x S11-20124	Chen		Conv	RKN, SCN, SC, Excluder
26	S16-9030C	R10-230 x S11-20124	Chen		Conv	SCN, SC, Excluder
27	S16-9090C	R10-230 x S11-20124	Chen		Conv	RKN, SCN
28	TN16-5024	TN09-008 x Ellis	Pantalone		Conv	
29	V14-0079	Glenn x V05-2436	Zhang	F4	Conv	> 50% meal
30	V15-1815DI	Ozark x G08-PR-394	Zhang	F4	Conv	Diversity
31	V15-1872	Ozark x NCC06-339	Zhang	F4	Conv	Diversity
32	V15-2261ST	Hanover x V09-0673	Zhang	F4	Conv	
33	V16-0709PR	S08-17361 x R08-3206	Zhang	F4	Conv	> 50% meal

† 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 2020

STRAIN/ VARIETY	RANK	AVG. RANK	YIELD† 2020	YIELD† 19-20	YIELD† 18-20	PROTEIN‡ 2020	PROTEIN‡ 19-20	PROTEIN‡ 18-20	OIL‡ 2020	OIL‡ 19-20	OIL‡ 18-20
Ellis	29	20	53.5	56.3	56.2	35.1	35.5	35.3	18.5	18.6	18.8
AG 53X9	1	8	64.1	.	.	35.2	.	.	18.4	.	.
AG 55X7	5	12	61.4	58.9	58.4	34.8	35.3	35.2	19.0	19.1	19.3
TN09-008	24	21	55.2	.	.	32.9	.	.	19.2	.	.
TN11-5140	25	20	54.9	57.4	58.3	34.7	35.2	35.2	19.1	19.2	19.4
AG 56X8	6	13	60.9	.	.	34.5	.	.	18.6	.	.
DA1134-015F	10	15	58.2	60.4	60.5	34.6	35.1	34.9	18.9	19.0	19.3
DA13099-008F	21	18	56.0	.	.	34.8	.	.	19.1	.	.
K15-1809	12	15	57.2	59.1	58.4	36.6	37.1	36.7	18.3	18.4	18.7
N16-590	15	17	57.2	58.8	.	36.8	37.6	.	18.5	18.5	.
N16-8531	27	21	54.8	53.9	.	36.4	36.9	.	18.1	18.1	.
N16-8564	23	20	55.2	56.0	.	35.9	36.3	.	18.6	18.9	.
N17-2520	20	19	56.3	.	.	34.7	.	.	20.2	.	.
N17-882	33	25	52.1	.	.	37.6	.	.	18.7	.	.
NDPJE-14-194	32	22	52.2	.	.	35.7	.	.	18.9	.	.
NDPJE-14-217	18	16	56.7	.	.	35.1	.	.	18.9	.	.
Osage	16	16	57.0	.	.	37.3	.	.	17.8	.	.
R13-13997	13	18	57.2	58.3	.	34.8	35.5	.	19.2	19.2	.
R13-14635RR	28	21	54.7	.	.	34.7	.	.	18.7	.	.
R14-1422	14	18	57.2	57.9	.	35.4	35.7	.	18.1	18.4	.
R15-1587	17	16	57.0	.	.	34.8	.	.	18.7	.	.
S16-14801C	2	9	63.4	.	.	34.6	.	.	18.9	.	.
S16-14869C	3	11	62.0	.	.	34.0	.	.	19.3	.	.
S16-3739RY	9	14	58.4	61.8	.	34.3	35.0	.	19.1	19.3	.
S16-7840C	8	14	59.0	.	.	33.9	.	.	19.0	.	.
S16-9030C	7	13	60.7	.	.	34.4	.	.	19.0	.	.
S16-9090C	4	11	62.0	.	.	34.1	.	.	19.4	.	.
TN16-5024	31	21	52.9	.	.	34.0	.	.	18.4	.	.
V14-0079	19	18	56.3	58.1	.	36.2	36.7	.	19.0	19.3	.
V15-1815DI	22	20	55.5	.	.	34.7	.	.	19.5	.	.
V15-1872	26	20	54.9	.	.	35.1	.	.	18.4	.	.
V15-2261ST	11	18	57.2	.	.	36.1	.	.	19.0	.	.
V16-0709PR	30	22	53.4	.	.	34.8	.	.	18.9	.	.
Mean	.	.	57.1	.	.	35.1	.	.	18.8	.	.
LSD(0.05)	.	.	4.8	.	.	0.6	.	.	0.3	.	.
CV(%)	.	.	13.5	.	.	2.5	.	.	2.6	.	.

†Data not included in the test mean: Belle Mina and Bossier City. Certain field trials were damaged by dicamba, which 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 2020

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
Ellis	46.9	0	1	26	1.5	12.5			
AG 53X9	46.8	2	1	33	1.6	15.5			
AG 55X7	46.7	1	1	29	1.5	13.6			
TN09-008	44.4	1	1	28	1.7	16.3			
TN11-5140	46.7	6	2	32	1.4	15.1			
AG 56X8	46.1	2	2	34	1.5	15.7			
DA1134-015F	46.4	1	2	30	1.4	14.0	P	T	T
DA13099-008F	46.7	1	2	28	1.4	15.2	P	T	T
K15-1809	48.7	2	1	25	1.4	14.0			
N16-590	49.1	2	1	29	1.4	14.8	P	T	
N16-8531	48.3	0	1	27	1.5	13.4	P	G	
N16-8564	48.0	2	1	27	1.3	12.9	P	G	
N17-2520	47.2	3	2	31	1.7	18.1	P	T	
N17-882	50.4	2	2	31	1.8	16.4	P	T	
NDPJE-14-194	47.7	2	2	31	1.7	15.6	P	T	
NDPJE-14-217	47.2	1	2	30	1.5	15.7	P	T	
Osage	49.3	1	1	27	1.2	12.8		G	
R13-13997	46.9	3	2	31	1.5	15.2	W	T	Tn
R13-14635RR	46.4	1	1	35	1.6	14.3	W	G	Tn
R14-1422	46.9	2	2	32	1.5	13.7	W	G	Tn
R15-1587	46.5	1	1	26	1.5	13.2	P	T	Tn
S16-14801C	46.3	0	2	32	1.6	14.8	P	G	T
S16-14869C	45.8	2	3	34	1.5	14.7	W	T	T
S16-3739RY	46.1	2	2	33	1.8	13.8	W	G	T
S16-7840C	45.4	0	3	36	1.6	14.8	W	T	T
S16-9030C	46.2	2	3	34	1.5	13.6	W	T	T
S16-9090C	45.9	2	2	33	1.4	14.2	W	G	T
TN16-5024	45.3	1	1	26	1.5	12.9			
V14-0079	48.5	1	1	25	1.5	14.0	P	G	
V15-1815DI	46.9	2	1	30	1.6	15.8	P	G	
V15-1872	46.7	1	1	31	1.6	16.1	P	G	
V15-2261ST	48.3	2	1	29	1.7	14.3	P	G	
V16-0709PR	46.6	2	2	36	1.7	17.7	P	G	
Mean	47.0	2	2	30	1.5	14.7			
LSD(0.05)	0.7	2	0	2	0.3	0.7			
CV(%)	2.2	158	36	11	28.0	7.2			

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

TABLE 54 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST V 2020

STRAIN/	*SCN Cyst Score (1-5 Scale)†*			*PRK*	*SRK*	*SC*	*SC*
VARIETY	*Race 2*	*Race 3*	*Race 5*	*GA*	*GA*	*RATING*	*SCORE*
Ellis	4	.	5	.	1.0	R	1.0
AG 53X9	4	.	5	.	5.0	R	1.0
AG 55X7	5	.	5	.	.	R	1.0
TN09-008	1	.	1	.	.	MS	4.0
TN11-5140	5	.	5	.	.	R	1.0
AG 56X8	5	.	4	.	1.0	R	1.0
DA1134-015F	3	.	5	.	.	R	1.0
DA13099-008F	5	.	5	.	.	R	1.0
K15-1809	5	.	4	.	5.0	R	1.0
N16-590	4	.	5	.	4.5	R	1.0
N16-8531	4	.	4	.	5.0	SS	3.0
N16-8564	4	.	5	.	5.0	S	5.0
N17-2520	4	.	5	.	3.5	R	1.0
N17-882	5	.	5	.	1.0	R	1.0
NDPJE-14-194	4	.	4	.	1.5	S	5.0
NDPJE-14-217	5	.	5	.	1.3	MS	4.0
Osage	4	.	5	.	5.0	SS	3.0
R13-13997	4	.	5	.	1.5	R	1.0
R13-14635RR	4	.	5	.	5.0	R	1.0
R14-1422	5	.	5	.	.	SS	3.0
R15-1587	4	.	4	.	5.0	R	1.0
S16-14801C	2	.	4	.	1.5	R	1.0
S16-14869C	3	.	5	.	1.0	R	1.0
S16-3739RY	3	.	2	.	1.3	SS	3.0
S16-7840C	1	.	4	.	1.0	R	1.0
S16-9030C	1	.	1	.	5.0	R	1.0
S16-9090C	4	.	4	.	1.0	SS	3.0
TN16-5024	1	.	2	.	1.8	SS	3.0
V14-0079	5	.	5	.	5.0	SS	3.0
V15-1815DI	4	.	4	.	4.8	MS	4.0
V15-1872	5	.	5	.	4.8	R	1.0
V15-2261ST	5	.	5	.	5.0	R	1.0
V16-0709PR	5	.	5	.	5.0	R	1.0

†The race 2 and 5 SCN populations used in these tests were typed as HG (*Heterodera glycines*) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 55 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST V 2020 †

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	32.1	38.3	47.5	52.0	58.4	67.9	49.1	69.1
AG 53X9	29.9	42.1	56.5	83.4	70.8	68.4	53.9	67.3
AG 55X7	34.4	32.1	52.5	67.9	56.9	79.4	49.1	66.5
TN09-008	27.0	45.0	49.2	72.1	52.1	54.3	45.0	63.0
TN11-5140	28.6	52.0	52.7	70.0	43.5	61.0	40.6	54.8
AG 56X8	30.8	44.2	44.2	71.8	57.0	72.0	42.9	64.6
DA1134-015F	28.1	45.0	51.7	76.7	57.9	64.1	43.0	61.4
DA13099-008F	33.9	57.7	50.8	65.4	60.8	45.9	45.4	65.6
K15-1809	37.8	35.8	46.3	77.1	53.7	60.2	52.4	67.0
N16-590	31.8	42.4	59.2	69.5	47.5	58.8	43.1	69.0
N16-8531	26.9	32.3	45.5	71.7	51.7	57.6	46.6	60.2
N16-8564	23.6	41.0	37.9	69.3	48.6	61.3	46.4	69.1
N17-2520	24.8	42.8	46.5	72.8	49.6	53.5	44.8	63.4
N17-882	24.5	32.5	49.0	57.2	49.4	58.0	41.8	52.8
NDPJE-14-194	21.8	40.6	35.5	74.5	51.6	32.7	47.0	53.0
NDPJE-14-217	17.9	58.9	47.2	85.9	55.2	37.8	50.3	59.2
Osage	25.6	30.9	54.7	63.2	51.9	68.4	49.4	65.6
R13-13997	32.3	51.5	51.7	70.1	48.3	67.6	45.9	64.1
R13-14635RR	31.4	47.1	47.1	76.4	51.2	58.9	41.9	56.5
R14-1422	20.0	46.2	50.0	73.9	49.0	56.4	51.7	64.3
R15-1587	28.9	50.8	55.0	58.6	55.8	74.0	44.7	66.6
S16-14801C	38.6	42.1	64.2	88.5	63.9	62.7	53.0	65.9
S16-14869C	33.6	36.7	50.5	88.0	54.9	67.5	46.3	66.4
S16-3739RY	31.5	47.0	54.9	74.9	58.8	67.5	51.6	66.0
S16-7840C	33.0	38.3	45.1	74.8	57.7	60.1	48.3	64.5
S16-9030C	31.3	46.2	63.2	86.9	50.1	76.6	37.9	56.5
S16-9090C	33.2	39.1	63.0	81.0	53.7	72.6	41.9	63.1
TN16-5024	30.3	33.3	53.0	62.8	55.1	46.8	48.4	69.3
V14-0079	14.9	32.1	49.3	70.0	49.3	61.8	47.0	67.9
V15-1815DI	30.2	47.7	41.0	69.9	49.1	63.6	40.8	63.6
V15-1872	31.6	57.0	35.8	75.7	47.0	56.5	44.0	59.8
V15-2261ST	27.3	43.4	51.9	85.6	50.5	70.3	44.4	68.4
V16-0709PR	28.2	35.6	52.6	72.2	47.1	37.3	39.1	66.4
Mean	29.0	42.7	50.2	73.0	53.3	60.6	46.0	63.7
LSD(0.05)	9.6	18.7	12.2	11.8	5.5	13.1	4.8	6.4
LSD(0.10)	8.0	15.6	10.2	9.9	4.6	10.9	4.0	5.4
CV(%)	20.3	26.9	14.0	9.9	6.3	13.0	6.3	6.2

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

TABLE 55 - SEED YIELD (BUSHELS PER ACRE) (continued)
UNIFORM TEST V 2020 †

STRAIN/ VARIETY	Plymouth, NC	Portageville, MO(A)‡	Portageville, MO(B)‡	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	29.7	27.5	42.5	53.1	76.1	54.7	67.7	53.5
AG 53X9	28.3	69.8	63.0	63.5	76.2	57.9	74.6	64.1
AG 55X7	36.5	66.5	66.8	52.6	79.8	54.4	68.8	61.4
TN09-008	30.4	39.0	44.0	67.1	76.3	48.9	75.5	55.2
TN11-5140	41.0	44.8	55.7	46.1	73.2	51.6	79.4	54.9
AG 56X8	36.0	68.0	64.7	65.8	69.4	58.7	76.3	60.9
DA1134-015F	27.4	45.2	54.4	63.9	78.0	59.7	72.9	58.2
DA13099-008F	28.2	47.2	52.4	59.5	77.9	58.7	69.2	56.0
K15-1809	30.8	41.4	55.9	55.9	78.4	60.0	64.9	57.2
N16-590	31.2	47.4	56.8	58.7	77.9	53.6	70.4	57.2
N16-8531	35.7	41.4	53.9	51.2	76.0	53.7	67.5	54.8
N16-8564	35.1	44.2	51.7	45.6	84.7	48.7	73.7	55.2
N17-2520	33.4	53.0	54.1	58.5	73.3	53.8	74.9	56.3
N17-882	25.0	40.7	50.7	59.4	70.3	56.3	67.2	52.1
NDPJE-14-194	32.4	50.6	50.0	59.2	68.6	53.9	69.2	52.2
NDPJE-14-217	35.8	46.8	52.9	63.1	76.2	55.7	70.7	56.7
Osage	37.2	33.9	48.7	62.9	82.1	53.5	69.8	57.0
R13-13997	32.9	38.0	52.2	70.0	77.7	56.1	69.0	57.2
R13-14635RR	36.4	55.5	34.8	54.3	67.2	49.0	81.5	54.7
R14-1422	38.7	52.9	51.4	59.3	71.7	52.8	71.3	57.2
R15-1587	36.7	36.0	45.5	52.9	84.9	53.5	76.6	57.0
S16-14801C	29.7	50.4	55.8	79.4	77.1	59.5	73.8	63.4
S16-14869C	32.5	58.4	59.9	75.1	76.9	55.5	73.9	62.0
S16-3739RY	26.2	40.8	46.2	64.7	77.9	53.8	75.8	58.4
S16-7840C	32.4	52.1	51.9	74.4	78.6	54.5	73.0	59.0
S16-9030C	33.1	54.4	56.9	66.7	75.3	56.4	74.7	60.7
S16-9090C	30.9	58.0	56.2	66.9	84.1	56.7	76.7	62.0
TN16-5024	28.8	28.1	43.6	68.3	66.1	49.4	67.9	52.9
V14-0079	31.1	39.3	48.6	57.1	81.7	52.1	76.7	56.3
V15-1815DI	35.7	42.3	53.6	61.1	67.0	53.2	80.3	55.5
V15-1872	42.3	43.8	49.6	54.3	72.9	54.4	77.1	54.9
V15-2261ST	34.7	38.1	48.6	59.2	68.9	53.5	71.4	57.2
V16-0709PR	29.2	52.0	42.2	54.1	69.6	53.1	77.2	53.4
Mean	32.9	46.9	52.0	60.7	75.5	54.5	73.0	57.1
LSD(0.05)	7.3	11.5	9.4	13.3	6.3	4.8	6.4	4.8
LSD(0.10)	6.1	9.6	7.8	11.1	5.2	4.0	5.4	4.0
CV(%)	13.3	15.0	11.0	13.4	5.1	5.4	5.4	13.5

‡ Field trials were damaged by Dicamba, which resulted in an unfair yield advantage for the AG check lines.

TABLE 56 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	*Belle Mina, AL*	*Bossier City, LA*	*Jackson, TN*	*Knoxville, TN*	*Manhattan, KS*	*Ottawa, KS*	*Pine Tree, AR*	*Plymouth, NC*
Ellis	10/13	10/19	10/13	10/11	10/19	10/7	10/15	11/7
AG 53X9	3	0	1	6	4	-1	3	1
AG 55X7	0	1	1	0	6	5	1	-1
TN09-008	-3	0	0	-2	0	3	-1	1
TN11-5140	0	0	6	8	14	10	5	10
AG 56X8	1	0	1	1	6	7	-1	1
DA1134-015F	4	0	-2	0	5	3	1	-1
DA13099-008F	-6	0	0	2	6	6	1	0
K15-1809	-6	-1	0	-2	13	6	0	-2
N16-590	1	1	-2	0	5	5	3	4
N16-8531	-1	-1	-8	-2	0	5	-1	-3
N16-8564	-7	-1	-4	0	13	6	2	4
N17-2520	3	1	1	-1	7	5	2	7
N17-882	4	1	-2	0	5	6	3	1
NDPJE-14-194	-6	0	-7	0	9	6	1	9
NDPJE-14-217	-6	1	-2	-2	7	5	0	2
Osage	0	-2	1	-3	4	6	1	1
R13-13997	2	0	0	-1	10	6	2	3
R13-14635RR	2	-1	-4	-2	2	3	-1	1
R14-1422	-6	-1	-2	-1	7	7	2	1
R15-1587	-5	0	-2	-1	7	5	1	-1
S16-14801C	-4	1	-2	-2	5	2	1	-1
S16-14869C	-1	0	1	-1	5	6	1	-1
S16-3739RY	2	1	2	-2	7	5	2	-3
S16-7840C	-6	0	-2	0	0	4	0	-2
S16-9030C	-5	0	1	-1	7	5	2	-1
S16-9090C	-5	-1	1	-2	9	6	3	3
TN16-5024	-1	0	1	-1	0	1	0	-2
V14-0079	-7	-1	1	2	4	5	1	-1
V15-1815DI	-3	0	0	0	5	4	0	3
V15-1872	1	0	0	0	1	5	2	1
V15-2261ST	1	-1	1	-1	6	2	2	-2
V16-0709PR	0	0	1	2	1	4	2	2
Mean	-2	0	-1	0	5	5	1	1
LSD(0.05)	3	3	5	1	3	2	2	4
CV(%)	124	1601	464	214	39	33	104	198

TABLE 56 - RELATIVE MATURITY (continued)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Warsaw, VA	Test Mean
Ellis	10/14	11/2	10/6	10/1	10/11	10/15
AG 53X9	5	-1	0	0	6	2
AG 55X7	3	-2	-2	1	4	1
TN09-008	4	1	-2	0	6	1
TN11-5140	9	1	4	3	12	6
AG 56X8	3	0	-1	-1	5	2
DA1134-015F	1	-2	-2	-2	4	1
DA13099-008F	3	-1	-2	-2	5	1
K15-1809	4	0	0	1	5	2
N16-590	4	-1	-2	3	9	2
N16-8531	4	-1	-2	0	6	0
N16-8564	3	0	1	2	9	2
N17-2520	5	-1	0	2	10	3
N17-882	1	-1	-1	2	5	2
NDPJE-14-194	5	0	0	4	10	2
NDPJE-14-217	4	-1	0	2	7	1
Osage	2	-1	0	1	8	1
R13-13997	6	-1	0	2	6	3
R13-14635RR	6	1	0	0	8	1
R14-1422	6	0	2	1	10	2
R15-1587	3	0	-2	0	7	1
S16-14801C	4	-2	-1	-3	6	0
S16-14869C	5	-3	-1	0	9	2
S16-3739RY	3	-1	0	0	8	2
S16-7840C	1	-2	-2	-2	5	0
S16-9030C	6	1	2	2	9	2
S16-9090C	9	-1	1	-1	9	2
TN16-5024	3	1	1	3	2	1
V14-0079	0	0	-2	-1	7	1
V15-1815DI	3	-2	1	0	10	2
V15-1872	1	-2	0	1	8	1
V15-2261ST	3	-1	0	3	9	2
V16-0709PR	9	1	-1	1	7	2
Mean	4	-1	0	1	7	2
LSD(0.05)	3	2	2	1	2	2
CV(%)	39	169	533	107	18	158

TABLE 57 - PLANT HEIGHT (INCHES)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	33	28	29	18	41	.	38	26
AG 53X9	36	36	33	26	43	.	39	31
AG 55X7	32	26	28	21	42	.	41	26
TN09-008	31	29	32	19	41	.	40	27
TN11-5140	36	32	34	23	43	.	45	29
AG 56X8	35	31	34	24	47	.	45	29
DA1134-015F	36	34	33	24	39	.	43	29
DA13099-008F	32	29	34	22	38	.	38	32
K15-1809	28	25	27	19	37	.	33	30
N16-590	36	31	34	24	40	.	40	25
N16-8531	29	26	28	23	42	.	38	28
N16-8564	34	27	28	22	42	.	37	28
N17-2520	36	35	35	25	46	.	44	26
N17-882	35	31	35	22	44	.	42	31
NDPJE-14-194	37	31	37	25	45	.	41	30
NDPJE-14-217	33	30	35	24	41	.	42	27
Osage	31	27	30	26	38	.	37	24
R13-13997	37	32	38	24	43	.	43	27
R13-14635RR	32	39	41	34	44	.	43	35
R14-1422	35	37	34	25	43	.	43	34
R15-1587	30	26	26	18	40	.	38	27
S16-14801C	34	34	38	25	42	.	42	34
S16-14869C	38	37	38	28	45	.	47	36
S16-3739RY	39	36	38	26	47	.	45	32
S16-7840C	40	38	38	30	49	.	49	35
S16-9030C	39	33	40	26	45	.	44	32
S16-9090C	37	36	35	27	45	.	46	30
TN16-5024	30	27	27	20	40	.	38	27
V14-0079	27	24	29	20	39	.	36	23
V15-1815DI	36	29	31	22	42	.	43	31
V15-1872	38	32	31	25	43	.	41	32
V15-2261ST	35	30	34	28	42	.	39	27
V16-0709PR	33	35	44	32	47	.	44	34
Mean	34	31	34	24	43	.	41	30
LSD(0.05)	5	4	5	4	4	.	2	5
CV(%)	8	7	9	9	6	.	3	10

TABLE 57 - PLANT HEIGHT (INCHES) (continued)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	*Plymouth, NC*	*Portageville, MO(A)*	*Portageville, MO(B)*	*Springfield, TN*	*Stoneville, MS*	*Stuttgart, AR*	*Warsaw, VA*	*Test Mean*
Ellis	23	13	19	26	23	25	29	27
AG 53X9	21	35	29	32	38	29	32	33
AG 55X7	22	27	26	28	29	26	31	29
TN09-008	22	15	22	28	26	26	29	28
TN11-5140	28	21	26	27	36	30	34	32
AG 56X8	28	35	31	34	35	31	34	34
DA1134-015F	25	17	23	33	30	28	33	30
DA13099-008F	24	15	19	25	31	28	28	28
K15-1809	19	14	22	24	18	27	25	25
N16-590	26	16	22	28	26	21	31	29
N16-8531	22	14	21	25	28	29	27	27
N16-8564	24	13	18	25	28	22	30	27
N17-2520	26	20	29	30	36	22	35	31
N17-882	23	17	24	29	27	36	30	31
NDPJE-14-194	26	19	25	33	31	31	31	31
NDPJE-14-217	25	16	23	33	35	31	29	30
Osage	24	14	20	28	28	23	30	27
R13-13997	24	18	21	34	30	28	31	31
R13-14635RR	34	26	23	37	45	28	38	35
R14-1422	24	19	23	33	30	29	33	32
R15-1587	23	14	20	27	25	20	29	26
S16-14801C	26	17	23	36	28	32	34	32
S16-14869C	27	20	26	38	33	31	35	34
S16-3739RY	28	16	23	34	29	31	35	33
S16-7840C	30	18	27	38	37	34	38	36
S16-9030C	28	21	25	36	32	32	35	34
S16-9090C	28	21	26	37	31	35	33	33
TN16-5024	22	14	19	29	19	22	29	26
V14-0079	20	13	18	22	19	24	31	25
V15-1815DI	23	13	23	30	31	28	33	30
V15-1872	27	17	22	29	31	30	36	31
V15-2261ST	27	15	21	29	25	28	30	29
V16-0709PR	29	25	25	38	46	31	38	36
Mean	25	19	23	31	30	28	32	30
LSD(0.05)	4	4	4	4	.	3	3	2
CV(%)	8	12	11	8	.	7	6	11

TABLE 58 - PLANT LODGING (1-5)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	1.0	1.0	1.0	1.5	1.3	.	1.0	1.0
AG 53X9	1.0	1.3	1.3	2.0	1.0	.	1.0	1.0
AG 55X7	1.0	1.0	1.0	2.0	1.0	.	1.0	1.0
TN09-008	1.0	1.0	1.0	2.0	2.3	.	1.0	1.0
TN11-5140	1.0	1.7	1.0	2.3	2.7	.	1.7	1.7
AG 56X8	1.3	1.3	1.3	2.0	1.3	.	1.0	1.0
DA1134-015F	1.3	2.3	1.3	2.0	2.7	.	2.0	2.0
DA13099-008F	1.0	2.3	2.7	2.0	2.0	.	1.0	3.7
K15-1809	1.0	1.0	1.0	2.0	1.7	.	1.0	2.0
N16-590	1.0	1.3	1.3	2.0	2.0	.	1.0	1.0
N16-8531	1.0	1.0	1.0	1.7	1.3	.	1.0	2.7
N16-8564	1.0	1.3	1.0	2.0	2.7	.	1.0	1.0
N17-2520	1.0	2.7	3.0	2.5	2.3	.	2.0	1.3
N17-882	1.0	2.3	2.0	2.0	2.0	.	1.7	4.7
NDPJE-14-194	1.3	3.0	3.0	2.8	2.3	.	1.3	1.7
NDPJE-14-217	1.7	1.3	2.0	3.0	2.0	.	1.7	2.0
Osage	1.0	1.0	1.3	1.7	1.3	.	1.0	1.7
R13-13997	1.0	1.3	2.7	2.0	2.0	.	1.3	3.0
R13-14635RR	1.0	2.0	1.0	2.8	1.0	.	1.0	1.3
R14-1422	1.3	3.0	2.7	2.5	2.3	.	2.3	4.7
R15-1587	1.0	1.3	1.0	1.7	1.7	.	1.0	1.7
S16-14801C	1.7	2.3	3.0	2.2	2.7	.	2.7	4.3
S16-14869C	1.7	3.3	2.7	3.0	2.7	.	3.0	4.3
S16-3739RY	1.0	2.3	1.3	2.0	2.3	.	2.0	3.7
S16-7840C	2.0	3.0	2.7	3.0	3.0	.	3.0	4.3
S16-9030C	1.7	2.7	2.7	2.5	2.7	.	3.0	5.0
S16-9090C	1.7	3.0	2.3	2.5	2.7	.	2.3	4.7
TN16-5024	1.0	1.0	1.0	1.7	2.0	.	1.0	1.7
V14-0079	1.0	1.0	1.0	1.7	2.0	.	1.0	1.0
V15-1815DI	1.0	1.3	1.0	2.0	2.0	.	1.0	2.0
V15-1872	1.0	1.3	1.0	2.0	1.7	.	1.0	2.0
V15-2261ST	1.0	1.0	1.0	2.0	1.7	.	1.0	1.0
V16-0709PR	1.0	1.7	2.0	3.0	1.3	.	1.0	1.3
Mean	1.2	1.8	1.7	2.2	2.0	.	1.5	2.3
LSD(0.05)	0.5	0.9	0.7	0.3	0.8	.	0.5	1.3
CV(%)	25.4	29.9	25.1	8.0	23.5	.	19.1	33.3

TABLE 58 - PLANT LODGING (1-5) (continued)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Plymouth, NC	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	1.5	1.0	1.0	1.0	1.0	1.0	1.1	1.1
AG 53X9	1.5	2.0	1.7	1.0	2.0	1.0	1.2	1.4
AG 55X7	1.5	1.0	1.0	1.0	1.0	1.0	1.2	1.1
TN09-008	1.5	1.0	1.0	1.0	1.0	1.7	1.3	1.3
TN11-5140	1.5	1.0	1.0	1.0	2.0	2.7	1.5	1.6
AG 56X8	1.5	1.3	2.0	1.0	2.3	2.3	1.5	1.5
DA1134-015F	1.5	1.0	1.0	1.0	2.7	2.0	1.7	1.8
DA13099-008F	1.5	1.0	1.0	1.0	2.0	2.3	1.5	1.8
K15-1809	1.5	1.0	1.3	1.0	1.0	1.7	1.3	1.3
N16-590	1.5	1.0	1.0	1.0	1.3	1.7	1.5	1.3
N16-8531	1.5	1.0	1.0	1.0	1.0	2.0	1.1	1.3
N16-8564	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.2
N17-2520	1.5	1.0	2.0	1.0	2.0	1.0	1.9	1.8
N17-882	1.5	1.0	1.0	1.0	1.3	3.0	1.6	1.9
NDPJE-14-194	1.5	1.0	1.7	1.0	2.7	3.0	1.7	2.0
NDPJE-14-217	1.5	1.0	1.3	1.0	3.0	3.0	1.5	1.9
Osage	1.5	1.0	1.0	1.0	2.0	1.3	1.2	1.3
R13-13997	1.5	1.0	1.0	1.0	1.7	1.3	1.2	1.6
R13-14635RR	1.5	1.0	1.3	1.0	2.0	1.0	1.1	1.4
R14-1422	1.8	1.0	2.7	1.0	2.7	2.3	1.9	2.3
R15-1587	1.5	1.0	1.0	1.0	1.3	1.0	1.2	1.2
S16-14801C	1.5	1.0	2.3	1.0	3.3	3.0	2.0	2.4
S16-14869C	1.8	1.0	2.0	1.0	3.3	3.0	2.1	2.5
S16-3739RY	1.5	1.0	1.7	1.0	2.3	2.7	1.9	1.9
S16-7840C	1.8	1.0	2.3	1.0	4.0	3.0	1.9	2.6
S16-9030C	1.5	1.0	3.0	1.0	3.0	2.7	2.1	2.5
S16-9090C	1.5	1.0	2.3	1.0	2.3	3.0	1.7	2.3
TN16-5024	1.5	1.0	1.0	1.0	1.0	1.0	1.3	1.2
V14-0079	1.5	1.0	1.0	1.0	1.0	1.0	1.3	1.2
V15-1815DI	1.5	1.0	1.0	1.0	1.7	1.7	1.4	1.4
V15-1872	1.5	1.0	1.0	1.0	1.0	2.0	1.3	1.3
V15-2261ST	1.5	1.0	1.0	1.0	1.0	1.0	1.2	1.2
V16-0709PR	1.7	1.7	2.0	1.0	2.7	1.7	1.3	1.7
Mean	1.5	1.1	1.4	1.0	1.9	1.9	1.5	1.6
LSD(0.05)	0.3	0.4	0.7		0.6	0.6	0.4	0.4
CV(%)	8.0	21.2	29.7	0.0	19.5	18.7	16.7	36.1

TABLE 59 - SEED QUALITY (1-5)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	2.0	1.0	1.7	.	1.7	1.0	1.3	2.0
AG 53X9	2.3	1.0	2.0	.	1.7	1.0	1.3	2.0
AG 55X7	2.0	1.0	1.3	.	1.3	1.0	2.0	2.0
TN09-008	1.0	1.0	2.3	.	1.7	1.0	2.0	2.0
TN11-5140	1.0	1.0	1.0	.	2.0	1.0	1.7	1.0
AG 56X8	1.0	1.0	2.0	.	2.0	1.0	1.7	2.0
DA1134-015F	2.0	1.0	1.3	.	1.3	1.0	1.7	1.0
DA13099-008F	1.0	1.0	2.0	.	1.7	1.0	1.7	1.0
K15-1809	1.0	1.0	1.3	.	1.7	1.7	1.7	1.0
N16-590	1.3	1.0	1.3	.	2.0	1.0	2.0	1.0
N16-8531	1.0	1.0	1.3	.	1.7	1.7	2.0	2.0
N16-8564	1.3	1.0	1.3	.	1.3	1.0	1.7	1.0
N17-2520	1.3	1.0	1.7	.	2.0	1.0	2.0	1.0
N17-882	2.7	1.0	2.0	.	2.0	1.0	1.7	2.0
NDPJE-14-194	1.3	1.0	2.3	.	2.0	1.3	1.7	3.0
NDPJE-14-217	1.3	1.0	2.0	.	2.0	1.7	1.3	2.0
Osage	1.0	1.0	1.3	.	1.7	1.0	1.3	1.0
R13-13997	1.3	1.0	1.3	.	2.0	1.3	2.0	2.0
R13-14635RR	2.3	1.0	1.7	.	1.7	1.3	1.3	1.0
R14-1422	2.0	1.0	2.0	.	1.7	1.0	1.7	1.0
R15-1587	2.0	1.0	1.7	.	2.0	1.3	2.0	1.0
S16-14801C	2.0	1.0	2.0	.	2.0	1.0	2.0	1.0
S16-14869C	2.0	1.0	1.7	.	1.7	1.0	1.7	1.0
S16-3739RY	2.7	1.0	1.7	.	2.0	1.0	2.0	1.0
S16-7840C	2.0	1.0	2.0	.	2.0	1.0	2.0	1.0
S16-9030C	1.0	1.0	2.0	.	1.7	1.0	2.0	1.0
S16-9090C	1.0	1.0	1.3	.	1.7	1.0	2.0	1.0
TN16-5024	2.0	1.0	1.3	.	2.0	1.0	1.3	1.0
V14-0079	2.3	1.0	1.7	.	1.7	1.0	2.0	1.0
V15-1815DI	2.0	1.0	1.7	.	1.7	1.0	1.7	1.0
V15-1872	1.3	1.0	2.0	.	1.7	1.3	1.7	2.0
V15-2261ST	1.0	1.0	2.0	.	2.0	3.0	2.0	1.0
V16-0709PR	2.3	1.0	1.7	.	1.7	1.0	2.3	1.0
Mean	1.6	1.0	1.7	.	1.8	1.2	1.8	1.4
LSD(0.05)	0.6	.	0.8	.	0.7	0.5	0.7	.
CV(%)	22.1	.	27.3	.	24.6	27.7	24.7	.

TABLE 59 - SEED QUALITY (1-5) (continued)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Plymouth, NC	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	.	2.0	2.0	1.2	.	1.0	1.0	1.5
AG 53X9	.	2.0	2.0	1.2	.	1.0	2.0	1.6
AG 55X7	.	2.0	2.0	1.0	.	1.0	1.0	1.5
TN09-008	.	2.0	2.0	1.0	.	2.0	2.7	1.7
TN11-5140	.	2.0	1.7	2.0	.	1.0	1.7	1.4
AG 56X8	.	2.0	2.0	1.3	.	1.0	1.0	1.5
DA1134-015F	.	2.0	1.7	1.0	.	1.0	1.3	1.4
DA13099-008F	.	2.0	2.0	1.0	.	1.0	1.0	1.4
K15-1809	.	2.0	2.0	1.0	.	1.0	1.7	1.4
N16-590	.	2.0	2.0	1.2	.	1.0	1.0	1.4
N16-8531	.	2.0	2.0	1.0	.		1.7	1.5
N16-8564	.	2.0	2.0	1.0	.	1.0	1.0	1.3
N17-2520	.	2.0	2.0	1.2	.	2.0	3.0	1.7
N17-882	.	2.0	2.0	1.0	.	2.0	3.0	1.8
NDPJE-14-194	.	2.0	1.3	1.0	.	2.0	1.7	1.7
NDPJE-14-217	.	2.0	2.0	1.3	.	1.0	1.0	1.5
Osage	.	2.0	1.3	1.2	.	1.0	1.0	1.2
R13-13997	.	2.0	1.3	1.3	.	1.0	1.3	1.5
R13-14635RR	.	2.0	2.0	1.5	.	1.0	2.0	1.6
R14-1422	.	2.0	1.0	1.3	.	1.0	2.0	1.5
R15-1587	.	2.0	1.3	1.0	.	1.0	2.0	1.5
S16-14801C	.	2.0	2.0	1.0	.	1.0	2.0	1.6
S16-14869C	.	2.0	1.7	1.0	.	1.0	2.0	1.5
S16-3739RY	.	2.0	2.0	1.5	.	2.0	2.3	1.8
S16-7840C	.	2.0	1.3	1.3	.	2.0	1.7	1.6
S16-9030C	.	2.0	1.7	1.0	.	1.0	2.0	1.5
S16-9090C	.	2.0	2.0	1.0	.	1.0	1.3	1.4
TN16-5024	.	2.0	2.0	1.0	.	1.0	2.0	1.5
V14-0079	.	2.0	1.0	1.0	.	1.0	2.0	1.5
V15-1815DI	.	2.0	2.0	1.3	.	1.0	2.3	1.6
V15-1872	.	2.0	2.0	1.0	.	1.0	2.0	1.6
V15-2261ST	.	2.0	2.0	1.3	.	1.0	1.7	1.7
V16-0709PR	.	2.0	2.0	1.0	.	2.0	2.3	1.7
Mean	.	2.0	1.8	1.2	.	1.2	1.7	1.5
LSD(0.05)	.	.	0.5	0.3	.	.	0.6	0.3
CV(%)	.	.	16.8	16.8	.	.	20.7	28.3

TABLE 60 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	*Belle Mina, AL*	*Bossier City, LA*	*Jackson, TN*	*Knoxville, TN*	*Manhattan, KS*	*Orange, VA*	*Ottawa, KS*	*Pine Tree, AR*
Ellis	15.3	16.1	13.4	.	9.3	11.7	11.3	13.0
AG 53X9	19.6	16.3	16.8	.	15.0	15.3	14.3	15.7
AG 55X7	17.2	16.0	14.1	.	11.7	12.7	12.0	16.5
TN09-008	18.2	17.9	16.1	.	14.7	15.0	14.7	17.6
TN11-5140	19.3	17.6	14.7	.	12.0	13.7	14.3	15.9
AG 56X8	20.1	18.6	16.0	.	13.0	13.3	15.3	17.3
DA1134-015F	17.5	13.4	14.6	.	12.3	11.7	13.3	17.7
DA13099-008F	18.5	17.4	17.1	.	13.3	13.0	14.0	14.9
K15-1809	16.9	17.2	13.8	.	11.7	12.3	14.3	17.9
N16-590	20.7	17.4	14.7	.	13.3	12.3	14.7	15.1
N16-8531	16.8	16.5	11.8	.	12.0	12.0	12.0	17.1
N16-8564	16.4	16.7	11.4	.	10.3	11.7	12.3	14.0
N17-2520	21.9	20.7	18.6	.	15.3	16.7	18.0	14.4
N17-882	19.8	18.4	15.0	.	12.3	13.7	15.7	22.2
NDPJE-14-194	19.4	17.5	14.1	.	13.0	12.0	16.0	18.5
NDPJE-14-217	19.2	18.4	13.8	.	12.7	12.3	16.3	17.6
Osage	16.8	14.9	12.0	.	10.7	11.7	11.0	14.1
R13-13997	20.8	17.5	14.6	.	12.3	14.0	13.7	16.7
R13-14635RR	17.2	16.2	13.4	.	13.0	12.7	12.0	15.0
R14-1422	16.9	14.4	14.1	.	11.7	13.0	13.0	14.8
R15-1587	16.4	15.7	13.2	.	10.7	12.0	12.7	14.8
S16-14801C	18.0	17.4	15.4	.	12.3	13.3	14.0	16.6
S16-14869C	18.6	17.0	16.1	.	11.7	12.7	13.7	16.6
S16-3739RY	18.1	15.8	15.1	.	10.7	11.7	13.0	15.1
S16-7840C	17.0	17.0	15.5	.	12.3	12.3	14.0	16.5
S16-9030C	16.4	14.8	14.2	.	11.3	12.0	12.3	15.3
S16-9090C	17.9	16.4	13.6	.	12.3	12.3	14.0	15.6
TN16-5024	15.3	16.5	13.9	.	10.7	10.3	12.0	14.1
V14-0079	18.0	17.8	14.3	.	12.0	12.0	12.7	15.5
V15-1815DI	20.8	19.4	17.0	.	12.7	14.0	14.7	17.3
V15-1872	20.4	19.6	16.8	.	13.7	14.7	15.0	17.5
V15-2261ST	17.1	17.1	15.2	.	12.0	12.5	12.7	16.0
V16-0709PR	23.5	20.5	17.7	.	14.7	16.5	16.3	19.3
Mean	18.4	17.1	14.8	.	12.3	12.9	13.8	16.2
LSD(0.05)	2.3	.	1.6	.	1.2	1.3	0.9	.
CV(%)	7.8	.	6.4	.	6.2	6.2	4.1	.

TABLE 60 - SEED SIZE (GRAMS PER 100 SEED) (continued)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Plymouth, NC	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	10.4	11.7	13.9	13.8	.	11.5	11.5	12.5
AG 53X9	13.7	14.4	14.7	15.5	.	14.1	14.5	15.5
AG 55X7	11.4	13.4	13.9	12.8	.	13.3	12.3	13.6
TN09-008	14.2	16.3	17.9	17.2	.	16.2	16.2	16.3
TN11-5140	12.8	15.1	16.4	16.2	.	13.4	14.3	15.1
AG 56X8	13.5	15.5	16.4	15.6	.	14.3	14.9	15.7
DA1134-015F	12.1	13.5	14.4	14.1	.	15.5	12.9	14.0
DA13099-008F	12.4	14.8	17.4	15.6	.	13.1	14.1	15.2
K15-1809	11.7	13.9	13.8	13.2	.	15.2	12.7	14.0
N16-590	10.8	15.0	15.6	14.9	.	12.6	14.7	14.8
N16-8531	11.6	12.9	14.3	12.5	.		13.7	13.4
N16-8564	11.9	12.4	14.4	11.3	.	13.2	13.0	12.9
N17-2520	17.3	17.9	19.1	19.2	.	13.1	19.2	18.1
N17-882	13.8	15.8	18.0	16.8	.	18.9	15.7	16.4
NDPJE-14-194	14.2	15.4	16.8	15.8	.	15.6	15.2	15.6
NDPJE-14-217	14.7	15.6	17.7	15.9	.	15.7	14.6	15.7
Osage	10.6	12.1	14.7	12.8	.	13.0	12.9	12.8
R13-13997	13.4	15.8	15.4	15.4	.	14.1	14.3	15.2
R13-14635RR	12.5	14.5	15.9	14.1	.	14.5	14.2	14.3
R14-1422	11.3	14.3	14.4	14.1	.	13.3	12.7	13.7
R15-1587	10.4	12.7	14.1	14.0	.	12.5	12.2	13.2
S16-14801C	12.2	15.0	15.7	15.7	.	14.0	13.3	14.8
S16-14869C	13.0	14.1	14.8	15.4	.	13.3	13.8	14.7
S16-3739RY	11.3	14.1	14.3	13.4	.	12.8	13.3	13.8
S16-7840C	12.9	15.5	16.1	15.2	.	14.8	13.8	14.8
S16-9030C	11.4	13.8	14.4	13.4	.	13.7	13.2	13.6
S16-9090C	12.2	15.4	15.0	13.4	.	13.2	13.5	14.2
TN16-5024	11.5	12.7	14.0	12.9	.	12.2	11.6	12.9
V14-0079	11.1	13.3	14.9	13.1	.	14.6	13.4	14.0
V15-1815DI	13.4	15.0	15.1	15.2	.	14.5	16.2	15.8
V15-1872	13.9	15.7	17.7	14.9	.	15.0	15.3	16.1
V15-2261ST	12.8	14.5	15.4	13.8	.	14.2	13.4	14.3
V16-0709PR	15.5	17.8	18.4	16.1	.	17.5	17.0	17.7
Mean	12.6	14.5	15.6	14.6	.	14.2	14.1	14.7
LSD(0.05)	1.8	1.1	0.8	1.1	.	.	0.6	0.7
CV(%)	8.6	4.4	3.1	4.6	.	.	2.7	7.2

TABLE 61 - OIL (%)†
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	18.4	.	18.7	19.0	17.1	17.9	18.9	18.6
AG 53X9	17.9	.	18.3	18.8	17.9	17.7	19.2	18.0
AG 55X7	18.3	.	18.9	19.7	18.6	18.4	20.0	18.8
TN09-008	19.5	.	19.0	20.0	18.3	18.3	19.5	18.9
TN11-5140	18.4	.	18.6	19.6	18.5	19.1	19.5	18.9
AG 56X8	17.9	.	18.3	19.1	17.6	18.0	18.4	18.4
DA1134-015F	18.7	.	19.6	19.4	17.9	18.0	19.0	18.3
DA13099-008F	19.4	.	19.6	20.0	17.6	18.2	19.3	18.9
K15-1809	18.8	.	18.4	18.4	17.5	16.0	18.7	18.8
N16-590	18.0	.	19.1	19.0	18.1	17.8	19.7	17.6
N16-8531	18.1	.	18.4	18.6	17.5	18.0	18.5	18.8
N16-8564	18.8	.	18.9	19.5	17.6	18.3	19.0	17.9
N17-2520	20.8	.	20.9	21.3	19.4	19.9	20.6	18.8
N17-882	18.0	.	18.0	18.7	18.2	18.6	19.2	20.4
NDPJE-14-194	19.1	.	19.2	19.5	18.0	18.2	19.6	18.2
NDPJE-14-217	18.4	.	19.4	19.3	17.9	18.4	19.4	18.8
Osage	17.5	.	17.7	18.1	17.0	17.3	18.4	17.7
R13-13997	18.6	.	19.0	19.7	18.0	18.7	19.4	19.4
R13-14635RR	18.5	.	19.2	19.5	17.6	17.7	19.0	18.3
R14-1422	18.4	.	18.2	18.5	16.6	17.3	18.3	17.5
R15-1587	19.0	.	19.2	19.4	17.2	17.9	18.5	18.7
S16-14801C	19.0	.	19.1	19.3	17.1	17.7	19.5	19.6
S16-14869C	18.6	.	20.0	19.7	17.6	18.5	19.5	19.4
S16-3739RY	19.4	.	19.3	19.8	17.2	17.8	19.4	18.8
S16-7840C	18.6	.	19.4	20.1	17.3	18.3	19.2	19.4
S16-9030C	19.0	.	18.7	19.3	17.9	18.2	19.2	19.1
S16-9090C	19.5	.	19.8	20.0	18.4	18.5	20.0	19.0
TN16-5024	18.9	.	19.1	19.0	16.6	17.6	18.6	18.2
V14-0079	18.8	.	18.7	19.8	18.2	18.1	20.0	18.8
V15-1815DI	19.6	.	19.8	20.0	18.7	18.5	20.2	19.8
V15-1872	18.8	.	18.0	18.7	17.2	17.6	18.7	18.0
V15-2261ST	19.4	.	18.7	18.8	18.8	18.6	20.0	18.5
V16-0709PR	19.1	.	18.4	20.0	17.8	17.6	19.5	18.5
Mean	18.8	.	19.0	19.4	17.8	18.1	19.3	18.7
LSD(0.05)	0.8	.	.	0.6	0.5	.	0.3	.
CV(%)	2.4	.	.	2.0	1.6	.	1.1	.

†Oil percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial were reported for some locations in 2021.

TABLE 61 - OIL (%)† (continued)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Plymouth, NC	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	18.4	18.2	.	18.3	20.0	18.4	19.0	18.5
AG 53X9	18.1	18.1	.	18.7	20.2	18.1	18.4	18.4
AG 55X7	18.7	18.4	.	19.3	20.4	18.8	18.6	19.0
TN09-008	19.0	19.1	.	19.7	20.0	19.4	18.9	19.2
TN11-5140	18.7	18.4	.	19.5	20.6	19.0	19.2	19.1
AG 56X8	18.2	18.5	.	18.7	20.2	18.9	19.2	18.6
DA1134-015F	18.5	18.6	.	19.0	20.6	19.2	18.9	18.9
DA13099-008F	18.5	18.9	.	20.1	20.7	18.7	18.7	19.1
K15-1809	18.0	17.6	.	18.5	19.8	19.3	18.7	18.3
N16-590	17.8	18.7	.	19.0	19.3	18.0	18.4	18.6
N16-8531	16.8	17.6	.	18.1	18.3	.	18.5	18.1
N16-8564	18.1	18.3	.	19.2	20.0	17.7	18.6	18.6
N17-2520	20.3	20.3	.	20.7	21.5	18.9	19.4	20.3
N17-882	17.8	17.9	.	18.0	18.7	20.5	19.9	18.7
NDPJE-14-194	18.6	18.7	.	19.2	20.0	17.9	19.4	18.9
NDPJE-14-217	18.3	18.5	.	19.2	20.2	19.0	19.3	18.9
Osage	18.0	17.1	.	17.9	18.5	17.6	18.9	17.8
R13-13997	19.5	18.7	.	19.5	20.7	19.4	18.4	19.1
R13-14635RR	18.4	18.1	.	19.3	20.2	18.2	19.1	18.7
R14-1422	18.4	17.2	.	18.7	20.0	17.9	18.1	18.1
R15-1587	18.7	18.4	.	19.4	19.4	18.7	18.1	18.6
S16-14801C	18.5	18.9	.	19.7	20.6	18.6	18.7	18.9
S16-14869C	19.1	19.1	.	20.1	20.6	19.2	19.0	19.2
S16-3739RY	19.3	19.0	.	19.4	20.9	18.9	19.2	19.1
S16-7840C	19.0	18.8	.	19.6	20.4	18.6	18.9	19.0
S16-9030C	19.1	18.7	.	19.1	20.6	18.9	19.3	19.0
S16-9090C	19.0	18.7	.	19.7	20.7	19.3	19.1	19.4
TN16-5024	17.9	18.1	.	18.8	18.8	19.1	19.0	18.4
V14-0079	18.7	18.8	.	19.7	20.3	19.0	18.2	19.0
V15-1815DI	19.0	19.2	.	20.1	20.5	19.4	19.0	19.5
V15-1872	17.8	18.5	.	18.7	19.5	18.5	19.1	18.4
V15-2261ST	18.2	18.6	.	19.6	20.2	18.8	18.3	19.0
V16-0709PR	19.3	18.1	.	19.5	.	19.1	19.5	19.0
Mean	18.5	18.5	.	19.2	20.1	18.8	18.9	18.8
LSD(0.05)	.	0.5	.	.	.	.	0.8	0.3
CV(%)	.	1.7	.	.	.	.	2.6	2.6

TABLE 62 - PROTEIN (%)†
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	36.7	.	36.5	35.8	33.6	34.1	33.3	35.8
AG 53X9	37.6	.	36.5	35.7	33.0	33.6	32.6	36.6
AG 55X7	37.3	.	35.7	35.1	32.8	34.0	32.1	34.2
TN09-008	34.2	.	32.8	33.3	30.7	32.2	31.0	34.6
TN11-5140	36.8	.	36.5	34.9	33.2	33.6	32.8	35.7
AG 56X8	37.1	.	36.1	34.9	32.3	33.5	33.0	35.1
DA1134-015F	37.4	.	34.9	34.9	32.8	33.2	33.1	36.7
DA13099-008F	35.1	.	35.9	34.8	33.6	34.0	33.5	35.7
K15-1809	37.5	.	36.7	37.3	34.8	37.7	35.3	37.4
N16-590	39.8	.	36.7	35.9	35.6	36.7	34.4	38.8
N16-8531	38.2	.	36.7	36.2	34.0	34.4	34.0	38.2
N16-8564	37.7	.	36.0	36.4	34.2	33.5	33.5	37.5
N17-2520	36.0	.	34.8	34.2	32.7	32.9	32.8	36.6
N17-882	40.2	.	39.8	39.4	35.9	36.8	36.1	36.3
NDPJE-14-194	35.8	.	35.7	35.4	33.6	34.2	32.3	38.2
NDPJE-14-217	37.3	.	35.2	35.8	33.9	33.4	32.9	36.1
Osage	39.8	.	37.8	37.9	35.7	35.5	34.5	38.9
R13-13997	36.8	.	36.7	35.5	32.9	33.0	32.4	35.8
R13-14635RR	36.5	.	35.3	35.0	32.9	34.0	32.4	35.6
R14-1422	36.2	.	36.1	36.1	34.1	34.2	32.9	37.5
R15-1587	35.7	.	35.3	35.3	33.4	33.5	32.7	36.2
S16-14801C	36.1	.	35.6	35.6	33.1	33.9	31.9	35.0
S16-14869C	36.3	.	34.4	34.9	32.2	32.0	32.2	35.3
S16-3739RY	36.2	.	35.2	34.6	32.7	33.8	32.4	35.9
S16-7840C	35.9	.	34.8	33.6	32.4	32.1	31.9	34.1
S16-9030C	36.2	.	36.0	35.8	31.8	33.5	32.6	35.3
S16-9090C	35.9	.	34.4	34.4	31.9	33.0	31.7	36.5
TN16-5024	34.6	.	33.5	34.3	33.1	31.9	32.5	35.3
V14-0079	37.9	.	38.2	37.0	34.5	34.7	32.7	37.7
V15-1815DI	35.8	.	35.2	35.1	32.7	34.6	32.1	35.7
V15-1872	36.4	.	37.0	35.9	33.3	34.3	31.5	37.4
V15-2261ST	37.2	.	38.0	37.4	33.3	34.2	33.7	37.3
V16-0709PR	36.4	.	36.1	34.9	32.5	35.2	32.2	36.7
Mean	36.8	.	35.9	35.6	33.3	34.0	32.9	36.3
LSD(0.05)	1.1	.	.	1.2	1.1	.	0.7	.
CV(%)	1.7	.	.	2.1	1.9	.	1.4	.

†Protein percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial in some locations were reported in 2020.

TABLE 62 - PROTEIN (%)† (continued)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Plymouth, NC	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	35.8	35.3	.	35.9	34.4	35.6	33.7	35.1
AG 53X9	36.5	34.7	.	36.1	34.6	35.2	34.3	35.1
AG 55X7	35.5	35.9	.	35.4	34.3	35.3	34.1	34.8
TN09-008	33.7	32.7	.	32.8	32.9	33.4	33.8	33.0
TN11-5140	34.8	36.5	.	36.1	33.4	35.1	32.2	34.7
AG 56X8	36.1	34.1	.	35.0	34.3	33.9	33.5	34.5
DA1134-015F	34.1	34.5	.	35.2	33.5	35.9	33.3	34.6
DA13099-008F	36.5	35.2	.	34.9	34.4	34.8	33.5	34.7
K15-1809	38.7	37.4	.	37.0	35.8	35.7	34.5	36.6
N16-590	38.3	36.4	.	36.7	36.5	36.8	35.8	36.8
N16-8531	38.9	36.5	.	37.3	36.7	.	35.7	36.4
N16-8564	37.7	36.4	.	35.7	35.8	37.4	34.9	35.9
N17-2520	35.6	34.8	.	35.5	34.0	36.8	34.3	34.7
N17-882	39.8	38.9	.	39.4	37.9	33.3	34.8	37.7
NDPJE-14-194	36.1	36.5	.	35.8	34.1	39.6	36.4	35.6
NDPJE-14-217	36.9	36.3	.	35.8	33.6	35.7	34.1	35.2
Osage	38.1	38.2	.	38.2	38.0	38.1	34.0	37.2
R13-13997	35.8	35.5	.	34.8	33.3	34.6	35.7	34.9
R13-14635RR	35.7	34.9	.	34.3	34.4	36.5	33.9	34.7
R14-1422	35.2	36.4	.	35.8	34.0	36.7	34.4	35.4
R15-1587	35.2	34.6	.	35.3	34.9	35.5	34.6	34.8
S16-14801C	35.8	34.0	.	36.8	33.5	34.9	33.5	34.6
S16-14869C	35.2	33.8	.	33.9	33.4	34.7	33.4	34.0
S16-3739RY	35.5	33.8	.	34.8	33.4	35.2	32.9	34.3
S16-7840C	34.8	33.6	.	33.9	33.9	35.7	33.3	33.8
S16-9030C	34.7	35.1	.	35.4	33.8	35.1	32.2	34.4
S16-9090C	34.9	34.5	.	34.5	33.7	34.9	32.9	34.1
TN16-5024	35.2	34.1	.	33.9	34.4	36.2	32.8	34.0
V14-0079	38.1	36.4	.	35.7	36.7	37.1	34.2	36.1
V15-1815DI	35.7	35.2	.	34.4	34.3	34.6	35.3	34.7
V15-1872	36.7	34.9	.	35.5	34.6	35.1	34.1	35.0
V15-2261ST	37.7	36.8	.	36.4	36.2	36.5	34.4	36.0
V16-0709PR	34.9	35.6	.	34.5	.	35.1	33.9	34.8
Mean	36.2	35.4	.	35.5	34.6	35.7	34.1	35.1
LSD(0.05)	.	1.0	.	.	.	.	1.7	0.6
CV(%)	.	1.8	.	.	.	.	3.0	2.5

TABLE 63 - MEAL (%)†
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Belle Mina, AL	Bossier City, LA	Jackson, TN	Knoxville, TN	Manhattan, KS	Orange, VA	Ottawa, KS	Pine Tree, AR
Ellis	49.7	.	48.8	48.1	44.1	45.2	44.6	47.8
AG 53X9	48.7	.	48.5	48.2	43.7	44.4	43.9	48.5
AG 55X7	49.5	.	47.8	47.9	43.8	45.3	43.6	45.8
TN09-008	44.9	.	44.0	44.8	40.8	42.8	41.9	46.4
TN11-5140	49.0	.	48.7	47.0	44.3	45.1	44.3	47.8
AG 56X8	48.7	.	48.1	47.8	42.6	44.3	44.0	46.7
DA1134-015F	48.6	.	47.2	46.8	43.4	44.0	44.3	48.8
DA13099-008F	47.2	.	48.5	46.9	44.4	45.2	45.2	47.8
K15-1809	50.1	.	48.9	49.7	45.9	48.7	47.2	50.1
N16-590	49.8	.	49.2	49.5	47.3	48.6	46.6	51.2
N16-8531	51.3	.	48.9	49.5	44.8	45.6	45.3	51.2
N16-8564	50.1	.	48.2	49.1	45.1	44.5	45.0	49.6
N17-2520	48.7	.	47.8	48.5	44.1	44.7	44.9	48.9
N17-882	53.5	.	52.7	53.1	47.7	49.2	48.5	49.6
NDPJE-14-194	48.2	.	48.0	48.9	44.5	45.5	43.7	50.7
NDPJE-14-217	48.2	.	47.5	48.2	44.9	44.5	44.3	48.4
Osage	52.1	.	50.0	50.5	46.8	46.7	46.0	51.4
R13-13997	48.4	.	49.2	48.1	43.6	44.1	43.7	48.3
R13-14635RR	47.3	.	47.5	47.3	43.4	44.9	43.4	47.4
R14-1422	48.2	.	48.0	47.7	44.5	45.0	43.7	49.4
R15-1587	47.7	.	47.5	48.2	43.8	44.4	43.7	48.4
S16-14801C	47.6	.	47.9	48.1	43.3	44.7	43.1	47.4
S16-14869C	47.7	.	46.7	48.2	42.5	42.7	43.5	47.6
S16-3739RY	47.5	.	47.4	47.8	43.0	44.7	43.7	48.0
S16-7840C	47.2	.	46.9	46.0	42.6	42.7	42.9	46.0
S16-9030C	48.9	.	48.1	47.8	42.2	44.6	43.9	47.4
S16-9090C	48.4	.	46.6	47.3	42.6	44.0	43.1	49.0
TN16-5024	47.2	.	45.0	46.4	43.2	42.0	43.3	47.0
V14-0079	50.8	.	51.0	49.7	45.8	46.0	44.5	50.4
V15-1815DI	48.7	.	47.7	47.7	43.7	46.2	43.7	48.4
V15-1872	48.9	.	49.1	48.5	43.8	45.2	42.2	49.6
V15-2261ST	50.9	.	50.8	49.7	44.5	45.6	45.8	49.8
V16-0709PR	48.8	.	48.1	47.4	43.0	46.4	43.5	48.9
Mean	48.9	.	48.2	48.2	44.0	45.1	44.3	48.6
LSD(0.05)	.	.	.	.	1.2	.	1.0	.
CV(%)	.	.	.	.	1.7	.	1.3	.

†Meal percentage reported on a 13% moisture basis beginning in 2018.
Protein and oil data from all replicates of a trial were reported for some locations in 2020.

TABLE 63 - MEAL (%)† (continued)
UNIFORM GROUP V 2020

STRAIN/ VARIETY	Plymouth, NC	Portageville, MO(A)	Portageville, MO(B)	Springfield, TN	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	47.7	46.9	.	47.7	46.7	47.4	45.3	46.9
AG 53X9	48.5	46.0	.	48.2	47.1	46.7	45.6	46.8
AG 55X7	47.5	47.8	.	47.7	46.9	47.3	45.5	46.7
TN09-008	45.2	44.0	.	44.5	44.7	45.1	45.2	44.4
TN11-5140	46.5	48.6	.	48.7	45.7	47.1	43.3	46.7
AG 56X8	47.9	45.5	.	46.8	46.7	45.4	45.1	46.1
DA1134-015F	45.4	46.1	.	47.3	45.8	48.3	44.6	46.4
DA13099-008F	48.6	47.2	.	47.5	47.1	46.5	44.7	46.7
K15-1809	51.3	49.3	.	49.3	48.5	48.0	46.2	48.7
N16-590	50.7	48.7	.	49.3	49.2	48.7	47.7	49.1
N16-8531	50.7	48.2	.	49.5	48.8	.	47.7	48.3
N16-8564	50.0	48.4	.	48.0	48.7	49.3	46.6	48.0
N17-2520	48.6	47.5	.	48.6	47.1	49.3	46.3	47.2
N17-882	52.6	51.5	.	52.2	50.6	45.5	47.2	50.4
NDPJE-14-194	48.2	48.9	.	48.2	46.3	52.5	49.1	47.7
NDPJE-14-217	49.1	48.3	.	48.1	45.7	47.9	45.9	47.2
Osage	50.5	50.1	.	50.6	50.6	50.3	45.6	49.3
R13-13997	48.3	47.5	.	47.0	45.6	46.7	47.6	46.9
R13-14635RR	47.5	46.3	.	46.2	46.9	48.5	45.6	46.4
R14-1422	46.9	47.8	.	47.8	46.2	48.6	45.7	46.9
R15-1587	47.0	46.1	.	47.6	47.0	47.5	45.9	46.5
S16-14801C	47.8	45.5	.	49.8	45.8	46.6	44.8	46.3
S16-14869C	47.4	45.4	.	46.1	45.7	46.6	44.8	45.8
S16-3739RY	47.7	45.4	.	47.0	45.8	47.2	44.3	46.1
S16-7840C	46.7	45.0	.	45.8	46.3	47.7	44.6	45.4
S16-9030C	46.6	46.9	.	47.5	46.2	47.0	43.3	46.2
S16-9090C	46.9	46.2	.	46.7	46.2	47.0	44.3	45.9
TN16-5024	46.5	45.3	.	45.3	46.1	48.6	44.1	45.3
V14-0079	50.9	48.8	.	48.3	50.1	49.8	45.4	48.5
V15-1815DI	48.0	47.4	.	46.7	46.9	46.7	47.3	46.9
V15-1872	48.5	46.5	.	47.5	46.7	46.8	45.8	46.7
V15-2261ST	50.1	49.1	.	49.3	49.2	48.9	45.8	48.3
V16-0709PR	47.0	47.3	.	46.6	.	47.2	45.7	46.6
Mean	48.3	47.3	.	47.8	47.1	47.7	45.7	47.0
LSD(0.05)	.	1.3	.	.	.	.	2.1	0.7
CV(%)	.	1.7	.	.	.	.	2.8	2.2

TABLE 64 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP V-EARLY 2020

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	Ellis	Commercial check	Pantalone		Conv	
2	AG 53X9	Commercial check	Commercial		RRX	
3	AG 55X7	Commercial check	Commercial		RRX	
4	TN09-008	Commercial check	Pantalone		Conv	SCN resistant
5	DA13062-001F	DA09c20-2-22-B4-B5 x DA09c002-30-24-B4-B5	Gillen		Conv	LN
6	DA1486-12F	Freedom x S11-17025	Gillen		Conv	
7	DS1169-122	(DT98-9102 x PI 587982A) x Osage	Rusty Smith	F6	Conv	heat tolereant
8	DS1169-333	(DT98-9102 x PI 587982A) x Osage	Rusty Smith	F6	Conv	heat tolereant
9	DS1247-160	(DT98-9102 x PI 587982A) x DT97-4290	Rusty Smith	F6	Conv	heat tolereant
10	DS49-142	(DT98-9102 x PI 603756) x Jake	Rusty Smith	F5	Conv	heat tolereant
11	K17-4406	TN11-5102 /435.TCS	Schapaugh		Conv	STS
12	K17-4973	TN11-5102 /K12-1348	Schapaugh		Conv	
13	K17-5013	TN11-5102 /K12-1348	Schapaugh		Conv	
14	K17-5587	K07-1633/K12-1348	Schapaugh		Conv	
15	K17-5609	K10-8556/K12-1348	Schapaugh		Conv	
16	K17-6562	LG11-6760 / R10-2346	Schapaugh		Conv	
17	N16-1296	Miller-BC(4)HOLN	Mian		Conv	HOLN
18	N17-1029	NC-Raleigh x R09-4095	Mian		Conv	
19	N17-550	LG09-7163 x R09-3789	Mian		Conv	
20	N17-551	LG09-7163 x R09-3789	Mian		Conv	
21	NC-Miller	Public cultivar	Mian		Conv	
22	R16-1445	R07-1826 x R08-47	Mozzoni		Conv	
23	R16-8295	R13-15998-19	Mozzoni		Conv	HOLN
24	R17-2442	LS03-4294 x UA5612	Mozzoni		Conv	
25	R17-283F	S13-16188 x UA5612	Mozzoni		Conv	HO
26	S16-15896C	R10-230 x S11-20124	Chen		Conv	SC, Excluder
27	S16-9478C	S11-20124 x S08-17361	Chen		Conv	SCN, SC, Excluder
28	S17-1494C	S11-16653 X S13-9205	Chen		Conv	SCN, SC, Excluder
29	S17-1980C	S11-16653 X S13-8585	Chen		Conv	SC, Excluder
30	S17CR-189R	[(S11-20124RR1(4) x TN10-5002) x (S11-20124(4) x S13-16750)]	Chen		RR1	SCN, SC, Excluder, HOLN
31	S17CR-337R	[(S11-20124RR1(4) x TN10-5002) x (S11-20124(4) x S13-16750)]	Chen		RR1	SCN, Excluder, HOLN
32	TN18-4049	NCC09-200719-1-37 x 2013-50,454	Pantalone		Conv	meal protein
33	TN18-4127	[Ellis(4) x TN13-5001LL] x [Ellis(4) x TN10-4037-HO-530-214HO]	Pantalone		Conv	HOLN
34	TN18-5530R2	Ellis x 12-61 F2 ROWS	Pantalone		RR2	
35	TN19-4064	R11-8346 x 2014-70,188	Pantalone		Conv	
36	V16-0025	JTN-5203 X Hanover (SCN)	Zhang	F4	Conv	
37	V16-0271DI	R99-1613F X VS22-465	Zhang	F4	Conv	
38	V16-2471R	JTN-4307 X V11-3098	Zhang	F4	RR1	
39	V17-0373	R09-430 x V11-2149	Zhang	F4	Conv	
40	V17-2361R	S09-6201 x V11-3163	Zhang	F4	RR1	
41	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 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 2020 ¶

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	59.2	23	20	0	1.2	27	4	.	5	R	1
AG 53X9	71.9	1	5	2	1.5	33	3	.	5	R	1
AG 55X7	64.9	6	13	2	1.2	30	4	.	5	R	1
TN09-008	60.5	18	20	2	1.5	29	1	.	1	MS	4
DA13062-001F	63.7	7	16	1	2.1	34	4	.	5	R	1
DA1486-12F	61.1	15	21	-1	1.7	29	3	.	5	R	1
DS1169-122	55.2	34	31	0	3.4	41	2	.	5	SS	3
DS1169-333	54.9	36	30	0	3.6	42	4	.	5	R	1
DS1247-160	52.5	39	33	0	3.3	41	4	.	4	R	1
DS49-142	51.8	40	36	-1	2.8	36	4	.	5	SS	3
K17-4406	62.2	11	16	1	1.3	30	4	.	5		.
K17-4973	62.1	12	18	-2	1.4	29	2	.	4	R	1
K17-5013	60.2	19	21	1	1.2	31	2	.	4		.
K17-5587	52.7	38	29	-2	1.1	23	3	.	5	S	5
K17-5609	59.7	22	19	-1	1.4	30	3	.	4	R	1
K17-6562	60.0	21	22	-3	2.2	39	3	.	4	R	1
N16-1296	59.1	26	24	3	1.7	33	4	.	5	R	1
N17-1029	56.8	32	27	0	1.2	23	4	.	5	S	5
N17-550	58.7	28	25	-3	1.5	34	5	.	5	R	1
N17-551	59.2	24	22	1	1.6	30	4	.	4	R	1
NC-Miller	58.9	27	23	2	1.6	29	4	.	4	R	1
R16-1445	62.8	9	15	3	2.0	33	3	.	4	S	5
R16-8295	50.8	41	35	4	2.5	35	3	.	5	S	5
R17-2442	62.0	13	17	2	2.9	35	4	.	5	R	1
R17-283F	61.0	16	18	3	2.0	34	4	.	5	R	1
S16-15896C	67.8	2	7	1	2.7	32	5	.	5	R	1
S16-9478C	66.9	3	10	2	2.6	33	1	.	1	R	1
S17-1494C	65.2	5	11	4	2.9	35	3	.	4	R	1
S17-1980C	65.4	4	10	3	2.4	37	2	.	3	R	1
S17CR-189R	63.5	8	14	2	3.0	36	1	.	1	S	5
S17CR-337R	62.2	10	17	1	2.7	34	1	.	1	S	5
TN18-4049	61.5	14	18	2	1.2	29	2	.	4	R	1
TN18-4127	57.7	30	24	-2	1.2	25	3	.	4	R	1
TN18-5530R2	54.2	37	31	1	1.2	28	2	.	4	R	1
TN19-4064	56.7	33	24	1	1.5	41	4	.	5	SS	3
V16-0025	57.4	31	25	0	1.2	29	1	.	3	SS	3
V16-0271DI	55.0	35	28	-1	1.1	27	3	.	4	R	1
V16-2471R	60.1	20	21	2	1.4	30	3	.	4	R	1
V17-0373	58.1	29	24	1	2.5	41	3	.	3	S	5
V17-2361R	59.1	25	23	-2	1.7	37	4	.	4	R	1
V17-2933R	60.6	17	19	0	1.9	39	3	.	5	R	1
Mean	59.8	.	.	1	1.9	33	.	.	.		.
LSD(0.05)	6.0	.	.	3	0.5	3	.	.	.		.
CV(%)	12.1	.	.	386	31	10	.	.	.		.

† Data not included in test mean: Kinston,NC. Data for one line not shown because wrong seed was sent.

‡The race 2 and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7 and HG Type 2.5.7, respectively.

¶ Data for one line is not presented because it was obvious later that the wrong seed was sent.

TABLE 66 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST V-EARLY 2020 ¶

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
Ellis	1.5	12.9	35.4	18.5	47.1			
AG 53X9	1.9	15.3	35.8	18.0	47.4			
AG 55X7	1.5	13.8	35.5	18.7	47.5			
TN09-008	2.0	17.2	33.0	19.4	44.5			
DA13062-001F	1.2	12.7	35.2	18.6	47.0	S	T	T
DA1486-12F	1.2	13.2	34.3	19.0	46.0	W	T	T
DS1169-122	1.5	12.2	35.9	17.4	47.2	P	G	Tn
DS1169-333	1.7	12.4	36.6	17.6	48.3	P	G	Tn
DS1247-160	1.8	15.0	35.5	18.0	47.0	W	G	Tn
DS49-142	1.8	15.0	36.1	18.3	48.0	P	Lt	Br
K17-4406	1.7	17.3	36.9	18.5	49.1			
K17-4973	1.7	13.0	35.6	18.2	47.3			
K17-5013	1.6	12.8	35.6	18.4	47.4			
K17-5587	2.0	12.0	34.9	19.3	47.1			
K17-5609	1.8	12.8	34.6	18.5	46.2			
K17-6562	2.1	13.8	34.4	19.7	46.5			
N16-1296	1.6	16.7	34.8	20.3	47.4	P	T	
N17-1029	2.0	15.7	34.2	21.2	47.2	W	T	
N17-550	1.7	16.5	36.4	19.4	49.1	P	T	
N17-551	1.7	16.1	36.3	19.0	48.6	P	T	
NC-Miller	1.6	17.0	33.9	20.1	46.1	P	G	
R16-1445	1.4	14.9	35.8	18.3	47.6	S	G	Tn
R16-8295	1.7	13.9	37.5	18.6	50.1	W	G	Tn
R17-2442	1.9	13.3	36.1	18.3	48.0	W	G	Tn
R17-283F	1.4	13.9	37.5	18.5	50.1	W	G	Tn
S16-15896C	1.5	14.5	36.0	18.3	47.9	W	G	T
S16-9478C	1.4	14.5	34.6	19.3	46.6	W	T	T
S17-1494C	1.9	13.6	36.1	17.8	47.7	W	G	T
S17-1980C	2.0	15.6	35.1	18.7	46.9	W	G	T
S17CR-189R	1.6	14.4	35.5	19.2	47.8	W	T	Bl
S17CR-337R	1.6	14.0	35.0	19.6	47.3	W	T	Bl
TN18-4049	1.3	14.9	34.9	18.9	46.7			
TN18-4127	1.7	12.5	35.9	18.6	48.0			
TN18-5530R2	1.6	14.7	35.2	18.6	47.0			
TN19-4064	1.7	14.1	36.5	18.1	48.4			
V16-0025	1.4	16.0	36.1	19.0	48.4	P	T	
V16-0271DI	1.8	16.0	36.1	18.8	48.4	P	G	
V16-2471R	1.1	14.6	35.6	19.1	47.8	W	T	
V17-0373	1.5	14.3	34.3	19.9	46.5	P	G	
V17-2361R	2.0	16.0	37.3	18.2	49.6	P	G	
V17-2933R	1.2	13.2	33.5	19.6	45.4	P	LT	
Mean	1.6	14.5	35.5	18.8	47.5			
LSD(0.05)	0.4	0.7	0.7	0.4	0.8			
CV(%)	26.7	5.4	2.1	2.3	1.8			

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

¶ Data for one line is not presented because it was obvious later that the wrong seed was sent.

TABLE 67 - SEED YIELD (BUSHELS PER ACRE)
PRELIMINARY GROUP V-EARLY 2020 † ‡

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	38.5	39.9	70.7	52.6	61.8	50.1	69.8	54.7	75.2	59.2
AG 53X9	62.8	36.2	113.8	51.1	60.5	69.0	80.6	57.8	79.9	71.9
AG 55X7	61.5	32.8	76.7	49.0	57.5	62.3	81.7	53.2	77.3	64.9
TN09-008	48.2	34.8	78.7	47.0	63.0	41.9	73.7	51.7	79.2	60.5
DA13062-001F	59.7	29.9	89.9	47.4	57.9	46.7	73.1	51.0	83.7	63.7
DA1486-12F	56.4	35.4	83.9	51.3	52.5	46.8	75.8	47.4	74.6	61.1
DS1169-122	44.8	34.3	67.1	36.2	54.5	46.9	64.8	54.2	73.0	55.2
DS1169-333	46.6	24.4	69.7	35.9	44.5	47.8	67.9	52.0	75.1	54.9
DS1247-160	48.1	33.3	67.1	37.7	42.1	36.3	62.3	51.3	74.8	52.5
DS49-142	45.0	27.6	72.5	36.3	50.0	42.4	56.0	45.0	67.1	51.8
K17-4406	53.2	44.9	82.2	49.9	56.9	51.5	75.3	51.9	76.7	62.2
K17-4973	59.1	28.7	78.8	53.5	57.9	51.9	75.2	50.7	69.7	62.1
K17-5013	47.6	30.8	72.3	52.3	56.5	57.7	68.8	49.5	76.8	60.2
K17-5587	40.7	24.3	61.3	54.4	60.2	35.1	70.5	43.1	55.8	52.7
K17-5609	49.5	33.3	80.1	49.5	61.9	52.3	68.0	54.6	61.6	59.7
K17-6562	43.3	29.0	85.3	49.6	52.8	56.5	63.5	54.0	74.7	60.0
N16-1296	51.1	31.2	77.2	40.5	50.7	49.7	76.8	52.7	74.2	59.1
N17-1029	51.4	29.6	71.8	39.2	59.2	47.5	75.5	37.2	72.8	56.8
N17-550	47.9	44.2	79.3	44.2	53.3	53.3	67.3	49.8	74.1	58.7
N17-551	43.3	34.0	66.3	49.0	56.8	50.6	79.1	49.7	78.5	59.2
NC-Miller	40.0	35.1	71.4	47.3	55.0	47.2	80.2	54.3	75.5	58.9
R16-1445	62.5	24.8	85.9	43.1	54.4	36.0	76.7	60.7	83.1	62.8
R16-8295	27.3	23.6	68.7	36.8	50.6	43.4	57.8	47.1	74.8	50.8
R17-2442	53.1	26.0	90.2	45.1	45.9	50.2	80.6	54.8	75.9	62.0
R17-283F	60.2	34.5	85.2	34.0	63.2	46.3	59.7	60.4	79.0	61.0
S16-15896C	56.6	35.8	101.0	49.8	61.2	50.9	81.3	61.8	79.5	67.8
S16-9478C	59.5	34.2	96.4	49.1	59.6	62.5	74.5	53.4	79.9	66.9
S17-1494C	61.8	28.5	83.5	47.4	58.8	58.6	76.0	57.9	77.7	65.2
S17-1980C	54.5	34.6	86.7	50.4	63.4	63.1	66.0	60.5	78.4	65.4
S17CR-189R	57.5	25.4	86.8	47.0	67.2	48.7	68.1	53.9	79.1	63.5
S17CR-337R	52.6	41.3	86.0	47.0	64.3	49.4	66.0	58.0	74.5	62.2
TN18-4049	51.8	37.1	82.8	42.3	62.7	49.4	70.9	51.0	81.4	61.5
TN18-4127	61.6	32.7	61.3	51.3	56.6	33.5	73.2	50.4	73.5	57.7
TN18-5530R2	46.8	31.0	62.3	43.8	56.1	35.2	74.6	42.2	72.1	54.2
TN19-4064	41.0	23.5	68.0	47.5	58.5	53.0	55.8	54.8	75.1	56.7
V16-0025	48.7	33.2	62.8	43.4	62.8	48.4	66.2	55.4	71.1	57.4
V16-0271DI	53.7	40.5	60.6	44.1	53.1	29.0	77.4	46.6	75.1	55.0
V16-2471R	52.9	22.6	81.8	43.3	58.4	41.3	72.3	50.0	81.1	60.1
V17-0373	42.8	27.3	75.9	39.8	52.6	54.0	63.4	56.6	79.4	58.1
V17-2361R	51.0	32.0	76.9	41.6	59.0	50.9	67.9	55.8	69.7	59.1
V17-2933R	54.2	44.3	78.7	41.8	61.4	51.5	66.6	51.2	79.4	60.6
Mean	50.7	32.3	77.4	45.1	56.5	48.3	70.3	51.8	75.2	59.4
LSD(0.05)	12.4	12.5	19.8	4.9	8.3	10.4	9.1	5.5	10.5	6.0
LSD(0.10)	10.3	10.4	16.5	4.1	6.9	8.7	7.6	4.6	8.8	5.1
CV(%)	12.1	17.9	12.7	5.4	7.3	10.7	6.4	5.2	6.9	12.2

† Data not included in the test mean: Kinston,NC.

‡ Data for one line is not presented because it was obvious later that the wrong seed was sent.

TABLE 68 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP V-EARLY 2020 †

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	10/13	10/20	10/8	10/8	10/15	11/1	9/30	.	10/11	10/14
AG 53X9	1	7	2	2	3	-6	-2	.	7	2
AG 55X7	0	7	3	4	0	-6	1	.	4	2
TN09-008	0	4	4	1	2	-1	1	.	6	2
DA13062-001F	0	1	1	4	-2	-6	0	.	5	1
DA1486-12F	-3	0	0	1	-1	-5	-3	.	0	-1
DS1169-122	-3	-4	-3	4	1	-5	-1	.	8	0
DS1169-333	-6	2	-4	6	0	-5	1	.	9	0
DS1247-160	0	-1	-4	6	-2	-4	-3	.	9	0
DS49-142	-3	-4	-5	2	1	-6	-2	.	6	-1
K17-4406	0	5	2	4	3	-4	-1	.	0	1
K17-4973	-6	1	-2	4	-2	-5	-2	.	-1	-1
K17-5013	0	1	2	4	0	-5	0	.	7	1
K17-5587	-9	12	-4	-6	-1	-3	-1	.	-6	-2
K17-5609	0	-3	-1	4	-1	-7	-2	.	-1	-1
K17-6562	-6	5	-4	-4	-4	-9	-3	.	0	-3
N16-1296	2	3	4	7	1	-4	3	.	9	3
N17-1029	-3	6	3	-2	0	-8	1	.	3	0
N17-550	-6	7	-3	-6	-3	-9	-4	.	2	-3
N17-551	0	4	0	4	0	-9	3	.	3	1
NC-Miller	1	6	-5	5	3	-3	3	.	10	3
R16-1445	0	7	2	6	3	-1	3	.	8	3
R16-8295	0	6	5	7	1	-1	3	.	10	4
R17-2442	0	2	-2	6	3	1	3	.	9	3
R17-283F	0	-1	0	9	4	-1	1	.	10	3
S16-15896C	0	7	3	2	0	-6	0	.	4	1
S16-9478C	0	3	1	5	3	-6	1	.	9	2
S17-1494C	1	6	-1	7	5	-1	3	.	10	4
S17-1980C	0	6	4	2	2	-1	3	.	9	3
S17CR-189R	0	6	-1	5	1	-3	-2	.	8	2
S17CR-337R	0	1	-1	10	2	-6	-2	.	8	2
TN18-4049	0	0	-4	5	3	-3	3	.	10	2
TN18-4127	-6	1	-4	-4	-1	2	0	.	-2	-2
TN18-5530R2	0	6	-4	4	3	-1	1	.	0	1
TN19-4064	0	7	-4	4	0	-1	0	.	6	1
V16-0025	-6	6	-3	4	-1	-4	-1	.	3	0
V16-0271DI	-6	-1	-4	3	0	1	0	.	0	-1
V16-2471R	0	6	-2	4	0	1	1	.	9	2
V17-0373	-3	5	-4	4	-1	1	-1	.	8	1
V17-2361R	-6	4	-4	-4	2	1	-1	.	-3	-2
V17-2933R	0	0	-1	-2	1	-4	-1	.	7	0
Mean	-2	3	-1	3	1	-3	0	.	5	1
LSD(0.05)	3	5	1	4	3	3	2	.	3	3
CV(%)	92	78	70	65	214	51	446	.	34	412

† Data for one line is not presented because it was obvious later that the wrong seed was sent.

TABLE 69 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP V-EARLY 2020 †

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	25	30	21	38	29	21	20	25	33	27
AG 53X9	34	38	27	40	30	32	36	29	37	33
AG 55X7	32	32	27	38	28	27	28	24	35	30
TN09-008	30	32	25	40	31	23	25	24	33	29
DA13062-001F	36	34	26	46	35	26	36	33	40	34
DA1486-12F	29	30	23	41	29	23	28	27	33	29
DS1169-122	44	44	35	48	45	30	46	38	43	41
DS1169-333	48	45	40	50	36	32	45	38	45	42
DS1247-160	45	44	35	50	43	32	45	37	42	41
DS49-142	40	36	31	46	30	26	43	29	42	36
K17-4406	33	36	27	38	29	24	22	29	35	30
K17-4973	36	34	22	40	30	21	22	24	34	29
K17-5013	34	33	25	39	32	25	27	26	35	31
K17-5587	26	30	16	30	26	18	15	21	24	23
K17-5609	38	33	25	43	33	24	20	23	28	30
K17-6562	38	39	39	47	40	30	46	35	41	39
N16-1296	42	35	26	38	35	26	31	33	32	33
N17-1029	24	28	19	32	24	20	16	18	28	23
N17-550	40	36	31	40	31	26	40	29	37	34
N17-551	32	33	22	38	32	23	26	25	35	30
NC-Miller	31	32	20	38	27	22	28	28	35	29
R16-1445	39	34	30	44	33	21	30	30	39	33
R16-8295	41	36	26	45	35	31	36	31	37	35
R17-2442	41	39	28	45	32	25	36	32	38	35
R17-283F	36	35	29	43	35	25	34	35	37	34
S16-15896C	37	37	24	44	34	25	27	28	33	32
S16-9478C	34	34	32	42	33	28	29	32	35	33
S17-1494C	39	39	30	45	33	27	33	32	37	35
S17-1980C	40	38	35	45	36	27	36	31	43	37
S17CR-189R	36	42	26	48	39	26	36	35	38	36
S17CR-337R	35	41	26	46	37	26	32	33	35	34
TN18-4049	30	34	22	36	34	23	26	22	36	29
TN18-4127	26	29	19	34	27	16	19	21	32	25
TN18-5530R2	29	32	21	39	31	23	22	20	35	28
TN19-4064	49	40	35	47	41	27	46	38	49	41
V16-0025	30	32	23	38	30	20	28	27	34	29
V16-0271DI	28	30	21	34	31	18	26	22	33	27
V16-2471R	36	31	27	42	28	19	23	26	34	30
V17-0373	42	45	38	48	39	32	46	37	46	41
V17-2361R	42	36	36	44	37	30	37	33	38	37
V17-2933R	45	41	32	47	39	32	44	33	43	39
Mean	36	36	27	42	33	25	32	29	37	33
LSD(0.05)	6	.	5	4	7	5	.	5	4	3
CV(%)	8	.	10	5	10	9	.	8	6	10

† Data for one line is not presented because it was obvious later that the wrong seed was sent.

TABLE 70 - PLANT LODGING (1-5)
PRELIMINARY GROUP V-EARLY 2020 †

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	1.0	.	1.8	1.0	1.0	1.0	1.0	1.0	1.5	1.2
AG 53X9	2.0	.	2.5	1.0	1.0	1.0	2.0	1.0	1.3	1.5
AG 55X7	1.0	.	2.0	1.0	1.0	1	1.0	1.0	1.2	1.2
TN09-008	1.0	.	2.0	1.0	3.0	1.0	1.0	1.5	1.2	1.5
DA13062-001F	2.0	.	2.0	1.0	3.0	2.0	2.0	2.5	2.1	2.1
DA1486-12F	2.0	.	2.0	1.0	2.5	1.0	2.0	2.0	1.3	1.7
DS1169-122	3.5	.	3.8	2.0	4.5	3.5	3.5	3.0	3.2	3.4
DS1169-333	3.5	.	4.3	2.5	4.5	3.5	4.0	3.0	3.4	3.6
DS1247-160	3.0	.	4.0	2.0	3.5	4.0	4.5	3.0	2.7	3.3
DS49-142	3.0	.	3.3	2.0	3.0	3.0	3.5	2.0	2.9	2.8
K17-4406	1.0	.	2.0	1.0	1.0	1.0	1.0	2.0	1.6	1.3
K17-4973	1.5	.	2.0	1.0	1.5	1.0	1.0	1.0	2.2	1.4
K17-5013	1.0	.	2.0	1.0	1.5	1.0	1.0	1.0	1.3	1.2
K17-5587	1.0	.	1.8	1.0	1.0	1.0	1.0	1.0	1.2	1.1
K17-5609	1.0	.	2.0	1.0	3.0	1.0	1.0	1.0	1.1	1.4
K17-6562	2.0	.	3.5	1.5	2.0	2.0	3.0	2.0	1.6	2.2
N16-1296	2.5	.	2.0	1.0	2.0	1.0	1.0	2.5	1.5	1.7
N17-1029	1.0	.	2.3	1.0	1.0	1.0	1.0	1.0	1.2	1.2
N17-550	1.5	.	2.3	1.0	1.0	1.5	2.5	1.0	1.3	1.5
N17-551	1.5	.	2.0	1.0	2.5	1.0	1.0	2.0	2.1	1.6
NC-Miller	1.5	.	2.0	1.0	3.0	1.0	1.0	2.0	1.3	1.6
R16-1445	2.5	.	2.8	1.5	2.5	1.0	1.0	2.0	2.4	2.0
R16-8295	3.0	.	2.8	1.0	4.0	2.0	2.0	3.0	2.2	2.5
R17-2442	3.0	.	2.3	2.5	4.0	2.5	3.0	3.0	2.7	2.9
R17-283F	2.0	.	2.0	2.0	3.5	2.0	1.0	2.0	1.3	2.0
S16-15896C	3.0	.	2.3	2.5	3.5	3.0	2.5	2.0	2.6	2.7
S16-9478C	4.0	.	2.8	1.5	4.0	2.0	2.0	2.5	2.4	2.6
S17-1494C	3.0	.	2.5	2.0	3.5	4.0	3.0	3.0	2.3	2.9
S17-1980C	3.0	.	3.8	1.0	2.5	1.5	3.5	1.0	2.8	2.4
S17CR-189R	3.0	.	2.0	2.5	4.0	2.5	3.0	3.0	3.6	3.0
S17CR-337R	2.5	.	2.5	2.0	3.5	2.5	3.0	3.0	2.8	2.7
TN18-4049	1.0	.	2.0	1.0	1.0	1.0	1.0	1.0	1.3	1.2
TN18-4127	1.0	.	1.8	1.0	1.0	1.0	1.0	1.0	1.6	1.2
TN18-5530R2	1.0	.	2.0	1.0	1.5	1.0	1.0	1.0	1.2	1.2
TN19-4064	1.5	.	2.0	1.0	1.5	1.0	2.0	1.5	1.2	1.5
V16-0025	1.0	.	2.0	1.0	1.0	1.0	1.0	1.0	1.3	1.2
V16-0271DI	1.0	.	1.5	1.0	1.0	1.0	1.5	1.0	1.1	1.1
V16-2471R	2.0	.	2.0	1.0	1.5	1.0	1.0	1.0	1.7	1.4
V17-0373	3.0	.	3.8	1.0	2.5	2.0	3.5	2.0	2.0	2.5
V17-2361R	2.0	.	3.0	1.0	1.5	1.0	2.5	1.0	1.2	1.7
V17-2933R	2.5	.	2.8	1.0	2.0	2.0	2.5	1.0	1.6	1.9
Mean	2.0	.	2.4	1.3	2.3	1.7	2.0	1.8	1.9	1.9
LSD(0.05)	1.2	.	0.5	0.6	1.7	0.9	0.7	0.5	0.9	0.5
CV(%)	28.9	.	9.9	21.1	36.9	25.5	17.9	15.0	22.5	31.6

† Data for one line is not presented because it was obvious later that the wrong seed was sent.

TABLE 71 - SEED QUALITY (1-5)
PRELIMINARY GROUP V-EARLY 2020 †

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	1.5	.	1.5	1.0	2.0	2.0	.	1.0	1.5	1.5
AG 53X9	1.5	.	1.5	2.0	1.0	3.0	.	2.0	2.0	1.9
AG 55X7	1.5	.	1.3	2.0	1.0	2.5	.	1.0	1.5	1.5
TN09-008	2.0	.	1.0	2.0	1.0	3.0	.	2.0	3.0	2.0
DA13062-001F	1.0	.	1.0	1.0	1.0	2.5	.	1.0	1.0	1.2
DA1486-12F	1.0	.	1.0	2.0	1.0	2.0	.	1.0	1.0	1.2
DS1169-122	1.5	.	1.0	2.0	1.0	3.0	.	1.0	1.0	1.5
DS1169-333	1.0	.	1.0	2.0	2.0	3.0	.	1.0	2.0	1.7
DS1247-160	2.0	.	1.0	2.0	1.0	3.0	.	1.0	2.0	1.8
DS49-142	2.0	.	1.0	3.0	1.0	2.5	.	1.0	2.0	1.8
K17-4406	2.0	.	1.3	2.0	1.0	2.5	.	1.0	2.0	1.7
K17-4973	1.5	.	1.7	2.0	1.0	3.0	.	1.0	1.5	1.7
K17-5013	1.5	.	1.3	1.0	1.0	3.0	.	1.0	2.0	1.6
K17-5587	2.0	.	1.5	2.0	2.0	3.0	.	1.0	2.5	2.0
K17-5609	1.5	.	1.5	2.0	2.0	3.0	.	1.0	1.5	1.8
K17-6562	2.0	.	1.5	2.0	3.0	3.0	.	1.0	2.0	2.1
N16-1296	1.5	.	1.0	2.0	2.0	3.0	.	1.0	1.0	1.6
N17-1029	2.0	.	1.0	2.0	2.0	3.0	.	1.0	2.5	2.0
N17-550	2.0	.	1.0	2.0	1.0	3.0	.	1.0	1.5	1.7
N17-551	2.0	.	1.0	2.0	1.0	2.5	.	2.0	1.5	1.7
NC-Miller	2.0	.	1.0	2.0	2.0	2.5	.	1.0	1.0	1.6
R16-1445	1.0	.	1.0	2.0	1.0	2.5	.	1.0	1.5	1.4
R16-8295	2.0	.	1.0	2.0	1.0	3.0	.	1.0	1.5	1.7
R17-2442	2.0	.	1.0	2.0	2.0	3.0	.	1.0	2.0	1.9
R17-283F	1.0	.	1.0	1.0	1.0	2.5	.	1.0	2.0	1.4
S16-15896C	1.0	.	1.0	2.0	1.0	2.5	.	1.0	2.0	1.5
S16-9478C	1.0	.	1.0	2.0	1.0	2.0	.	1.0	2.0	1.4
S17-1494C	2.0	.	1.0	2.0	2.0	2.5	.	1.0	2.5	1.9
S17-1980C	2.0	.	1.0	2.0	2.0	2.5	.	1.0	3.0	2.0
S17CR-189R	1.0	.	1.0	2.0	2.0	2.5	.	1.0	2.0	1.6
S17CR-337R	1.5	.	1.0	2.0	2.0	2.0	.	1.0	2.0	1.6
TN18-4049	1.0	.	1.0	2.0	1.0	2.5	.	1.0	1.0	1.3
TN18-4127	2.0	.	1.5	2.0	1.0	2.0	.	1.0	2.0	1.7
TN18-5530R2	1.5	.	1.0	2.0	2.0	3.0	.	1.0	1.0	1.6
TN19-4064	2.0	.	1.3	2.0	1.0	2.5	.	2.0	1.0	1.7
V16-0025	1.5	.	1.0	2.0	2.0	2.0	.	1.0	1.0	1.4
V16-0271DI	2.0	.	1.0	2.0	2.0	2.5	.	1.0	2.0	1.8
V16-2471R	1.0	.	1.0	1.0	1.0	2.0	.	1.0	1.0	1.1
V17-0373	1.5	.	1.3	2.0	1.0	2.0	.	1.0	1.5	1.5
V17-2361R	2.0	.	1.5	2.0	2.0	2.5	.	2.0	2.0	2.0
V17-2933R	1.0	.	1.0	2.0	1.0	2.0	.	1.0	1.0	1.2
Mean	1.6	.	1.1	1.9	1.4	2.6	.	1.1	1.7	1.6
LSD(0.05)	0.8	.	0.3	.	.	0.9	.	.	1.0	0.4
CV(%)	23.5	.	11.9	.	.	16.4	.	.	28.6	26.7

† Data for one line is not presented because it was obvious later that the wrong seed was sent.

TABLE 72 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP V-EARLY 2020 †

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	13.2	14.9	12.6	11.0	13.8	13.9	.	.	11.6	12.9
AG 53X9	16.5	16.8	14.7	15.0	15.7	15.3	.	14.3	14.2	15.3
AG 55X7	13.4	16.0	12.7	13.0	15.3	14.8	.	13.1	12.5	13.8
TN09-008	17.0	19.2	16.5	15.0	18.4	18.8	.	15.9	16.7	17.2
DA13062-001F	11.9	14.6	12.6	12.0	13.4	13.4	.	11.8	12.0	12.7
DA1486-12F	12.4	14.6	13.3	13.0	13.2	15.0	.	11.8	12.1	13.2
DS1169-122	11.9	13.2	11.3	11.0	13.2	13.5	.	11.9	11.9	12.2
DS1169-333	12.0	14.2	11.0	11.0	13.7	13.4	.	11.3	12.5	12.4
DS1247-160	14.7	15.9	13.5	14.0	17.2	16.6	.	13.9	14.1	15.0
DS49-142	14.7	16.3	14.3	13.0	16.4	15.6	.	14.1	15.3	15.0
K17-4406	16.7	18.2	17.8	16.0	18.6	19.1	.	16.0	16.0	17.3
K17-4973	13.0	16.4	11.9	11.0	14.0	14.1	.	12.0	11.3	13.0
K17-5013	12.1	15.1	11.9	12.0	13.6	14.3	.	12.1	11.4	12.8
K17-5587	11.4	14.4	11.4	11.0	13.2	13.6	.	11.2	10.2	12.0
K17-5609	12.3	14.1	12.7	12.0	14.3	13.4	.	12.3	11.9	12.8
K17-6562	13.1	15.5	12.4	12.0	15.6	15.9	.	13.8	12.4	13.8
N16-1296	16.0	17.2	16.8	15.0	18.5	18.0	.	16.0	16.2	16.7
N17-1029	14.6	18.3	15.5	13.0	16.9	17.3	.	15.3	14.6	15.7
N17-550	15.1	18.2	15.2	15.0	18.5	18.7	.	16.2	15.7	16.5
N17-551	15.5	18.4	15.3	14.0	17.7	18.8	.	14.8	14.2	16.1
NC-Miller	18.8	18.7	15.6	14.0	18.3	18.8	.	15.1	15.8	17.0
R16-1445	14.0	16.5	14.5	13.0	15.6	17.1	.	13.7	14.3	14.9
R16-8295	13.1	15.7	14.1	12.0	14.5	14.5	.	13.0	13.8	13.9
R17-2442	13.4	15.4	12.6	12.0	14.2	14.9	.	12.3	11.7	13.3
R17-283F	13.5	14.7	14.5	13.0	15.0	13.4	.	12.0	14.9	13.9
S16-15896C	14.3	18.8	14.2	13.0	14.4	14.9	.	12.9	12.9	14.5
S16-9478C	14.6	15.6	14.1	14.0	15.7	15.4	.	12.8	14.3	14.5
S17-1494C	13.4	15.4	13.3	13.0	14.1	15.0	.	12.4	12.3	13.6
S17-1980C	15.5	16.7	15.2	14.0	16.7	16.6	.	14.8	15.6	15.6
S17CR-189R	14.3	15.3	14.0	14.0	15.3	15.8	.	13.1	13.8	14.4
S17CR-337R	13.9	14.6	13.9	13.0	15.2	15.2	.	13.0	13.2	14.0
TN18-4049	14.8	15.5	14.0	14.0	15.9	17.1	.	14.5	13.5	14.9
TN18-4127	12.7	14.7	11.9	11.0	13.4	14.1	.	10.9	11.2	12.5
TN18-5530R2	14.0	17.2	13.7	13.0	15.9	17.0	.	13.6	12.9	14.7
TN19-4064	13.0	16.6	13.2	12.0	16.0	16.1	.	13.2	12.9	14.1
V16-0025	14.1	18.0	15.3	14.0	18.1	18.3	.	15.7	14.5	16.0
V16-0271DI	14.5	17.8	13.7	15.0	17.4	20.2	.	15.2	14.3	16.0
V16-2471R	14.6	16.5	14	12.0	16.9	15.4	.	13.9	13.8	14.6
V17-0373	13.9	15.0	13.4	13.0	15.9	15.4	.	13.9	13.9	14.3
V17-2361R	16.3	17.4	15.3	13.0	16.9	18.1	.	15.7	14.9	16.0
V17-2933R	12.5	14.6	13.0	12.0	14.2	14.6	.	12.4	12.6	13.2
Mean	14.1	16.1	13.8	13.0	15.6	15.9	.	13.5	13.5	14.5
LSD(0.05)	1.2	1.1	1.2	.	.	1.0	.	.	0.7	0.7
CV(%)	4.2	3.5	4.2	.	.	3.2	.	.	2.7	5.4

† Data for one line is not presented because it was obvious later that the wrong seed was sent.

TABLE 73 - OIL (%)† ‡
PRELIMINARY GROUP V-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	19.0	17.8	19.3	18.9	18.4	16.9	19.1	18.6	18.3	18.5
AG 53X9	17.9	16.1	18.9	19.2	18.0	16.8	19.8	18.1	17.4	18.0
AG 55X7	18.7	17.4	19.5	19.8	18.4	17.6	20.1	19.1	18.2	18.7
TN09-008	19.9	18.5	20.4	19.5	19.1	18.2	20.0	20.0	18.8	19.4
DA13062-001F	18.8	16.9	19.8	19.4	18.4	17.4	19.9	18.6	18.2	18.6
DA1486-12F	18.7	17.6	19.7	20.1	18.8	18.0	20.1	18.9	18.7	19.0
DS1169-122	18.0	16.8	18.5	18.3	16.6	15.6	18.4	17.4	16.6	17.4
DS1169-333	18.1	16.2	18.7	16.9	17.6	17.1	18.6	17.7	17.3	17.6
DS1247-160	18.6	17.1	20.3	17.6	17.1	15.4	20.6	17.8	17.5	18.0
DS49-142	19.0	17.4	19.2	18.5	17.7	17.1	19.7	18.2	18.2	18.3
K17-4406	19.3	15.3	20.2	19.4	18.2	17.1	20.2	18.4	18.2	18.5
K17-4973	19.0	17.5	19.2	18.5	18.0	16.5	19.2	18.4	17.7	18.2
K17-5013	19.0	16.8	19.6	18.9	18.2	17.0	19.7	18.3	18.0	18.4
K17-5587	20.4	17.6	20.8	19.8	18.4	17.8	19.9	19.6	19.5	19.3
K17-5609	19.8	17.9	19.5	19.0	17.9	17.0	19.9	18.3	17.4	18.5
K17-6562	20.4	17.1	21.1	20.3	19.2	18.9	21.1	19.5	19.3	19.7
N16-1296	21.0	19.6	20.9	19.9	20.1	18.9	21.7	20.2	20.4	20.3
N17-1029	22.2	20.3	22.3	20.5	20.5	20.4	22.1	21.0	21.5	21.2
N17-550	19.3	16.9	20.9	20.0	19.8	18.3	20.1	19.1	19.9	19.4
N17-551	19.0	18.3	20.2	19.7	18.6	17.7	20.6	18.7	18.4	19.0
NC-Miller	20.3	19.1	21.3	20.3	20.0	18.7	20.7	20.7	19.8	20.1
R16-1445	19.1	16.6	19.2	18.2	17.8	16.6	20.2	18.4	18.3	18.3
R16-8295	.	17.5	19.8	18.2	18.4	17.5	20.2	18.7	18.1	18.6
R17-2442	19.0	17.1	18.9	18.8	17.9	17.6	19.3	18.4	17.8	18.3
R17-283F	18.9	18.2	19.8	18.0	18.4	16.9	20.2	18.1	17.8	18.5
S16-15896C	19.5	16.4	19.3	19.0	18.1	17.2	19.4	18.4	17.9	18.3
S16-9478C	19.9	18.3	20.2	19.4	18.9	18.1	20.8	19.1	19.2	19.3
S17-1494C	18.2	16.6	18.5	18.6	17.8	16.2	18.9	17.9	17.7	17.8
S17-1980C	18.9	17.6	20.0	19.3	18.5	17.3	19.5	18.8	18.1	18.7
S17CR-189R	20.1	17.0	20.6	18.9	19.5	17.3	21.4	19.1	19.4	19.2
S17CR-337R	.	18.4	21.1	18.9	19.4	17.7	21.8	19.3	19.5	19.6
TN18-4049	19.4	17.7	20.0	19.3	18.7	17.5	20.5	18.8	18.2	18.9
TN18-4127	19.1	17.8	19.3	19.3	18.0	17.1	19.8	18.9	18.6	18.6
TN18-5530R2	19.7	17.3	19.5	19.4	18.0	16.9	20.1	18.7	18.2	18.6
TN19-4064	19.3	16.3	19.5	18.3	17.5	16.2	20.1	18.0	17.9	18.1
V16-0025	19.8	17.2	20.1	19.2	19.1	17.7	19.6	19.3	19.0	19.0
V16-0271DI	19.3	18.2	19.7	19.4	18.5	17.0	20.0	19.0	18.3	18.8
V16-2471R	20.1	17.3	20.0	19.6	18.5	17.9	20.2	18.8	19.2	19.1
V17-0373	20.8	18.0	21.3	19.9	19.7	18.5	21.5	19.9	19.6	19.9
V17-2361R	18.3	16.1	19.3	19.3	17.8	17.1	19.5	18.0	18.4	18.2
V17-2933R	19.6	18.3	21.0	20.5	19.4	18.0	21.4	19.7	18.9	19.6
Mean	19.4	17.5	19.9	19.2	18.5	17.4	20.1	18.8	18.5	18.8
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.4
CV(%)	.	.	.	.	.	.	.	.	.	2.3

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

‡ Data for one line is not presented because it was obvious later that the wrong seed was sent.

TABLE 74 - PROTEIN (%)† ‡
PRELIMINARY GROUP V-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	34.5	37.0	35.1	33.5	36.0	36.9	35.7	35.1	34.5	35.4
AG 53X9	36.9	39.4	35.3	32.3	36.1	36.9	33.9	35.5	35.6	35.8
AG 55X7	35.8	38.3	35.1	32.4	36.6	37.2	34.8	35.0	34.8	35.5
TN09-008	33.0	34.6	32.8	31.3	34.4	34.1	32.7	31.7	32.6	33.0
DA13062-001F	35.2	38.4	34.7	32.0	36.4	36.9	34.2	34.5	34.2	35.2
DA1486-12F	35.2	36.9	34.2	31.3	35.4	35.2	33.5	34.0	33.4	34.3
DS1169-122	35.3	37.5	35.6	32.1	38.4	37.4	35.4	36.4	35.1	35.9
DS1169-333	36.6	39.8	36.6	32.1	38.1	36.5	36.8	36.2	36.8	36.6
DS1247-160	35.0	36.7	33.4	32.7	38.2	38.6	34.7	35.6	34.3	35.5
DS49-142	36.2	38.2	36.3	32.4	37.2	36.8	36.0	35.6	35.8	36.1
K17-4406	35.4	40.5	35.5	34.2	37.7	39.2	36.1	36.8	36.6	36.9
K17-4973	35.7	36.1	35.5	33.7	36.4	37.5	35.4	35.3	34.7	35.6
K17-5013	35.2	38.8	34.1	33.4	37.1	37.4	35.5	35.5	33.8	35.6
K17-5587	34.0	38.2	33.5	32.6	36.9	36.2	35.1	34.5	33.6	34.9
K17-5609	33.5	36.1	32.9	32.7	37.0	36.3	34.4	34.4	34.3	34.6
K17-6562	33.0	39.3	33.1	31.9	36.4	34.2	32.6	34.5	34.5	34.4
N16-1296	34.1	35.9	34.9	32.6	36.0	36.7	33.3	35.2	34.4	34.8
N17-1029	32.7	37.0	33.6	32.5	35.7	34.3	34.4	35.2	32.4	34.2
N17-550	37.5	39.8	35.0	34.7	36.0	37.5	35.9	36.7	34.7	36.4
N17-551	36.9	38.7	35.6	34.0	37.6	38.4	33.7	35.6	35.8	36.3
NC-Miller	33.7	36.8	33.1	31.8	35.5	35.0	32.9	33.0	33.2	33.9
R16-1445	35.4	37.5	35.3	33.0	37.2	37.6	35.1	36.0	34.9	35.8
R16-8295	.	38.8	37.0	34.7	39.3	37.5	38.1	37.9	37.2	37.5
R17-2442	36.3	38.0	36.2	33.6	38.1	36.9	35.0	35.7	35.2	36.1
R17-283F	36.9	38.7	37.7	35.4	38.7	38.6	37.1	37.6	37.1	37.5
S16-15896C	35.8	39.2	35.7	33.6	37.5	37.8	35.1	34.7	34.8	36.0
S16-9478C	34.3	36.1	34.8	32.8	36.4	35.8	33.4	34.7	33.0	34.6
S17-1494C	36.4	38.2	36.3	32.7	36.4	37.9	36.1	36.0	34.7	36.1
S17-1980C	35.6	37.8	34.4	31.7	36.4	35.6	35.4	34.7	34.7	35.1
S17CR-189R	34.3	38.6	35.0	33.4	36.1	37.3	34.2	36.2	34.7	35.5
S17CR-337R	.	36.9	34.7	32.8	36.2	36.8	33.7	35.3	33.8	35.0
TN18-4049	34.8	37.3	34.2	32.4	35.8	37.0	33.1	35.0	34.3	34.9
TN18-4127	35.8	37.4	35.9	34.1	37.4	37.4	34.8	35.4	35.3	35.9
TN18-5530R2	34.3	37.7	34.8	32.1	37.5	37.3	34.3	34.7	33.8	35.2
TN19-4064	35.2	39.8	36.2	34.4	38.8	38.9	34.3	36.4	34.6	36.5
V16-0025	35.7	38.2	36.2	33.8	37.0	37.8	36.5	36.2	33.4	36.1
V16-0271DI	35.7	38.2	35.2	33.5	37.3	38.9	35.4	35.5	35.7	36.1
V16-2471R	34.6	38.6	35.6	32.1	37.6	36.8	34.8	35.6	34.8	35.6
V17-0373	32.9	38.0	34.1	31.0	35.7	35.5	33.2	34.3	34.0	34.3
V17-2361R	37.9	41.0	36.6	33.3	38.3	38.1	37.4	37.5	35.7	37.3
V17-2933R	32.3	36.0	32.4	31.5	35.1	35.6	32.3	33.1	33.7	33.5
Mean	35.1	37.9	35.0	32.9	36.9	36.9	34.8	35.3	34.6	35.5
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.7
CV(%)	.	.	.	.	.	.	.	.	.	2.1

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

‡ Data for one line is not presented because it was obvious later that the wrong seed was sent.

TABLE 75 - ESTIMATED MEAL PROTEIN (%)† ‡
PRELIMINARY GROUP V-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	46.4	48.9	47.2	44.9	47.9	48.3	47.9	46.9	45.9	47.1
AG 53X9	48.9	51.0	47.4	43.5	47.8	48.2	45.9	47.2	46.8	47.4
AG 55X7	47.9	50.3	47.4	43.8	48.7	49.1	47.3	47.0	46.2	47.5
TN09-008	44.8	46.2	44.7	42.3	46.2	45.2	44.4	43.0	43.6	44.5
DA13062-001F	47.2	50.2	47.1	43.2	48.5	48.5	46.5	46.0	45.4	47.0
DA1486-12F	47.0	48.7	46.3	42.6	47.4	46.6	45.6	45.6	44.6	46.0
DS1169-122	46.8	49.0	47.4	42.8	50.0	48.1	47.1	47.8	45.7	47.2
DS1169-333	48.6	51.7	48.9	42.0	50.2	47.9	49.1	47.9	48.3	48.3
DS1247-160	46.7	48.1	45.6	43.1	50.1	49.5	47.5	47.0	45.1	47.0
DS49-142	48.6	50.3	48.9	43.2	49.1	48.2	48.7	47.3	47.6	48.0
K17-4406	47.7	51.9	48.4	46.1	50.0	51.3	49.2	49.0	48.6	49.1
K17-4973	47.9	47.5	47.7	45.0	48.2	48.8	47.6	47.0	45.8	47.3
K17-5013	47.2	50.7	46.1	44.7	49.3	49.0	48.0	47.2	44.8	47.4
K17-5587	46.4	50.3	46.0	44.1	49.2	47.9	47.6	46.6	45.4	47.1
K17-5609	45.4	47.8	44.4	43.9	49.1	47.5	46.7	45.7	45.1	46.2
K17-6562	45.0	51.6	45.6	43.6	48.9	45.8	45.0	46.5	46.4	46.5
N16-1296	46.9	48.5	48.0	44.3	48.9	49.1	46.2	48.0	47.0	47.4
N17-1029	45.7	50.5	47.0	44.5	48.9	46.9	48.0	48.4	44.8	47.2
N17-550	50.5	52.0	48.1	47.2	48.7	49.8	48.9	49.2	47.0	49.1
N17-551	49.6	51.4	48.4	46.1	50.2	50.7	46.1	47.6	47.7	48.6
NC-Miller	46.0	49.4	45.7	43.4	48.2	46.8	45.1	45.2	45.0	46.1
R16-1445	47.5	48.9	47.5	43.9	49.2	49.0	47.8	47.9	46.3	47.6
R16-8295	.	51.1	50.1	46.1	52.3	49.3	51.8	50.6	49.4	50.1
R17-2442	48.7	49.8	48.5	45.0	50.5	48.6	47.2	47.6	46.5	48.0
R17-283F	49.4	51.4	51.0	47.0	51.6	50.5	50.5	50.0	49.0	50.1
S16-15896C	48.2	51.0	48.0	45.1	49.8	49.6	47.4	46.1	46.1	47.9
S16-9478C	46.5	48.0	47.4	44.2	48.8	47.5	45.8	46.5	44.4	46.6
S17-1494C	48.4	49.8	48.4	43.7	48.2	49.1	48.4	47.6	45.8	47.7
S17-1980C	47.7	49.8	46.7	42.6	48.6	46.8	47.7	46.5	46.0	46.9
S17CR-189R	46.6	50.5	47.8	44.8	48.7	49.1	47.3	48.7	46.8	47.8
S17CR-337R	.	49.1	47.8	44.0	48.8	48.6	46.8	47.6	45.7	47.3
TN18-4049	46.9	49.3	46.4	43.7	47.9	48.7	45.2	46.9	45.6	46.7
TN18-4127	48.1	49.5	48.3	45.9	49.5	49.0	47.1	47.4	47.1	48.0
TN18-5530R2	46.3	49.6	46.9	43.3	49.6	48.8	46.6	46.3	44.9	47.0
TN19-4064	47.4	51.7	48.8	45.8	51.1	50.4	46.6	48.2	45.8	48.4
V16-0025	48.4	50.2	49.2	45.5	49.7	50.0	49.3	48.7	44.9	48.4
V16-0271DI	48.0	50.7	47.7	45.2	49.7	50.9	48.1	47.6	47.5	48.4
V16-2471R	47.0	50.8	48.4	43.4	50.1	48.7	47.4	47.6	46.8	47.8
V17-0373	45.1	50.4	47.1	42.1	48.3	47.3	45.9	46.5	45.9	46.5
V17-2361R	50.4	53.1	49.3	44.8	50.7	50.0	50.4	49.7	47.5	49.6
V17-2933R	43.7	47.8	44.5	43.1	47.3	47.2	44.7	44.8	45.1	45.4
Mean	47.3	50.0	47.5	44.2	49.2	48.6	47.3	47.3	46.2	47.5
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.8
CV(%)	.	.	.	.	.	.	.	.	.	1.8

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

‡ Data for one line is not presented because it was obvious later that the wrong seed was sent.

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST V-EARLY 2020 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
Ellis	10.7	3.6	22.5	55.4	7.8
AG 53X9	10.3	4.0	21.7	56.2	7.7
AG 55X7	11.1	3.3	21.5	56.8	7.3
DA13062-001F	11.5	3.7	21.1	60.7	2.9
N16-1296	8.9	3.4	59.8	25.0	3.0
R16-8295	9.7	3.5	44.5	37.6	4.7
R17-283F	7.5	3.2	76.9	6.6	5.8
S17CR-189R	7.1	2.6	81.7	4.0	4.7
S17CR-337R	7.4	2.7	75.3	9.5	5.0
TN18-4127	7.3	2.6	82.5	5.2	2.4
Mean	9.2	3.3	50.8	31.7	5.1
LSD(0.05)	0.7	0.2	9.2	7.8	0.9
CV(%)	8.6	8.0	19.4	26.3	19.3

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

SEED PALMITIC ACID (%)
PRELIMINARY GROUP V-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	10.1	10.9	10.8	10.7	11.0	11.1	11.7	9.9	10.2	10.7
AG 53X9	10.5	10.3	10.1	10.3	10.6	10.9	9.9	10.3	10.2	10.3
AG 55X7	10.5	10.7	11.3	11.0	11.1	11.5	11.4	11.4	11.3	11.1
DA13062-001F	11.1	11.3	11.3	11.3	11.7	11.7	11.9	11.3	11.9	11.5
N16-1296	6.4	11.6	7.0	7.8	9.8	7.6	12.0	8.2	9.4	8.9
R16-8295	10.7	8.4	11.0	7.2	10.2	10.1	9.8	9.6	10.2	9.7
R17-283F	7.4	7.3	7.3	7.1	7.8	7.4	7.6	7.6	7.6	7.5
S17CR-189R	7.4	7.1	6.7	7.3	6.9	7.6	6.6	7.1	7.2	7.1
S17CR-337R	7.3	6.9	6.9	7.0	8.1	8.6	7.3	8.0	7.0	7.4
TN18-4127	7.2	7.1	7.0	7.0	7.3	7.4	8.2	7.2	7.4	7.3
Mean	8.9	9.2	8.9	8.7	9.4	9.4	9.6	9.1	9.2	9.2
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.7
CV(%)	.	.	.	.	.	.	.	.	.	8.6

SEED STEARIC ACID (%)
PRELIMINARY GROUP V-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	3.6	3.6	3.4	4.4	3.4	3.7	3.8	3.2	3.0	3.6
AG 53X9	4.0	4.0	3.6	4.8	4.1	3.9	4.3	3.8	3.7	4.0
AG 55X7	3.2	2.9	2.9	4.3	3.1	3.3	3.7	3.0	3.0	3.3
DA13062-001F	3.7	4.1	3.1	4.9	3.8	3.6	3.5	3.6	3.3	3.7
N16-1296	3.1	3.4	2.9	4.2	4.3	3.2	3.1	3.2	3.4	3.4
R16-8295	4.4	3.3	2.9	4.9	3.3	3.5	3.6	3.0	2.9	3.5
R17-283F	3.0	2.9	2.9	4.7	3.1	3.2	3.5	2.9	2.6	3.2
S17CR-189R	2.6	2.5	2.2	3.2	2.8	2.8	2.3	2.3	2.2	2.6
S17CR-337R	2.7	2.5	2.3	3.6	2.8	2.9	2.8	2.6	2.4	2.7
TN18-4127	2.6	2.4	2.4	3.0	2.6	2.6	2.7	2.5	2.6	2.6
Mean	3.3	3.2	2.9	4.2	3.3	3.3	3.3	3.0	2.9	3.3
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.2
CV(%)	.	.	.	.	.	.	.	.	.	8.0

SEED OLEIC ACID (%)
PRELIMINARY GROUP V-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	22.5	22.8	16.4	19.3	19.1	15.8	17.5	38.0	31.3	22.5
AG 53X9	20.8	29.0	20.5	20.9	21.7	19.0	23.0	19.5	21.1	21.7
AG 55X7	20.8	26.9	20.5	22.7	20.3	20.0	24.3	20.2	17.8	21.5
DA13062-001F	19.9	26.0	19.5	22.4	20.3	19.4	24.0	21.5	17.4	21.1
N16-1296	85.1	33.4	84.3	67.8	39.1	81.9	25.4	68.5	53.0	59.8
R16-8295	21.5	51.2	30.9	76.6	43.0	41.8	45.5	51.7	38.0	44.5
R17-283F	78.3	80.0	80.2	74.2	76.9	70.8	81.8	75.9	74.1	76.9
S17CR-189R	81.3	82.6	85.0	78.1	82.1	77.9	86.0	82.4	79.8	81.7
S17CR-337R	70.4	82.7	86.7	77.5	68.8	61.8	84.4	65.5	80.0	75.3
TN18-4127	84.6	86.2	85.7	84.0	83.3	82.3	69.2	84.3	82.5	82.5
Mean	50.5	52.1	53.0	54.3	47.5	49.1	48.1	52.7	49.5	50.8
LSD(0.05)	.	.	.	.	.	.	.	.	.	9.2
CV(%)	.	.	.	.	.	.	.	.	.	19.4

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP V-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	56.9	55.5	60.8	57.5	58.3	60.0	59.7	42.8	47.1	55.4
AG 53X9	57.5	50.1	58.7	56.1	56.0	57.7	55.8	58.1	56.1	56.2
AG 55X7	59.0	52.9	58.0	54.6	58.3	57.7	54.8	57.8	58.1	56.8
DA13062-001F	62.7	55.8	63.5	58.6	61.6	60.6	58.4	60.9	64.2	60.7
N16-1296	3.5	48.3	3.8	18.0	42.6	5.1	54.2	18.1	31.1	25.0
R16-8295	56.0	33.3	48.7	10.4	38.1	38.8	38.2	31.3	43.2	37.6
R17-283F	5.9	5.1	4.6	7.7	6.6	10.4	3.2	7.1	8.9	6.6
S17CR-189R	3.9	3.4	2.3	6.1	3.8	5.8	2.1	3.5	5.1	4.0
S17CR-337R	15.0	3.5	0.3	6.4	14.9	20.2	2.2	18.2	5.1	9.5
TN18-4127	3.4	2.4	3.0	3.7	4.4	5.1	16.9	3.7	4.2	5.2
Mean	32.4	31.0	30.4	27.9	34.5	32.1	34.5	30.1	32.3	31.7
LSD(0.05)	.	.	.	.	.	.	.	.	.	7.8
CV(%)	.	.	.	.	.	.	.	.	.	26.3

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP V-EARLY 2020

STRAIN/ VARIETY	Jackson, TN	Kinston, NC	Knoxville, TN	Ottawa, KS	Pinetree, AR	Portageville, MO(B)	Stoneville, MS	Stuttgart, AR	Warsaw, VA	Test Mean
Ellis	6.8	7.2	8.6	8.1	8.2	9.4	7.3	6.1	8.4	7.8
AG 53X9	7.2	6.5	7.1	7.9	7.6	8.5	6.9	8.3	8.9	7.7
AG 55X7	6.5	6.6	7.2	7.4	7.2	7.6	5.7	7.6	9.8	7.3
DA13062-001F	2.6	2.8	2.6	2.8	2.7	4.6	2.2	2.7	3.3	2.9
N16-1296	1.9	3.3	2.0	2.2	4.2	2.3	5.3	2.1	3.3	3.0
R16-8295	7.4	3.8	6.5	0.8	5.4	5.7	2.9	4.5	5.7	4.7
R17-283F	5.4	4.7	5.0	6.4	5.7	8.2	3.8	6.5	6.8	5.8
S17CR-189R	4.9	4.4	3.7	5.4	4.4	5.9	3.0	4.6	5.6	4.7
S17CR-337R	4.6	4.4	3.9	5.5	5.5	6.5	3.3	5.7	5.4	5.0
TN18-4127	2.2	2.0	2.0	2.4	2.4	2.6	3.0	2.2	3.3	2.4
Mean	4.9	4.6	4.9	4.9	5.3	6.1	4.3	5.0	6.0	5.1
LSD(0.05)	.	.	.	.	.	.	.	.	.	0.9
CV(%)	.	.	.	.	.	.	.	.	.	19.3

TABLE 76 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP V-LATE 2020

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG 55X7	Commercial check	Commercial		RRX	
2	TN11-5140	Commercial check	Panatalone		Conv	
3	AG56X8	Commercial check	Commercial		RRX	
4	N16-7403	Holladay x Fiskeby V	Carter	F4	Conv	diversity
5	N16-7526	Holladay x Fiskeby III	Carter	F4	Conv	diversity,drought,ozone
6	N16-7558	Holladay x Fiskeby III	Carter	F4	Conv	diversity,drought,ozone
7	N16-8423	NC-Roy x LG01-5087-5	Carter	F4	Conv	diversity
8	N16-8437	NC-Roy x LG01-5087-5	Carter	F4	Conv	diversity
9	N16-8458	NC-Roy x LG01-5087-5	Carter	F4	Conv	diversity
10	N17-2319	HR10-1-540 x R05-655	Mian		Conv	
11	N17-2488	R05-655 x NC-Miller	Mian		Conv	
12	N17-2491	R05-655 x NC-Miller	Mian		Conv	
13	N17-2496	R05-655 x NC-Miller	Mian		Conv	
14	N17-701	LD02-4485 x R10-5828	Mian		Conv	
15	R13-11034	R06-4433 x R01-2731F	Mozzoni		Conv	
16	R15-5695	V06-3392 x N02-417	Mozzoni		Conv	elevated oil
17	R16-45	R07-6669 x UA5612	Mozzoni		Conv	
18	R17-7481RR	NCC07-1148RR x R09-1589	Mozzoni		RR1	
19	V14-3987	(Glenn x V03-4660) x Glenn	Zhang	F4	Conv	
20	V16-0269DI	R99-1613F x VS22-465	Zhang	F4	Conv	diversity
21	V16-1485ST	S09-9943 x UA 5612	Zhang	F4	Conv	
22	V16-2057R	Glenn x S07-10311	Zhang	F4	RR1	
23	V17-3034R2LA	V12-0287R2 x TN09-008	Zhang	F4	RR2	LN
24	V17-3039R2LA	V12-0287R2 x TN09-008	Zhang	F4	RR2	LN

† 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 2020

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	60.2	1	6	0	1.4	29	4	.	5	R	1
TN11-5140	56.9	6	12	6	2.1	34	4	.	5	R	1
AG56X8	57.6	4	10	0	1.7	32	3	.	4	R	1
N16-7403	50.1	21	18	-2	1.6	24	4	.	5	S	5
N16-7526	46.7	24	20	0	1.9	27	3	.	5	S	5
N16-7558	49.8	22	17	0	1.9	28	4	.	5	S	5
N16-8423	53.0	17	15	5	1.4	35	4	.	5	R	1
N16-8437	53.2	16	13	5	1.2	33	4	.	5	SS	3
N16-8458	54.0	15	13	7	2.2	31	4	.	5	MR	2
N17-2319	56.3	8	12	1	1.3	29	4	.	5	SS	3
N17-2488	56.0	11	11	1	1.3	28	4	.	5	R	1
N17-2491	56.1	10	10	2	1.3	28	5	.	5	R	1
N17-2496	55.4	12	11	4	1.3	29	4	.	5	R	1
N17-701	57.9	3	6	4	1.4	30	4	.	4	SS	3
R13-11034	58.5	2	7	2	2.0	31	4	.	3	R	1
R15-5695	57.3	5	9	3	1.7	32	4	.	4	R	1
R16-45	56.5	7	12	0	2.1	37	4	.	4	R	1
R17-7481RR	54.1	14	14	1	2.7	34	5	.	5	S	5
V14-3987	55.3	13	12	2	1.3	24	5	.	5	R	1
V16-0269DI	50.9	20	18	1	1.7	29	4	.	5	R	1
V16-1485ST	56.3	9	9	6	2.3	38	5	.	5	SS	3
V16-2057R	52.1	19	12	3	1.3	28	5	.	4	R	1
V17-3034R2LA	48.0	23	18	-1	1.2	26	2	.	3	R	1
V17-3039R2LA	52.2	18	16	3	1.3	29	1	.	1	R	1
Mean	54.3	.	.	2	1.7	30	.	.	.		.
LSD(0.05)	7.0	.	.	3	0.5	3	.	.	.		.
CV(%)	13.3	.	.	103	31	9	.	.	.		.

†Data not included in the test mean: NA

‡The race 2 and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 78 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST V-LATE 2020

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
AG 55X7	1.0	14.0	35.1	19.1	47.1			
TN11-5140	1.2	14.6	35.3	18.8	47.3			
AG56X8	1.2	16.0	34.4	18.7	46.0			
N16-7403	1.6	14.6	35.4	18.0	47.0	P	G	
N16-7526	1.8	16.2	34.8	19.0	46.7	P	G	
N16-7558	1.6	16.4	35.3	19.1	47.3	P	G	
N16-8423	1.2	13.0	35.1	18.4	46.8	P	G	
N16-8437	1.4	12.9	35.4	17.9	46.8	P	G	
N16-8458	1.2	11.9	37.2	16.7	48.5	P	G	
N17-2319	1.2	16.0	35.0	19.2	47.1	P	G	
N17-2488	1.6	17.1	34.0	20.2	46.2	P	G	
N17-2491	1.6	14.6	33.2	20.1	45.2	P	G	
N17-2496	1.2	15.6	34.4	19.8	46.6	P	G	
N17-701	1.4	15.7	35.6	19.0	47.7	P	G	
R13-11034	1.2	14.2	34.7	18.8	46.4	W	G	Tn
R15-5695	1.6	16.7	34.8	19.4	46.9	P	T	Tn
R16-45	1.4	15.1	34.1	19.4	46.0	S	G	Tn
R17-7481RR	1.8	12.0	36.0	17.7	47.6	P	T	Tn
V14-3987	1.6	14.0	36.6	18.1	48.6	W	G	
V16-0269DI	1.6	15.3	35.8	18.7	47.9	P	G	
V16-1485ST	1.4	14.2	35.2	17.9	46.6	P	G	
V16-2057R	1.4	15.9	35.1	19.2	47.2	W	T	
V17-3034R2LA	2.2	16.0	34.0	19.4	45.9	P	G	
V17-3039R2LA	2.3	17.0	34.7	19.0	46.6	P	G	
Mean	1.5	15.0	35.1	18.8	46.9			
LSD(0.05)	0.6	1.0	0.9	0.4	1.1			
CV(%)	29.0	5.8	2.3	1.9	2.1			

§ 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 2020 †

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	45.8	88.6	49.7	60.0	49.2	68.1	60.2
TN11-5140	37.4	102.4	40.4	37.9	50.3	73.1	56.9
AG56X8	42.0	93.5	41.1	41.8	60.4	67.0	57.6
N16-7403	31.0	76.4	45.7	47.9	46.0	53.4	50.1
N16-7526	24.7	64.7	45.1	45.1	41.9	58.8	46.7
N16-7558	26.6	72.3	48.9	39.0	45.4	66.9	49.8
N16-8423	36.2	84.7	37.7	45.4	50.9	63.3	53.0
N16-8437	43.1	79.6	35.2	53.9	53.5	53.8	53.2
N16-8458	37.8	79.9	36.9	51.1	54.1	64.0	54.0
N17-2319	41.2	79.2	45.9	60.2	50.8	60.8	56.3
N17-2488	41.7	91.0	45.2	43.6	52.2	62.6	56.0
N17-2491	43.8	76.9	45.2	55.0	47.9	67.6	56.1
N17-2496	41.6	77.6	49.7	45.0	52.3	66.2	55.4
N17-701	42.0	88.8	49.8	42.7	54.3	69.6	57.9
R13-11034	36.9	83.0	51.8	52.4	54.2	73.0	58.5
R15-5695	37.4	84.2	44.2	56.1	53.4	68.4	57.3
R16-45	33.9	87.1	44.1	61.3	51.4	61.4	56.5
R17-7481RR	29.5	83.0	42.8	54.3	53.1	62.1	54.1
V14-3987	39.5	82.0	49.3	50.2	47.0	63.8	55.3
V16-0269DI	34.5	76.6	42.8	42.3	43.7	65.6	50.9
V16-1485ST	43.2	81.6	37.1	48.1	56.3	71.5	56.3
V16-2057R	42.0	78.5	50.6	24.3	49.3	67.9	52.1
V17-3034R2LA	40.5	64.7	49.2	41.5	31.4	60.4	48.0
V17-3039R2LA	40.3	71.5	44.7	48.2	42.1	66.2	52.2
Mean	38.0	81.2	44.7	47.8	49.6	64.8	54.3
LSD(0.05)	9.1	16.0	5.4	14.8	10.8	5.4	7.0
LSD(0.10)	7.5	13.2	4.5	12.3	9.0	4.5	5.9
CV(%)	11.6	9.5	5.9	15.0	10.5	4.1	13.3

† Data not included in the test mean: None excluded

TABLE 80 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	10/19	10/12	10/12	10/15	.	10/17	10/15
TN11-5140	8	5	6	7	.	6	6
AG56X8	-5	1	2	2	.	-1	0
N16-7403	-5	-2	-4	2	.	-3	-2
N16-7526	-4	-1	0	2	.	4	0
N16-7558	-1	-1	-2	2	.	1	0
N16-8423	4	3	9	4	.	5	5
N16-8437	3	6	9	5	.	6	5
N16-8458	8	3	9	9	.	7	7
N17-2319	4	-1	-2	4	.	0	1
N17-2488	2	-2	2	3	.	1	1
N17-2491	1	-1	0	6	.	4	2
N17-2496	4	1	2	8	.	5	4
N17-701	4	-1	7	5	.	5	4
R13-11034	2	-2	1	6	.	4	2
R15-5695	5	0	3	3	.	5	3
R16-45	-4	-1	1	1	.	1	0
R17-7481RR	-2	-1	5	3	.	3	1
V14-3987	3	0	2	7	.	3	2
V16-0269DI	2	0	0	2	.	1	1
V16-1485ST	5	8	6	5	.	7	6
V16-2057R	2	0	5	3	.	5	3
V17-3034R2LA	5	-1	-5	2	.	-4	-1
V17-3039R2LA	2	3	1	7	.	4	3
Mean	2	1	2	4	.	3	2
LSD(0.05)	2	1	4	3	.	4	3
CV(%)	67	73	84	42	.	62	103

TABLE 81 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	30	27	41	26	23	29	29
TN11-5140	38	32	42	28	32	35	34
AG56X8	33	30	44	25	30	31	32
N16-7403	28	20	31	23	20	25	24
N16-7526	28	21	34	27	25	31	27
N16-7558	29	23	35	26	24	32	28
N16-8423	39	31	48	28	30	37	35
N16-8437	36	24	41	30	31	37	33
N16-8458	34	25	41	29	33	29	31
N17-2319	34	26	36	28	23	29	29
N17-2488	31	25	38	26	25	27	28
N17-2491	32	25	37	25	23	28	28
N17-2496	34	24	39	24	25	30	29
N17-701	32	29	39	24	25	31	30
R13-11034	34	27	42	22	29	32	31
R15-5695	34	26	38	32	31	30	32
R16-45	40	32	47	35	34	35	37
R17-7481RR	36	27	44	33	31	35	34
V14-3987	28	19	34	20	20	27	24
V16-0269DI	34	24	38	24	25	29	29
V16-1485ST	42	40	45	31	35	38	38
V16-2057R	32	26	39	16	23	32	28
V17-3034R2LA	35	20	38	20	18	26	26
V17-3039R2LA	30	24	41	25	25	31	29
Mean	33	26	39	26	26	31	30
LSD(0.05)	7	5	4	7	4	2	3
CV(%)	3	9	4	13	6	4	9

TABLE 82 - PLANT LODGING (1-5)
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	1.8	2.0	1.0	1.0	1.5	1.1	1.4
TN11-5140	2.3	2.0	2.0	2.0	3.0	1.6	2.1
AG56X8	1.8	2.0	1.5	1.0	2.5	1.2	1.7
N16-7403	2.0	2.0	1.5	1.5	1.0	1.6	1.6
N16-7526	2.8	2.0	1.5	2.5	1.5	1.2	1.9
N16-7558	2.3	2.0	1.5	2.5	2.0	1.2	1.9
N16-8423	1.8	2.0	1.0	1.5	1.0	1.0	1.4
N16-8437	1.5	2.0	1.0	1.0	1.0	1.0	1.2
N16-8458	3.0	2.0	1.5	2.5	3.0	1.5	2.2
N17-2319	1.5	2.0	1.0	1.0	1.0	1.2	1.3
N17-2488	1.5	2.5	1.0	1.0	1.0	1.0	1.3
N17-2491	1.5	2.0	1.0	1.0	1.5	1.1	1.3
N17-2496	2.0	2.0	1.0	1.0	1.0	1.1	1.3
N17-701	1.8	2.0	1.0	1.0	1.5	1.1	1.4
R13-11034	2.5	2.3	1.5	2.5	2.0	1.1	2.0
R15-5695	2.0	2.0	1.0	2.0	2.0	1.1	1.7
R16-45	2.0	2.5	1.5	2.5	2.5	1.3	2.1
R17-7481RR	2.8	2.0	3.0	5.0	2.5	1.2	2.7
V14-3987	1.8	1.8	1.0	1.0	1.0	1.2	1.3
V16-0269DI	2.3	2.0	1.0	1.5	2.0	1.3	1.7
V16-1485ST	1.8	3.8	1.0	3.5	2.0	1.8	2.3
V16-2057R	1.5	2.0	1.0	1.0	1.0	1.1	1.3
V17-3034R2LA	1.5	1.8	1.0	1.0	1.0	1.0	1.2
V17-3039R2LA	1.5	2.0	1.0	1.0	1.0	1.2	1.3
Mean	1.9	2.1	1.3	1.7	1.6	1.2	1.7
LSD(0.05)	0.7	0.3	0.8	0.9	0.9	0.3	0.5
CV(%)	16.9	6.9	30.0	26.5	24.8	11.8	31.1

TABLE 83 - SEED QUALITY (1-5)
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	.	.	1.0	1.0	1.0	1.0	1.0
TN11-5140	.	.	2.0	1.0	1.0	1.0	1.2
AG56X8	.	.	2.0	1.0	1.0	1.0	1.2
N16-7403	.	.	2.0	1.0	1.0	2.0	1.6
N16-7526	.	.	2.0	2.0	1.0	2.0	1.8
N16-7558	.	.	2.0	1.0	1.0	2.0	1.6
N16-8423	.	.	1.0	1.0	1.0	1.5	1.2
N16-8437	.	.	2.0	1.0	1.0	1.5	1.4
N16-8458	.	.	2.0	1.0	1.0	1.0	1.2
N17-2319	.	.	1.0	1.0	1.0	1.5	1.2
N17-2488	.	.	2.0	1.0	1.0	2.0	1.6
N17-2491	.	.	2.0	1.0	1.0	2.0	1.6
N17-2496	.	.	2.0	1.0	1.0	1.0	1.2
N17-701	.	.	2.0	1.0	1.0	1.5	1.4
R13-11034	.	.	1.0	1.0	1.0	1.5	1.2
R15-5695	.	.	2.0	2.0	1.0	1.5	1.6
R16-45	.	.	1.0	2.0	2.0	1.0	1.4
R17-7481RR	.	.	2.0	2.0	1.0	2.0	1.8
V14-3987	.	.	2.0	1.0	1.0	2.0	1.6
V16-0269DI	.	.	2.0	1.0	1.0	2.0	1.6
V16-1485ST	.	.	2.0	1.0	1.0	1.5	1.4
V16-2057R	.	.	2.0	2.0	1.0	1.0	1.4
V17-3034R2LA	.	.	2.0	2.0	2.0	2.5	2.2
V17-3039R2LA	.	.	2.0	2.0	2.0	3.0	2.3
Mean	.	.	1.8	1.3	1.1	1.6	1.5
LSD(0.05)	.	.	.	.	.	0.8	0.6
CV(%)	.	.	.	.	.	25.1	29.0

TABLE 84 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	16.1	.	13.0	14.9	13.7	12.2	14.0
TN11-5140	17.2	.	13.0	14.7	14.1	13.9	14.6
AG56X8	17.5	.	15.0	18.0	15.0	14.5	16.0
N16-7403	14.3	.	14.0	16.3	15.2	13.4	14.6
N16-7526	16.8	.	15.0	17.6	15.6	15.8	16.2
N16-7558	17.1	.	15.0	18.3	16.4	15.2	16.4
N16-8423	13.3	.	13.0	13.0	12.9	12.8	13.0
N16-8437	13.7	.	12.0	13.9	12.8	12.0	12.9
N16-8458	12.4	.	11.0	12.4	11.6	12.1	11.9
N17-2319	17.6	.	15.0	18.0	16.7	13.0	16.0
N17-2488	18.1	.	15.0	19.1	17.8	15.7	17.1
N17-2491	15.7	.	14.0	15.5	14.0	13.7	14.6
N17-2496	17.6	.	15.0	16.9	14.9	13.7	15.6
N17-701	18.6	.	15.0	15.8	14.7	14.1	15.7
R13-11034	15.8	.	13.0	15.5	14.0	12.8	14.2
R15-5695	18.9	.	15.0	18.1	16.4	15.1	16.7
R16-45	16.8	.	13.0	17.8	14.5	13.4	15.1
R17-7481RR	13.2	.	12.0	13.1	11.9	10.2	12.0
V14-3987	15.9	.	13.0	14.6	13.7	12.6	14.0
V16-0269DI	18.1	.	14.0	15.9	15.5	13.0	15.3
V16-1485ST	14.7	.	13.0	15.3	13.8	14.2	14.2
V16-2057R	17.6	.	16.0	16.5	15.6	14.1	15.9
V17-3034R2LA	18.9	.	13.0	17.1	17.0	13.7	16.0
V17-3039R2LA	18.6	.	15.0	18.2	17.8	15.5	17.0
Mean	16.4	.	13.8	16.1	14.8	13.6	15.0
LSD(0.05)	1.4	.	.	.	.	0.8	1.0
CV(%)	4.2	.	.	.	.	3.0	5.8

TABLE 85 - OIL (%)†
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	18.1	20.0	20.1	18.4	18.9	19.0	19.1
TN11-5140	18.3	19.8	19.2	18.1	18.1	19.5	18.8
AG56X8	18.1	20.0	18.5	18.3	18.6	18.8	18.7
N16-7403	17.9	18.9	18.1	17.5	18.0	17.8	18.0
N16-7526	18.5	20.1	19.1	18.4	18.9	18.9	19.0
N16-7558	18.5	20.2	19.3	18.7	18.8	19.0	19.1
N16-8423	17.6	19.2	18.1	18.8	18.9	17.9	18.4
N16-8437	17.7	18.6	17.7	17.7	18.4	17.4	17.9
N16-8458	16.8	17.3	16.7	16.3	16.7	16.7	16.7
N17-2319	18.7	20.4	20.0	17.6	19.4	19.0	19.2
N17-2488	19.2	21.6	20.2	19.9	20.0	20.2	20.2
N17-2491	19.9	21.2	20.0	19.6	20.1	20.0	20.1
N17-2496	19.2	20.7	19.8	19.5	19.9	19.6	19.8
N17-701	18.7	19.4	19.3	18.9	18.8	18.6	19.0
R13-11034	18.2	19.5	19.5	18.4	18.6	18.6	18.8
R15-5695	19.1	21.0	19.7	19.1	19.4	18.2	19.4
R16-45	18.9	21.4	19.5	19.0	19.0	18.7	19.4
R17-7481RR	17.4	18.7	17.5	17.9	17.7	17.1	17.7
V14-3987	17.5	18.4	18.8	18.0	18.0	17.9	18.1
V16-0269DI	18.1	19.4	18.9	18.2	18.7	18.7	18.7
V16-1485ST	17.1	18.7	18.3	18.0	17.9	17.2	17.9
V16-2057R	18.5	20.0	19.0	19.1	19.4	19.2	19.2
V17-3034R2LA	18.5	20.3	19.8	19.2	19.2	19.2	19.4
V17-3039R2LA	18.6	20.0	18.9	18.8	19.1	18.9	19.0
Mean	18.3	19.8	19.0	18.5	18.8	18.6	18.8
LSD(0.05)	.	.	.	.	.	.	0.4
CV(%)	.	.	.	.	.	.	1.9

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

TABLE 86 - PROTEIN (%)†
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	37.6	33.6	32.0	37.3	35.8	34.2	35.1
TN11-5140	37.1	34.9	33.4	37.0	36.2	33.5	35.3
AG56X8	36.2	32.7	33.3	36.0	34.7	33.5	34.4
N16-7403	36.6	33.8	34.6	36.4	36.4	34.7	35.4
N16-7526	36.8	31.9	32.8	37.7	35.6	34.1	34.8
N16-7558	37.9	34.1	33.0	36.0	35.9	34.6	35.3
N16-8423	37.4	33.7	34.6	35.1	35.1	34.8	35.1
N16-8437	36.0	34.6	34.3	36.7	35.3	35.4	35.4
N16-8458	37.6	36.6	36.5	38.2	37.7	36.5	37.2
N17-2319	37.2	34.5	32.8	35.3	36.0	34.3	35.0
N17-2488	36.7	31.4	33.2	34.6	34.6	33.4	34.0
N17-2491	34.4	32.5	31.6	34.7	33.7	32.4	33.2
N17-2496	36.7	33.6	32.7	35.5	34.2	33.4	34.4
N17-701	38.1	35.9	33.1	36.2	35.4	34.9	35.6
R13-11034	36.3	34.9	31.5	36.1	35.5	33.9	34.7
R15-5695	36.9	33.5	32.4	36.2	34.8	35.0	34.8
R16-45	35.9	32.1	31.2	36.5	35.3	34.0	34.1
R17-7481RR	37.4	35.4	34.8	37.7	35.5	35.3	36.0
V14-3987	39.0	37.0	33.8	36.7	37.5	35.9	36.6
V16-0269DI	39.8	35.3	33.3	37.1	35.4	34.1	35.8
V16-1485ST	37.4	35.5	32.7	34.9	34.9	35.8	35.2
V16-2057R	37.0	35.0	33.1	35.3	35.9	34.2	35.1
V17-3034R2LA	36.4	33.3	32.4	34.2	34.7	33.3	34.0
V17-3039R2LA	36.5	33.8	34.2	35.5	34.6	33.5	34.7
Mean	37.0	34.1	33.2	36.1	35.5	34.4	35.1
LSD(0.05)	.	.	.	.	.	.	0.9
CV(%)	.	.	.	.	.	.	2.3

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

TABLE 87 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pine Tree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	50.0	45.6	43.6	49.7	48.0	45.9	47.1
TN11-5140	49.4	47.3	44.8	49.1	48.1	45.1	47.3
AG56X8	48.1	44.5	44.3	47.9	46.3	44.8	46.0
N16-7403	48.5	45.3	45.9	48.0	48.2	45.9	47.0
N16-7526	49.1	43.4	44.1	50.2	47.6	45.7	46.7
N16-7558	50.6	46.4	44.5	48.1	48.1	46.4	47.3
N16-8423	49.3	45.4	45.8	46.9	47.1	46.1	46.8
N16-8437	47.6	46.3	45.3	48.4	47.0	46.5	46.8
N16-8458	49.1	48.1	47.7	49.5	49.2	47.7	48.5
N17-2319	49.7	47.1	44.6	46.5	48.5	46.0	47.1
N17-2488	49.3	43.6	45.2	46.9	47.0	45.5	46.2
N17-2491	46.6	44.8	42.9	46.9	45.9	44.0	45.2
N17-2496	49.4	46.1	44.4	48.0	46.5	45.2	46.6
N17-701	50.9	48.4	44.6	48.5	47.4	46.5	47.7
R13-11034	48.2	47.1	42.4	48.1	47.5	45.3	46.4
R15-5695	49.7	46.1	43.8	48.6	46.9	46.5	46.9
R16-45	48.1	44.3	42.0	48.9	47.4	45.5	46.0
R17-7481RR	49.2	47.3	45.8	49.9	46.9	46.3	47.6
V14-3987	51.4	49.3	45.2	48.6	49.7	47.5	48.6
V16-0269DI	52.8	47.6	44.6	49.3	47.3	45.6	47.9
V16-1485ST	49.1	47.4	43.5	46.2	46.2	47.0	46.6
V16-2057R	49.3	47.6	44.5	47.5	48.5	45.9	47.2
V17-3034R2LA	48.6	45.4	43.9	46.0	46.6	44.7	45.9
V17-3039R2LA	48.7	46.0	45.8	47.5	46.5	44.9	46.6
Mean	49.3	46.3	44.5	48.1	47.4	45.9	46.9
LSD(0.05)	.	.	.	.	.	.	1.1
CV(%)	.	.	.	.	.	.	2.1

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

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST V-LATE 2020 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AG 55X7	11	3.0	22	56	7.3
TN11-5140	11	3.3	19	59	8.2
AG56X8	12	3.4	20	57	8.4
V17-3034R2LA	12	3.1	19	58	8.1
V17-3039R2LA	12	3.2	19	58	8.2
Mean	12	3.2	20	58	8.1
LSD(0.05)	0.3	0.2	1.3	1.0	0.5
CV(%)	2.0	6.1	5.3	1.5	4.7

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

SEED PALMITIC ACID (%)
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pinetree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	10.8	10.8	10.6	11.0	11.4	12.0	11.1
TN11-5140	11.0	11.1	10.9	11.4	11.3	11.0	11.1
AG56X8	11.1	11.4	11.4	11.9	11.6	12.1	11.6
V17-3034R2LA	11.9	11.5	11.6	12.1	11.8	12.2	11.8
V17-3039R2LA	11.6	11.6	11.8	12.1	12.0	12.6	11.9
Mean	11.3	11.3	11.3	11.7	11.6	12.0	11.5
LSD(0.05)	.	.	.	.	.	.	0.3
CV(%)	,	,	,	,	,	,	2.0

SEED STEARIC ACID (%)
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pinetree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	2.9	2.7	3.7	3.1	2.9	2.7	3.0
TN11-5140	3.2	3.0	4.3	3.4	3.1	3.0	3.3
AG56X8	3.4	2.9	4.1	3.7	3.4	3.1	3.4
V17-3034R2LA	3.0	3.0	3.4	3.2	3.1	3.1	3.1
V17-3039R2LA	3.2	3.2	3.3	3.2	2.9	3.1	3.2
Mean	3.1	3.0	3.7	3.3	3.1	3.0	3.2
LSD(0.05)	.	.	.	.	.	.	0.2
CV(%)	,	,	,	,	,	,	6.1

SEED OLEIC ACID (%)
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pinetree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	27.2	22.2	21.9	21.9	21.1	20.2	22.4
TN11-5140	22.5	17.2	20.3	16.8	18.3	17.0	18.7
AG56X8	25.3	19.1	20.4	17.5	19.4	16.9	19.8
V17-3034R2LA	20.1	18.4	20.2	18.5	18.6	16.6	18.7
V17-3039R2LA	24.6	18.3	19.0	16.8	18.1	16.7	18.9
Mean	23.9	19.0	20.3	18.3	19.1	17.5	19.7
LSD(0.05)	.	.	.	.	.	.	1.3
CV(%)	,	,	,	,	,	,	5.3

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pinetree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	52.7	57.5	56.8	56.5	57.4	56.0	56.1
TN11-5140	56.0	60.0	56.9	59.4	59.7	59.7	58.6
AG56X8	53.3	58.1	55.8	57.7	57.8	58.0	56.8
V17-3034R2LA	57.8	59.6	56.5	57.9	58.4	58.6	58.1
V17-3039R2LA	54.2	59.3	57.5	59.0	58.8	57.9	57.8
Mean	54.8	58.9	56.7	58.1	58.4	58.1	57.5
LSD(0.05)	.	.	.	.	.	.	1.0
CV(%)	,	,	,	,	,	,	1.5

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP V-LATE 2020

STRAIN/ VARIETY	Kinston, NC	Knoxville, TN	Ottawa, KS	Pinetree, AR	Stuttgart, AR	Warsaw, VA	Test Mean
AG 55X7	6.4	6.7	7.1	7.5	7.2	9.0	7.3
TN11-5140	7.3	8.7	7.6	9.0	7.7	9.2	8.2
AG56X8	7.0	8.3	8.3	9.2	7.9	9.9	8.4
V17-3034R2LA	7.1	7.5	8.2	8.4	8.0	9.5	8.1
V17-3039R2LA	6.3	7.7	8.5	8.8	8.2	9.7	8.2
Mean	6.8	7.8	7.9	8.6	7.8	9.4	8.1
LSD(0.05)	.	.	.	.	.	.	0.5
CV(%)	,	,	,	,	,	,	4.7

TABLE 88 - PARENTAGE OF ENTRIES
UNIFORM GROUP VI 2020

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG64X8 RR2X	Commercial check	Commercial		RRX	
2	NC-Dunphy	Commercial check	Commercial		Conv	
3	NC-Dilday	Commercial check	Commercial		Conv	
4	CZ6316LL	Commercial check	Commercial		LL	
5	G15-1038R2	G10PR-56248R2 x G10PR-56466R2	Zenglu Li	F5d	RR2	
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	G16-4162R2	G06-3182RR x G10PR-86R2 (R2)	Zenglu Li	F5d	RR2	
9	G16-4995R2	G10PR-56444R2 x G11PR-407R2	Zenglu Li	F5d	RR2	
10	G16-8779	LG06-5920 x G00-3880	Zenglu Li	F4d	Conv	
11	G16LL-10015	G08-394 x [G00-3213(2) x A5547-127 Liberty]	Zenglu Li	F6d	LL	
12	N10-7412	5157 x 93705-50	Carter	F4	Conv	drought
13	N11-12528	NC-Roy x PI 603308B	Carter	F4	Conv	diversity/elevated protein
14	N16-10756	NMS4-44-329 x N7103	Carter	F4	Conv	diversity/elevated protein
15	N16-559	N08-145 x Pro5-10	Mian		Conv	
16	N16-8876	N02-7002 x NMS4-1-45	Carter	F4	Conv	diversity/elevated protein
17	N16-9064	N7103 x NMS5-48-2-75	Carter	F4	Conv	diversity/elevated protein
18	N16-9211	N7103 x NMS5-48-2-75	Carter	F4	Conv	diversity
19	N16-D49-2524	CNS x S-100	Carter		Conv	
20	N17-2535	R09-4095 x NC-Miller	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 2020

STRAIN/		AVG.	YIELD†			PROTEIN‡			OIL‡		
VARIETY	RANK	RANK	2020	19-20	18-20	2020	19-20	18-20	2020	19-20	18-20
AG64X8 RR2X	11	9	53.5	53.8	52.0	35.1	35.6	35.7	18.8	19.0	19.2
NC-Dunphy	3	7	55.9	54.6	53.4	34.5	34.7	34.6	19.5	19.8	20.0
NC-Dilday	6	10	54.9	53.6	53.2	34.0	34.5	34.2	19.9	20.2	20.5
CZ6316LL	13	11	53.1	52.4	.	33.8	34.1	.	19.6	20.1	.
G15-1038R2	12	9	53.2	57.3	.	37.7	37.8	.	17.6	18.1	.
G15-1811R2	1	6	56.8	58.3	.	35.7	35.8	.	18.7	18.9	.
G15-3361R2	4	7	55.3	57.3	.	36.4	36.7	.	17.7	18.0	.
G16-4162R2	9	10	54.2	.	.	36.1	.	.	18.3	.	.
G16-4995R2	8	9	54.4	.	.	38.0	.	.	17.2	.	.
G16-8779	2	7	56.5	.	.	35.5	.	.	18.5	.	.
G16LL-10015	7	9	54.8	.	.	35.4	.	.	19.3	.	.
N10-7412	15	14	51.4	52.4	.	35.6	35.6	.	19.0	19.4	.
N11-12528	18	13	50.3	.	.	37.9	.	.	17.6	.	.
N16-10756	14	12	51.9	.	.	37.4	.	.	17.6	.	.
N16-559	19	18	48.3	.	.	41.9	.	.	16.7	.	.
N16-8876	5	9	54.9	.	.	37.2	.	.	18.5	.	.
N16-9064	16	14	51.1	.	.	36.8	.	.	16.9	.	.
N16-9211	17	13	50.9	51.4	.	39.2	38.8	.	16.7	17.3	.
N16-D49-2524	20	19	46.1	.	.	36.8	.	.	19.5	.	.
N17-2535	10	9	53.6	.	.	34.6	.	.	21.2	.	.
Mean	.	.	53.0	.	.	36.5	.	.	18.4	.	.
LSD(0.05)	.	.	5.4	.	.	1.0	.	.	0.6	.	.
CV(%)	.	.	9.6	.	.	1.9	.	.	2.0	.	.

†Data not included in the test mean: 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 2020

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
AG64X8 RR2X	47.1	0	2	34	1.2	13.5			
NC-Dunphy	46.8	-3	1	28	1.5	16.9			
NC-Dilday	46.3	-1	2	31	1.5	17.9			
CZ6316LL	45.6	-1	1	33	1.2	13.7			
G15-1038R2	49.4	1	2	33	1.2	14.2	P	T	T
G15-1811R2	47.4	1	2	36	1.2	14.4	P	T	T
G15-3361R2	48.2	0	2	34	1.0	13.1	P	T	T
G16-4162R2	47.8	2	2	35	1.2	14.5	P	T	T
G16-4995R2	49.8	3	2	36	1.1	13.5	W	T	T
G16-8779	47.4	0	2	34	1.4	14.9	P	T	BR
G16LL-10015	47.8	1	2	39	1.1	14.4	W	T	T
N10-7412	47.7	-2	2	33	1.1	14.7	M	T	
N11-12528	49.8	-1	2	35	1.2	12.6	W	G	
N16-10756	49.2	-2	2	36	1.1	13.0	W	G	
N16-559	54.4	-2	3	33	1.3	16.3	P	T	
N16-8876	49.6	-1	2	35	1.1	14.9	P	G	
N16-9064	48.4	-1	2	34	1.5	16.0	P	G	
N16-9211	51.1	1	2	32	1.0	11.5	W	G	
N16-D49-2524	50.0	-2	2	31	1.2	13.6		T	
N17-2535	47.6	-3	2	36	1.6	19.0	P	T	
Mean	48.6	0	2	34	1.2	14.6			
LSD(0.05)	1.1	2	1	3	0.5	1			
CV(%)	1.6	661	33	10	28.0	5.9			

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

TABLE 91 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST VI 2020

STRAIN/ VARIETY	SCN Cyst Score (1-5 Scale)†			PRK GA	SRK GA	SC RATING	SC SCORE
	Race 2	Race 3	Race 5				
AG64X8 RR2X	5	.	5	.	1.0	R	1.0
NC-Dunphy	5	.	5	.	5.0		.
NC-Dilday	5	.	5	.	3.0		.
CZ6316LL	5	.	4	.	5.0		.
G15-1038R2	5	.	5	.	1.0	SS	3.0
G15-1811R2	5	.	5	.	1.0	R	1.0
G15-3361R2	5	.	5	.	1.0	R	1.0
G16-4162R2	4	.	4	.	1.3	SS	3.0
G16-4995R2	4	.	4	.	1.0	SS	3.0
G16-8779	4	.	4	.	3.0	S	5.0
G16LL-10015	3	.	3	.	1.0	R	1.0
N10-7412	5	.	4	.	5.0	R	1.0
N11-12528	5	.	4	.	4.8	SS	3.0
N16-10756	5	.	4	.	4.8	MS	4.0
N16-559	5	.	5	.	1.0	R	1.0
N16-8876	2	.	2	.	5.0	SS	3.0
N16-9064	5	.	3	.	5.0		.
N16-9211	5	.	4	.	1.0		.
N16-D49-2524	5	.	4	.	5.0		.
N17-2535	5	.	4	.	3.3		.

†The race 2 and 5 SCN populations used in these tests were typed as HG (*Heterodera glycines*) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 92 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST VI 2020 †

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clemson, SC	Kinston, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	62.4	56.4	56.1	.	44.2	43.2	51.3	53.5
NC-Dunphy	68.6	51.6	62.0	50.2	41.6	54.2	51.2	55.9
NC-Dilday	75.8	48.0	56.3	43.7	38.3	50.2	49.1	54.9
CZ6316LL	64.9	44.5	61.8	41.3	39.2	42.8	46.6	53.1
G15-1038R2	63.4	63.7	54.9	34.7	42.8	42.4	51.9	53.2
G15-1811R2	67.9	42.0	66.2	39.9	42.0	50.9	51.0	56.8
G15-3361R2	69.4	47.0	59.0	36.3	44.8	41.3	47.8	55.3
G16-4162R2	60.6	52.1	61.2	29.1	46.8	37.8	48.4	54.2
G16-4995R2	62.0	48.1	61.3	46.5	41.9	44.6	52.3	54.4
G16-8779	63.8	53.2	70.2	37.6	43.6	54.8	48.5	56.5
G16LL-10015	57.7	47.2	63.9	41.5	41.1	43.6	56.6	54.8
N10-7412	62.3	50.8	54.3	32.5	40.0	41.2	49.0	51.4
N11-12528	62.4	54.1	51.9	30.0	34.4	37.7	52.3	50.3
N16-10756	63.2	47.4	58.6	29.7	34.4	38.2	51.3	51.9
N16-559	58.0	55.2	52.5	34.1	36.4	49.6	46.4	48.3
N16-8876	69.9	46.1	57.4	42.5	45.8	46.3	46.3	54.9
N16-9064	60.8	45.8	52.2	40.9	43.7	53.4	47.5	51.1
N16-9211	63.4	49.0	50.0	35.6	42.1	47.1	48.2	50.9
N16-D49-2524	56.0	40.3	50.8	35.9	36.7	30.9	40.9	46.1
N17-2535	64.3	57.7	58.4	41.9	42.5	45.6	49.1	53.6
Mean	63.8	50.0	57.9	38.1	41.1	44.8	49.3	53.0
LSD(0.05)	7.2	16.0	9.1	14.8	4.4	16.5	5.9	5.4
LSD(0.10)	6.0	13.3	7.6	12.3	3.6	13.6	4.9	4.5
CV(%)	6.8	19.4	9.5	23.1	6.4	17.2	7.3	9.6

†Data not included in the test mean: Bossier City, Clemson and Tallassee

TABLE 93 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clemson, SC	Kinston, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	10/17	10/19	10/11	10/23	10/21	10/31	10/16	10/20
NC-Dunphy	0	0	-4	1	-7	-3	-10	-3
NC-Dilday	3	0	-3	2	-1	-5	-4	-1
CZ6316LL	-1	0	-2	2	-1	-5	-1	-1
G15-1038R2	1	0	5	2	1	-5	0	1
G15-1811R2	4	0	-1	2	1	-1	2	1
G15-3361R2	1	0	-2	2	1	0	0	0
G16-4162R2	3	0	3	3	1	2	4	2
G16-4995R2	4	1	5	3	4	0	6	3
G16-8779	0	0	2	2	1	-1	-2	0
G16LL-10015	3	0	1	2	3	-3	0	1
N10-7412	-2	0	2	1	-2	-3	-9	-2
N11-12528	3	0	-2	2	-4	-6	0	-1
N16-10756	3	0	-5	2	-2	-11	0	-2
N16-559	-1	0	0	2	-1	-7	-7	-2
N16-8876	1	0	-1	2	1	-6	-5	-1
N16-9064	0	0	-1	2	0	-4	-3	-1
N16-9211	7	0	-2	3	2	-2	0	1
N16-D49-2524	1	0	-1	2	-4	-10	-1	-2
N17-2535	-1	0	0	2	-6	-7	-7	-3
Mean	2	0	0	2	-1	-4	-2	0
LSD(0.05)	1	0	5	1	2	7		2
CV(%)	38	387	1172	34	161	90	0	661

TABLE 94 - PLANT HEIGHT (INCHES)
UNIFORM GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clemson, SC	Kinston, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	41	35	34	.	39	30	25	34
NC-Dunphy	28	31	30	31	26	29	23	28
NC-Dilday	35	35	30	25	32	37	25	31
CZ6316LL	38	33	34	34	38	31	25	33
G15-1038R2	37	34	33	36	38	33	25	34
G15-1811R2	40	41	34	32	40	35	31	36
G15-3361R2	38	37	35	36	41	29	23	34
G16-4162R2	40	41	34	34	40	31	25	35
G16-4995R2	43	40	34	36	41	29	26	36
G16-8779	35	33	33	39	36	38	25	34
G16LL-10015	43	37	37	37	45	39	32	39
N10-7412	36	32	33	33	39	31	29	33
N11-12528	40	37	37	33	41	29	29	35
N16-10756	46	36	36	34	40	33	30	36
N16-559	39	34	33	36	35	30	27	34
N16-8876	38	34	37	36	39	36	26	35
N16-9064	38	35	32	36	38	35	23	34
N16-9211	35	33	34	35	36	30	22	32
N16-D49-2524	36	31	31	32	35	29	23	31
N17-2535	41	38	36	34	37	35	31	36
Mean	38	36	34	34	37	32	26	34
LSD(0.05)	3	5	4	3	3	12	3	3
CV(%)	4	9	7	5	4	19	8	10

TABLE 95 - PLANT LODGING (1-5)
UNIFORM GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clemson, SC	Kinston, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	1.0	2.0	1.7		1.5	.	1.0	1.5
NC-Dunphy	1.0	1.0	1.0	2.0	1.5	.	1.0	1.2
NC-Dilday	1.7	3.3	1.3	2.0	1.7	.	1.7	2.0
CZ6316LL	1.3	1.0	1.0	2.0	1.5	.	1.0	1.3
G15-1038R2	1.7	2.7	1.3	2.0	1.5	.	1.0	1.7
G15-1811R2	1.7	2.3	1.7	2.0	2.0	.	2.0	1.9
G15-3361R2	1.3	2.3	1.3	2.3	2.0	.	1.0	1.7
G16-4162R2	1.7	2.7	2.0	2.0	2.0	.	1.3	1.9
G16-4995R2	2.0	3.3	1.3	2.0	2.0	.	1.0	1.9
G16-8779	1.0	1.7	2.0	2.7	1.5	.	1.0	1.6
G16LL-10015	2.0	4.0	1.7	2.0	2.0	.	1.3	2.2
N10-7412	2.3	1.7	1.0	2.0	2.0	.	2.0	1.8
N11-12528	2.0	3.0	2.0	2.0	2.3	.	1.7	2.1
N16-10756	2.7	3.7	1.7	2.3	2.3	.	2.0	2.4
N16-559	2.0	4.0	2.3	2.3	2.0	.	2.0	2.5
N16-8876	2.0	2.3	2.7	3.3	2.0	.	1.3	2.3
N16-9064	1.3	2.7	1.0	2.3	2.0	.	1.3	1.8
N16-9211	1.3	4.0	2.3	2.3	2.0	.	1.3	2.2
N16-D49-2524	1.3	1.7	2.0	2.7	2.0	.	1.7	1.9
N17-2535	2.0	2.0	1.7	2.7	2.0	.	2.0	2.1
Mean	1.7	2.6	1.7	2.3	1.9	.	1.4	1.9
LSD(0.05)	0.7	1.3	0.9	0.7	0.3	.	0.6	0.5
CV(%)	25.7	30.8	33.0	17.6	6.9	.	25.5	32.6

TABLE 96 - SEED QUALITY (1-5)
UNIFORM GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clemson, SC	Kinston, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	1.5	1.0	.	.	.	1.0	.	1.2
NC-Dunphy	2.5	1.0	.	.	.	1.0	.	1.5
NC-Dilday	2.3	1.0	.	.	.	1.0	.	1.5
CZ6316LL	1.5	1.0	.	.	.	1.0	.	1.2
G15-1038R2	1.7	1.0	.	.	.	1.0	.	1.2
G15-1811R2	1.7	1.0	.	.	.	1.0	.	1.2
G15-3361R2	1.0	1.0	.	.	.	1.0	.	1.0
G16-4162R2	1.7	1.0	.	.	.	1.0	.	1.2
G16-4995R2	1.2	1.0	.	.	.	1.0	.	1.1
G16-8779	2.2	1.0	.	.	.	1.0	.	1.4
G16LL-10015	1.2	1.0	.	.	.	1.0	.	1.1
N10-7412	1.2	1.0	.	.	.	1.0	.	1.1
N11-12528	1.5	1.0	.	.	.	1.0	.	1.2
N16-10756	1.2	1.0	.	.	.	1.0	.	1.1
N16-559	2.0	1.0	.	.	.	1.0	.	1.3
N16-8876	1.3	1.0	.	.	.	1.0	.	1.1
N16-9064	2.3	1.0	.	.	.	1.0	.	1.5
N16-9211	1.0	1.0	.	.	.	1.0	.	1.0
N16-D49-2524	1.5	1.0	.	.	.	1.0	.	1.2
N17-2535	2.7	1.0	.	.	.	1.0	.	1.6
Mean	1.7	1.0	.	.	.	1.0	.	1.2
LSD(0.05)	0.6		.	.	.		.	0.5
CV(%)	20.3	0.0	.	.	.	0.0	.	28.2

TABLE 97 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clemson, SC	Kinston, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	13.7	11.5	.	.	14.0	14.1	.	13.5
NC-Dunphy	17.5	16.3	.	.	15.6	18.0	.	16.9
NC-Dilday	17.8	17.1	.	.	17.1	19.6	.	17.9
CZ6316LL	13.4	13.6	.	.	13.3	14.4	.	13.7
G15-1038R2	13.4	14.2	.	.	14.5	14.7	.	14.2
G15-1811R2	14.2	13.8	.	.	14.4	14.8	.	14.4
G15-3361R2	13.2	12.7	.	.	13.4	12.8	.	13.1
G16-4162R2	15.1	14.2	.	.	14.6	14.0	.	14.5
G16-4995R2	13.3	13.6	.	.	13.6	13.6	.	13.5
G16-8779	14.6	15.1	.	.	15.5	14.5	.	14.9
G16LL-10015	14.3	13.5	.	.	14.3	15.2	.	14.4
N10-7412	14.5	14.3	.	.	15.0	15.0	.	14.7
N11-12528	13.7	12.1	.	.	11.6	12.9	.	12.6
N16-10756	14.4	12.9	.	.	12.2	12.4	.	13.0
N16-559	16.4	14.9	.	.	15.3	18.5	.	16.3
N16-8876	14.2	15.4	.	.	15.1	15.3	.	14.9
N16-9064	16.1	15.9	.	.	15.3	16.9	.	16.0
N16-9211	11.1	11.0	.	.	10.8	13.2	.	11.5
N16-D49-2524	13.4	14.5	.	.	13.2	13.7	.	13.6
N17-2535	18.9	19.7	.	.	18.4	19.3	.	19.0
Mean	14.7	14.3	.	.	14.4	15.1	.	14.6
LSD(0.05)	0.9		.	.	0.6	2.5	.	1.0
CV(%)	3.6		.	.	2.7	7.5	.	5.9

TABLE 98 - OIL (%)†
UNIFORM GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clemson, SC	Kinston, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	18.9	.	.	.	18.3	19.1	.	18.7
NC-Dunphy	19.6	.	.	.	19.4	19.6	.	19.5
NC-Dilday	19.9	.	.	.	19.8	19.9	.	19.8
CZ6316LL	20.2	.	.	.	18.6	20.2	.	19.7
G15-1038R2	18.0	.	.	.	16.7	18.2	.	17.6
G15-1811R2	19.2	.	.	.	18.1	18.7	.	18.7
G15-3361R2	18.0	.	.	.	17.1	17.8	.	17.7
G16-4162R2	18.4	.	.	.	18.2	18.3	.	18.2
G16-4995R2	17.7	.	.	.	16.6	17.4	.	17.2
G16-8779	18.5	.	.	.	17.9	19.2	.	18.5
G16LL-10015	19.4	.	.	.	18.9	19.7	.	19.3
N10-7412	19.3	.	.	.	18.3	19.3	.	19.0
N11-12528	18.3	.	.	.	16.9	17.5	.	17.7
N16-10756	18.6	.	.	.	16.8	17.3	.	17.7
N16-559	17.1	.	.	.	16.3	16.6	.	16.7
N16-8876	18.6	.	.	.	18.0	18.8	.	18.4
N16-9064	17.0	.	.	.	16.7	17.1	.	16.9
N16-9211	17.0	.	.	.	16.3	16.7	.	16.7
N16-D49-2524	19.4	.	.	.	18.6	20.4	.	19.4
N17-2535	21.5	.	.	.	20.8	21.4	.	21.2
Mean	18.7	.	.	.	17.9	18.6	.	18.4
LSD(0.05)	0.4	.	.	.	.	.	.	0.6
CV(%)	1.3	.	.	.	.	.	.	2.0

†Oil percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial were reported for some locations in 2021.

TABLE 99 - PROTEIN (%)†
UNIFORM GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clemson, SC	Kinston, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	34.9	.	.	.	36.0	34.4	.	35.2
NC-Dunphy	34.5	.	.	.	34.6	34.4	.	34.7
NC-Dilday	33.9	.	.	.	34.3	33.8	.	34.1
CZ6316LL	32.9	.	.	.	35.1	33.5	.	33.7
G15-1038R2	36.3	.	.	.	39.8	37.0	.	37.5
G15-1811R2	34.4	.	.	.	36.5	36.2	.	35.5
G15-3361R2	36.0	.	.	.	37.1	36.2	.	36.5
G16-4162R2	35.2	.	.	.	36.6	36.5	.	36.0
G16-4995R2	37.2	.	.	.	39.0	37.7	.	37.9
G16-8779	35.2	.	.	.	36.3	35.0	.	35.6
G16LL-10015	35.1	.	.	.	36.2	35.0	.	35.5
N10-7412	34.9	.	.	.	37.1	34.9	.	35.6
N11-12528	36.7	.	.	.	38.5	38.4	.	37.7
N16-10756	36.3	.	.	.	38.6	37.3	.	37.2
N16-559	40.7	.	.	.	42.8	42.1	.	41.7
N16-8876	36.8	.	.	.	38.6	36.1	.	37.2
N16-9064	36.9	.	.	.	37.1	36.5	.	37.0
N16-9211	38.5	.	.	.	39.6	39.4	.	39.1
N16-D49-2524	37.0	.	.	.	37.6	35.8	.	37.0
N17-2535	33.8	.	.	.	35.0	35.0	.	34.5
Mean	35.9	.	.	.	37.3	36.3	.	36.5
LSD(0.05)	1.1	.	.	.	.	.	.	1.0
CV(%)	1.8	.	.	.	.	.	.	1.9

†Protein percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial in some locations were reported in 2020.

TABLE 100 - MEAL (%)†
UNIFORM GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clemson, SC	Kinston, NC	Tallassee, AL	Tifton, GA	Test Mean
AG64X8 RR2X	46.8	.	.	.	47.9	46.2	.	47.1
NC-Dunphy	46.6	.	.	.	46.6	46.5	.	46.8
NC-Dilday	45.9	.	.	.	46.5	45.9	.	46.3
CZ6316LL	44.7	.	.	.	46.9	45.6	.	45.6
G15-1038R2	48.2	.	.	.	51.9	49.2	.	49.4
G15-1811R2	46.3	.	.	.	48.5	48.3	.	47.4
G15-3361R2	47.7	.	.	.	48.7	47.8	.	48.2
G16-4162R2	46.8	.	.	.	48.6	48.5	.	47.8
G16-4995R2	49.1	.	.	.	50.8	49.6	.	49.8
G16-8779	46.9	.	.	.	48.0	47.1	.	47.4
G16LL-10015	47.4	.	.	.	48.6	47.3	.	47.8
N10-7412	47.0	.	.	.	49.3	47.0	.	47.7
N11-12528	48.8	.	.	.	50.4	50.6	.	49.8
N16-10756	48.4	.	.	.	50.4	49.0	.	49.2
N16-559	53.4	.	.	.	55.6	54.9	.	54.4
N16-8876	49.1	.	.	.	51.1	48.3	.	49.6
N16-9064	48.3	.	.	.	48.4	47.8	.	48.4
N16-9211	50.4	.	.	.	51.4	51.3	.	51.1
N16-D49-2524	49.9	.	.	.	50.2	48.9	.	50.0
N17-2535	46.8	.	.	.	48.0	48.3	.	47.6
Mean	47.9	.	.	.	49.4	48.4	.	48.6
LSD(0.05)	1.2	.	.	.	.	.	.	1.1
CV(%)	1.6	.	.	.	.	.	.	1.6

†Meal percentage reported on a 13% moisture basis beginning in 2018.
Protein and oil data from all replicates of a trial were reported for some locations in 2020.

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TABLE 101 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP VI 2020

Ent	*Strain/Variety*	*Parentage*	*Source*	*Fn*	*Trans-genic†*	*Special Traits‡*
1	AG64X8 RR2X	Commercial check	Commercial		RRX	
2	NC-Dunphy	Commercial check	Commercial		Conv	
3	NC-Dilday	Commercial check	Commercial		Conv	
4	CZ6316LL	Commercial check	Commercial		LL	
5	G17-3055R2	N08-145 x G10PR-56248R2	Zenglu Li	F6d	RR2	
6	G17-4801R2	N07-14182 x G10PR-56248R2	Zenglu Li	F6d	RR2	
7	G17-8322LL	N08-521 x [G00-3213(4) x A5547-127 LIBERTY]	Zenglu Li	F5d	LL	
8	G17-8706LL	N07-14182 x [G00-3213(4) x A5547-127 LIBERTY]	Zenglu Li	F5d	LL	
9	N14-7254	G00-3213 x TCHM06-Morph-204	Carter	F4	Conv	Protein
10	N14-7567	N6002 x NC-Roy	Carter	F4	Conv	diversity/protein
11	N14-7691	N6002 x NC-Roy	Carter	F4	Conv	diversity/protein
12	N14-7695	N6002 x NC-Roy	Carter	F4	Conv	diversity/protein
13	N14-7707	N07-14704 (sib of N6001) x NC-Roy	Carter	F4	Conv	diversity/protein
14	N14-7797	N6001 x NC-Roy	Carter	F4	Conv	diversity/protein
15	N14-7784	N6001 x NC-Roy	Carter	F4	Conv	diversity/protein
16	N16-1286	NC-Roy-BC(4)HOLN	Mian		Conv	HOLN
17	N17-1791	HR09-397 x R06-3789	Mian		Conv	
18	NC-Roy	Public cultivar	Mian		Conv	
19	SC17-5529RR1	G08-4200RR x Osage	Fallen		RR1	
20	SC17-6518ERR1	TN05-5018 x SC06-676RR	Fallen		RR1	
21	SC18-8225	G10PR-5626R2 x R10-2436	Fallen		RR2	

† 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 2020

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
AG64X8 RR2X	43.4	10	10	0	1.6	34	3	.	5	R	1
NC-Dunphy	46.4	6	8	-2	1.3	27	3	.	5	R	1
NC-Dilday	46.7	5	7	-1	1.8	34	4	.	5	R	1
CZ6316LL	43.1	11	11	-1	2.1	35	4	.	5	R	1
G17-3055R2	45.0	7	10	2	2.1	40	2	.	5	MS	4
G17-4801R2	49.2	1	4	2	2.0	38	4	.	5	MS	4
G17-8322LL	47.0	4	7	2	2.2	40	3	.	5	MS	4
G17-8706LL	47.8	2	5	2	1.9	42	3	.	4	MS	4
N14-7254	43.0	12	10	1	2.6	34	3	.	5	MS	4
N14-7567	39.0	20	17	1	2.9	38	3	.	5	MS	4
N14-7691	39.4	16	16	3	2.9	42	3	.	5	R	1
N14-7695	39.2	17	16	2	2.7	39	4	.	5	R	1
N14-7707	39.2	18	15	5	3.4	45	5	.	5	MS	4
N14-7797	41.9	14	11	2	2.5	39	5	.	5	MS	4
N14-7784	47.0	3	7	1	2.6	37	3	.	5	MS	4
N16-1286	44.9	8	10	1	2.1	35	3	.	5	MS	4
N17-1791	42.1	13	12	-7	2.8	41	5	.	5	R	1
NC-Roy	39.2	19	16	-1	2.5	37	4	.	5	MS	4
SC17-5529RR1	40.6	15	14	1	2.2	40	2	.	5	R	1
SC17-6518ERR1	44.4	9	10	2	2.3	36	2	.	2	MS	4
SC18-8225	38.3	21	15	-1	2.7	36	4	.	5	S	5
Mean	43.2	.	.	1	2.3	38	.	.	.		.
LSD(0.05)	6.1	.	.	4	0.9	4	.	.	.		.
CV(%)	13.8	.	.	498	26	9	.	.	.		.

†Data not included in the mean: NA

‡The race 2 and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 103 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST VI 2020

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
AG64X8 RR2X	1.2	13.3	35.7	18.4	47.5			
NC-Dunphy	2.0	15.8	35.2	19.1	47.3			
NC-Dilday	1.8	16.7	34.2	19.6	46.2			
CZ6316LL	1.3	13.2	33.5	19.6	45.3			
G17-3055R2	1.1	14.2	36.6	18.2	48.6	W	T	T
G17-4801R2	1.0	15.0	35.9	18.5	47.9	W	T	T
G17-8322LL	1.0	13.3	37.8	17.3	49.6	W	T	T
G17-8706LL	1.2	16.6	36.4	18.6	48.5	P	T	T
N14-7254	1.2	13.9	36.5	18.0	48.4	W	T	
N14-7567	1.5	14.2	37.8	17.3	49.6	P	G	
N14-7691	1.3	15.0	38.8	17.3	51.0	P	G	
N14-7695	1.2	12.9	38.0	17.3	50.0	P	G	
N14-7707	1.2	14.4	37.5	17.1	49.2		G	
N14-7797	1.5	13.9	38.5	17.5	50.7	W	G	
N14-7784	1.4	14.5	37.9	17.3	49.7	P	G	
N16-1286	1.4	12.1	37.6	18.7	50.3	W	G	
N17-1791	1.8	17.7	40.1	17.9	53.1	P	T	
NC-Roy	1.2	13.4	37.8	17.3	49.7	W	G	
SC17-5529RR1	1.1	12.7	36.3	18.2	48.2	P	T	
SC17-6518ERR1	1.2	11.1	36.4	17.3	47.8	W	G	
SC18-8225	1.2	11.2	36.3	17.9	48.0	P	T	
Mean	1.3	14.0	36.9	18.0	48.9			
LSD(0.05)	0.8	1.2	0.9	0.6	0.9			
CV(%)	30.2	7.7	1.7	2.3	1.3			

§ 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 2020 †

STRAIN/ VARIETY	Athens, GA(A)	Clemson, SC	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	62.8	.	36.5	37.7	43.7	43.4
NC-Dunphy	72.8	41.3	35.0	34.1	48.8	46.4
NC-Dilday	69.2	38.3	42.0	31.1	53.2	46.7
CZ6316LL	59.9	40.4	35.2	38.6	41.0	43.1
G17-3055R2	60.2	36.0	31.4	46.7	51.3	45.0
G17-4801R2	62.2	47.6	39.7	47.9	48.0	49.2
G17-8322LL	58.3	48.0	41.0	32.8	55.4	47.0
G17-8706LL	60.6	38.9	41.9	40.3	58.1	47.8
N14-7254	60.1	29.2	40.1	40.2	45.1	43.0
N14-7567	57.3	30.3	35.3	32.4	39.1	39.0
N14-7691	58.8	29.2	34.8	36.6	37.5	39.4
N14-7695	49.3	32.0	32.0	43.7	39.9	39.2
N14-7707	55.3	30.5	38.9	29.8	41.4	39.2
N14-7797	61.7	32.4	38.2	27.3	49.4	41.9
N14-7784	70.0	37.9	37.7	41.2	47.9	47.0
N16-1286	70.2	29.9	35.3	43.8	43.8	44.9
N17-1791	57.1	36.0	35.5	36.0	46.3	42.1
NC-Roy	61.3	26.3	34.0	32.5	41.6	39.2
SC17-5529RR1	54.3	36.6	37.8	33.1	40.9	40.6
SC17-6518ERR1	57.3	38.2	35.3	46.7	44.1	44.4
SC18-8225	47.5	33.7	32.7	33.1	46.7	38.3
Mean	60.3	35.6	36.7	37.4	45.9	43.2
LSD(0.05)	7.0	8.1	5.2	7.0	13.6	6.1
LSD(0.10)	5.9	6.7	4.3	5.9	11.2	5.1
CV(%)	7.1	13.2	8.6	11.0	13.9	13.8

† Data not included in the test mean: None excluded

TABLE 105 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	*Athens, GA(A)*	*Clemson, SC*	*Kinston, NC*	*Plymouth, NC*	*Tallassee, AL*	*Test Mean*
AG64X8 RR2X	10/17	10/26	10/20	10/27	10/28	10/24
NC-Dunphy	1	1	-6	-1	-4	-2
NC-Dilday	3	1	-4	-9	5	-1
CZ6316LL	0	1	-4	-2	-1	-1
G17-3055R2	5	-1	4	1	1	2
G17-4801R2	5	-1	6	-2	4	2
G17-8322LL	3	-1	3	7	1	2
G17-8706LL	4	-1	3	2	5	2
N14-7254	7	-1	2	1	-4	1
N14-7567	6	-1	3	3	-5	1
N14-7691	5	-1	4	10	-4	3
N14-7695	6	1	4	1	-1	2
N14-7707	7	2	7	9	0	5
N14-7797	5	2	3	3	-3	2
N14-7784	7	-1	3	3	-6	1
N16-1286	6	1	1	-2	-3	1
N17-1791	-5	-1	-10	-12	-8	-7
NC-Roy	4	0	0	1	-9	-1
SC17-5529RR1	0	1	1	-3	6	1
SC17-6518ERR1	3	-1	3	1	3	2
SC18-8225	-3	0	-1	-2	-1	-1
Mean	3	0	1	0	-1	1
LSD(0.05)	1	1	2	6	7	4
CV(%)	18	1050	78	974	301	498

TABLE 106 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	*Athens, GA(A)*	*Clemson, SC*	*Kinston, NC*	*Plymouth, NC*	*Tallassee, AL*	*Test Mean*
AG64X8 RR2X	39	.	38	35	29	34
NC-Dunphy	31	25	25	24	29	27
NC-Dilday	37	26	33	31	43	34
CZ6316LL	35	36	38	36	33	35
G17-3055R2	44	35	42	41	36	40
G17-4801R2	43	37	41	40	32	38
G17-8322LL	38	40	41	41	40	40
G17-8706LL	46	41	41	38	43	42
N14-7254	41	28	35	34	33	34
N14-7567	45	27	42	41	36	38
N14-7691	47	38	44	41	42	42
N14-7695	43	35	41	39	39	39
N14-7707	56	36	45	43	44	45
N14-7797	43	34	42	40	37	39
N14-7784	41	33	40	39	34	37
N16-1286	38	36	37	34	30	35
N17-1791	48	36	43	42	36	41
NC-Roy	41	34	39	37	34	37
SC17-5529RR1	49	35	42	41	32	40
SC17-6518ERR1	41	35	38	36	31	36
SC18-8225	40	34	37	37	34	36
Mean	42	34	39	37	36	38
LSD(0.05)	2	3	4	4	8	4
CV(%)	3	5	4	5	11	9

TABLE 107 - PLANT LODGING (1-5)
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Clemson, SC	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	1.0	.	.	1.5	.	1.6
NC-Dunphy	1.0	1.3	.	1.5	.	1.3
NC-Dilday	1.7	2.0	.	1.8	.	2
CZ6316LL	1.7	2.7	.	2.0	.	2.1
G17-3055R2	2.0	2.3	.	2.0	.	2.1
G17-4801R2	1.3	2.7	.	2.0	.	2.0
G17-8322LL	2.0	2.7	.	2.0	.	2.2
G17-8706LL	1.0	2.7	.	2.0	.	1.9
N14-7254	2.0	4.0	.	1.8	.	2.6
N14-7567	3.0	3.7	.	2.0	.	2.9
N14-7691	3.0	3.7	.	2.0	.	2.9
N14-7695	2.3	4.0	.	1.8	.	2.7
N14-7707	4.0	4.0	.	2.0	.	3.4
N14-7797	2.0	3.7	.	1.8	.	2.5
N14-7784	3.0	2.7	.	2.0	.	2.6
N16-1286	2.3	2.3	.	1.5	.	2.1
N17-1791	2.7	3.7	.	2.0	.	2.8
NC-Roy	2.3	3.7	.	1.5	.	2.5
SC17-5529RR1	1.7	3.0	.	2.0	.	2.2
SC17-6518ERR1	1.7	3.3	.	2.0	.	2.3
SC18-8225	3.0	3.3	.	1.8	.	2.7
Mean	2.1	3.1	.	1.8	.	2.3
LSD(0.05)	0.6	0.8	.	0.4	.	0.9
CV(%)	17.8	16.3	.	9.3	.	25.7

TABLE 108 - SEED QUALITY (1-5)
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Clemson, SC	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	1.5	.	.	.	1.0	1.2
NC-Dunphy	3.0	.	.	.	1.0	2.0
NC-Dilday	2.7	.	.	.	1.0	1.8
CZ6316LL	1.7	.	.	.	1.0	1.3
G17-3055R2	1.2	.	.	.	1.0	1.1
G17-4801R2	1.0	.	.	.	1.0	1.0
G17-8322LL	1.0	.	.	.	1.0	1.0
G17-8706LL	1.3	.	.	.	1.0	1.2
N14-7254	1.3	.	.	.	1.0	1.2
N14-7567	2.0	.	.	.	1.0	1.5
N14-7691	1.7	.	.	.	1.0	1.3
N14-7695	1.5	.	.	.	1.0	1.2
N14-7707	1.5	.	.	.	1.0	1.2
N14-7797	2.0	.	.	.	1.0	1.5
N14-7784	1.8	.	.	.	1.0	1.4
N16-1286	1.8	.	.	.	1.0	1.4
N17-1791	2.5	.	.	.	1.0	1.8
NC-Roy	1.5	.	.	.	1.0	1.2
SC17-5529RR1	1.2	.	.	.	1.0	1.1
SC17-6518ERR1	1.3	.	.	.	1.0	1.2
SC18-8225	1.5	.	.	.	1.0	1.2
Mean	1.7	.	.	.	1.0	1.3
LSD(0.05)	0.4	.	.	.		0.8
CV(%)	14.0	.	.	.	0.0	30.2

TABLE 109 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	*Athens, GA(A)*	*Clemson, SC*	*Kinston, NC*	*Plymouth, NC*	*Tallassee, AL*	*Test Mean*
AG64X8 RR2X	13.5	.	13.7	12.9	13.0	13.3
NC-Dunphy	17.6	.	15.8	13.8	16.0	15.8
NC-Dilday	17.7	.	16.9	13.7	19.0	16.7
CZ6316LL	13.1	.	13.9	11.7	14.4	13.2
G17-3055R2	14.5	.	14.9	13.6	14.0	14.2
G17-4801R2	15.9	.	15.6	14.1	14.4	15.0
G17-8322LL	13.1	.	13.5	12.6	13.9	13.3
G17-8706LL	17.1	.	17.5	15.3	16.3	16.6
N14-7254	14.2	.	14.2	14.2	12.9	13.9
N14-7567	14.4	.	15.3	14.5	12.3	14.2
N14-7691	15.5	.	16.3	15.2	12.6	15.0
N14-7695	13.2	.	14.1	13.3	11.0	12.9
N14-7707	14.0	.	14.9	14.3	14.2	14.4
N14-7797	14.6	.	14.7	13.0	13.4	13.9
N14-7784	15.7	.	14.8	13.5	13.9	14.5
N16-1286	12.9	.	12.3	11.6	11.6	12.1
N17-1791	18.0	.	18.5	16.7	17.8	17.7
NC-Roy	14.2	.	13.3	12.6	13.7	13.4
SC17-5529RR1	13.2	.	14.2	12.8	10.2	12.7
SC17-6518ERR1	10.8	.	12.0	11.1	10.3	11.1
SC18-8225	11.2	.	12.3	10.8	10.5	11.2
Mean	14.5	.	14.7	13.4	13.6	14.0
LSD(0.05)	0.6	.	0.8	1.2	3.7	1.2
CV(%)	2.4	.	3.4	5.5	12.4	7.7

TABLE 110 - OIL (%)†
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Clemson, SC	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	18.9	.	18.5	17.9		18.4
NC-Dunphy	19.2	.	19.1	18.6	19.4	19.1
NC-Dilday	19.7	.	20.0	19.4	19.4	19.6
CZ6316LL	20.2	.	19.5	18.8	19.9	19.6
G17-3055R2	18.6	.	17.9	17.6	18.6	18.2
G17-4801R2	19.8	.	18.3	17.5	18.6	18.5
G17-8322LL	18.3	.	17.6	15.9	17.2	17.3
G17-8706LL	19.4	.	18.5	17.9	18.4	18.6
N14-7254	19.1	.	17.8	17.1	18.1	18.0
N14-7567	18.3	.	17.3	17.1	16.7	17.3
N14-7691	18.4	.	17.5	16.5	16.7	17.3
N14-7695	18.5	.	17.1	16.9	16.8	17.3
N14-7707	18.1	.	16.9	16.9	16.6	17.1
N14-7797	18.5	.	17.8	15.8	17.8	17.5
N14-7784	17.9	.	17.0	16.6	17.5	17.3
N16-1286	19.2	.	18.6	18.3	18.8	18.7
N17-1791	18.9	.	18.1	17.1	17.7	17.9
NC-Roy	18.6	.	17.2	16.6	16.9	17.3
SC17-5529RR1	19.0	.	18.0	18.2	17.6	18.2
SC17-6518ERR1	18.1	.	16.9	16.4	17.7	17.3
SC18-8225	18.7	.	18.7	16.9	17.5	17.9
Mean	18.8	.	18.0	17.3	17.9	18.0
LSD(0.05)	.	.	.	.	.	0.6
CV(%)	.	.	.	.	.	2.3

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

TABLE 111 - PROTEIN (%)†
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Clemson, SC	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	34.7	.	36.2	35.6		35.7
NC-Dunphy	35.1	.	35.0	35.4	35.4	35.2
NC-Dilday	33.6	.	34.2	34.1	34.8	34.2
CZ6316LL	32.8	.	34.1	33.8	33.5	33.5
G17-3055R2	36.0	.	37.4	36.7	36.5	36.6
G17-4801R2	35.1	.	36.3	36.6	35.6	35.9
G17-8322LL	35.9	.	37.6	39.1	38.5	37.8
G17-8706LL	34.9	.	37.1	36.3	37.2	36.4
N14-7254	34.9	.	37.0	37.3	36.7	36.5
N14-7567	36.1	.	38.3	37.5	39.1	37.8
N14-7691	37.0	.	38.5	39.9	39.9	38.8
N14-7695	36.2	.	39.0	37.9	39.0	38.0
N14-7707	36.0	.	38.1	37.5	38.4	37.5
N14-7797	37.0	.	38.9	39.9	38.3	38.5
N14-7784	36.4	.	38.5	38.8	37.8	37.9
N16-1286	36.7	.	38.6	37.7	37.4	37.6
N17-1791	38.8	.	39.8	40.5	41.3	40.1
NC-Roy	36.2	.	38.1	38.2	38.7	37.8
SC17-5529RR1	35.0	.	36.9	35.8	37.5	36.3
SC17-6518ERR1	35.2	.	37.4	36.6	36.5	36.4
SC18-8225	35.5	.	35.1	37.2	37.4	36.3
Mean	35.7	.	37.2	37.3	37.5	36.9
LSD(0.05)	.	.	.	.	.	0.9
CV(%)	.	.	.	.	.	1.7

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

TABLE 112 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	*Athens, GA(A)*	*Clemson, SC*	*Kinston, NC*	*Plymouth, NC*	*Tallassee, AL*	*Test Mean*
AG64X8 RR2X	46.5	.	48.2	47.1		47.5
NC-Dunphy	47.2	.	47.0	47.3	47.8	47.3
NC-Dilday	45.4	.	46.4	46.0	47.0	46.2
CZ6316LL	44.6	.	46.1	45.2	45.5	45.3
G17-3055R2	48.1	.	49.5	48.3	48.7	48.6
G17-4801R2	47.6	.	48.3	48.2	47.5	47.9
G17-8322LL	47.7	.	49.6	50.6	50.5	49.6
G17-8706LL	47.0	.	49.5	48.1	49.5	48.5
N14-7254	46.8	.	49.0	49.0	48.7	48.4
N14-7567	48.0	.	50.3	49.2	51.0	49.6
N14-7691	49.2	.	50.7	52.0	52.0	51.0
N14-7695	48.3	.	51.1	49.6	50.9	50.0
N14-7707	47.7	.	49.7	49.0	50.1	49.2
N14-7797	49.3	.	51.4	51.5	50.6	50.7
N14-7784	48.2	.	50.3	50.6	49.7	49.7
N16-1286	49.4	.	51.5	50.1	50.0	50.3
N17-1791	52.0	.	52.8	53.2	54.4	53.1
NC-Roy	48.3	.	50.0	49.7	50.6	49.7
SC17-5529RR1	46.9	.	48.9	47.6	49.4	48.2
SC17-6518ERR1	46.7	.	48.9	47.5	48.2	47.8
SC18-8225	47.4	.	46.9	48.7	49.2	48.0
Mean	47.7	.	49.3	49.0	49.6	48.9
LSD(0.05)		.				0.9
CV(%)		.				1.3

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

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST VI 2020 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AG64X8 RR2X	12.6	3.5	17.2	58.2	8.6
NC-Dunphy	12.8	3.1	17.7	58.1	8.4
NC-Dilday	11.3	3.2	20.0	58.0	7.4
N16-1286	7.4	2.8	82.0	5.6	2.3
Mean	11.0	3.2	34.2	45.0	6.7
LSD(0.05)	0.5	0.2	1.8	1.1	0.7
CV(%)	2.8	4.7	3.4	1.6	6.6

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

SEED PALMITIC ACID (%)
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	13.1	12.4	12.0	12.8	12.6
NC-Dunphy	13.3	12.7	12.7	12.4	12.8
NC-Dilday	11.2	11.3	11.3	11.5	11.3
N16-1286	7.7	7.4	7.4	7.0	7.4
Mean	11.3	11.0	10.9	10.9	11.0
LSD(0.05)	.	.	.	.	0.5
CV(%)	.	.	.	.	2.8

SEED STEARIC ACID (%)
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	3.3	3.7	3.3	3.7	3.5
NC-Dunphy	3.0	3.1	3.2	3.1	3.1
NC-Dilday	3.2	3.1	3.3	3.3	3.2
N16-1286	2.9	2.8	2.7	2.6	2.8
Mean	3.1	3.2	3.1	3.2	3.2
LSD(0.05)	.	.	.	.	0.2
CV(%)	.	.	.	.	4.7

SEED OLEIC ACID (%)
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	16.4	18.0	17.6	16.7	17.2
NC-Dunphy	18.1	15.9	17.9	18.9	17.7
NC-Dilday	21.8	18.7	20.7	18.8	20.0
N16-1286	82.1	81.0	81.7	83.2	82.0
Mean	34.6	33.4	34.5	34.4	34.2
LSD(0.05)	.	.	.	.	1.8
CV(%)	.	.	.	.	3.4

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	58.3	57.5	58.1	58.8	58.2
NC-Dunphy	57.1	59.2	58.2	57.7	58.1
NC-Dilday	56.9	59.0	57.7	58.5	58.0
N16-1286	5.0	6.4	5.9	5.0	5.6
Mean	44.3	45.5	45.0	45.0	45.0
LSD(0.05)	.	.	.	.	1.1
CV(%)	.	.	.	.	1.6

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP VI 2020

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plymouth, NC	Tallassee, AL	Test Mean
AG64X8 RR2X	8.8	8.5	9.0	8.0	8.6
NC-Dunphy	8.5	9.1	8.0	7.8	8.4
NC-Dilday	6.9	7.9	7.0	7.8	7.4
N16-1286	2.3	2.4	2.4	2.2	2.3
Mean	6.6	7.0	6.6	6.5	6.7
LSD(0.05)	.	.	.	.	0.7
CV(%)	.	.	.	.	6.6

TABLE 113 - PARENTAGE OF ENTRIES
UNIFORM GROUP VII 2020

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AGS-738RR	Commercial check	Commercial		RR1	
2	AG74X8 RR2X	Commercial check	Commercial		RR2	
3	N7003CN	Commercial check	Commercial		Conv	
4	NC-Wilder	Commercial check	Commercial		Conv	
5	AGS 747LL	Commercial check	Commercial		LL	
6	G15-2017R2	R04-342 x G09PR-54457R2	Zenglu Li	F7d	RR2	
7	G15-2379R2	NCC04-619 x G09PR-54457R2	Zenglu Li	F7d	RR2	
8	G16-4418R2	G06-3182RR x G10PR-224R2 (R2)	Zenglu Li	F5d	RR2	
9	G16-5129R2	G10PR-86R2 x G11-418R2	Zenglu Li	F5d	RR2	
10	G16-5923R2	NCC04-619 x G09PR-54457R2	Zenglu Li	F7d	RR2	
11	G16-5967R2	N05-7462 x G09PR-54457R2	Zenglu Li	F5d	RR2	
12	G16LL-10193	G08-394 x [G00-3213(2) x A5547-127 Liberty]	Zenglu Li	F6d	LL	
13	N16-10518	N7103 x NMS4-1-45	Carter	F4	Conv	diversity/elevated protein
14	N16-10740	NMS4-44-329 x N7103	Carter	F4	Conv	diversity/elevated protein
15	N16-9124	N7103 x NMS5-48-2-75	Carter	F4	Conv	diversity/elevated protein
16	N16-9134	N7103 x NMS5-48-2-75	Carter	F4	Conv	diversity/elevated protein
17	N16-9198	N7103 x NMS5-48-2-75	Carter	F4	Conv	diversity/elevated protein
18	N94-7441	NTCPR90-143 x PEARL	Carter	F4	Conv	
19	SC17-5537RR2	N07-14182 x G10PR-224R2	Fallen		RR2	

† 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 2020

STRAIN/		*AVG.*	*YIELD†*			*PROTEIN‡*			*OIL‡*		
VARIETY	*RANK*	*RANK*	*2020*	*19-20*	*18-20*	*2020*	*19-20*	*18-20*	*2020*	*19-20*	*18-20*
AGS-738RR	6	8	51.6	51.6	49.4	34.8	34.8	35.0	18.6	18.6	19.1
AG74X8 RR2X	18	12	44.7	48.8	49.8	35.7	35.7	35.8	18.2	18.8	19.0
N7003CN	15	13	46.3	47.7	48.7	35.3	35.3	35.3	18.3	18.8	19.3
NC-Wilder	4	7	52.5	52.6	52.4	34.8	34.8	34.8	19.1	19.7	20.0
AGS 747LL	12	10	49.7	51.9	.	35.9	35.8	.	18.5	19.0	.
G15-2017R2	5	8	52.3	51.5	.	36.3	36.2	.	18.0	18.3	.
G15-2379R2	2	5	53.5	52.7	.	36.2	36.4	.	18.0	18.4	.
G16-4418R2	3	6	53.2	.	.	36.0	.	.	18.3	.	.
G16-5129R2	10	10	50.0	.	.	35.7	.	.	18.2	.	.
G16-5923R2	1	5	54.2	.	.	36.3	.	.	18.0	.	.
G16-5967R2	7	8	51.5	.	.	33.9	.	.	18.6	.	.
G16LL-10193	9	10	50.3	.	.	35.7	.	.	19.0	.	.
N16-10518	14	14	46.5	.	.	36.8	.	.	18.0	.	.
N16-10740	19	15	43.5	.	.	37.9	.	.	17.5	.	.
N16-9124	16	14	45.6	.	.	39.0	.	.	16.4	.	.
N16-9134	17	15	44.9	45.2	.	38.5	38.2	.	16.5	17.0	.
N16-9198	11	10	49.8	48.8	.	38.8	38.2	.	16.0	16.7	.
N94-7441	13	12	48.1	46.1	.	38.0	37.8	.	16.5	17.0	.
SC17-5537RR2	8	9	50.9	50.5	.	36.5	36.5	.	18.1	18.5	.
Mean	.	.	49.4	.	.	36.4	.	.	17.9	.	.
LSD(0.05)	.	.	4.4	.	.	0.7	.	.	0.4	.	.
CV(%)	.	.	13.8	.	.	1.9	.	.	2.2	.	.

†Data not included in the test mean: None excluded

‡ 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 2020

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
AGS-738RR	46.6	0	2	34	1.2	14.1			
AG74X8 RR2X	47.4	3	1	31	1.2	16.3			
N7003CN	46.9	4	2	35	1.7	17.0			
NC-Wilder	47.0	3	2	34	1.2	15.9			
AGS 747LL	47.9	2	2	34	1.2	15.2			
G15-2017R2	47.9	2	2	36	1.2	14.7	P	T	T
G15-2379R2	48.0	1	2	36	1.1	14.8	P	T	T
G16-4418R2	47.9	3	2	37	1.1	13.9	W	T	T
G16-5129R2	47.3	2	2	39	1.2	15.9	W	T	T
G16-5923R2	48.0	2	2	35	1.2	14.4	P	T	T
G16-5967R2	45.1	3	2	37	1.1	17.2	W	T	T
G16LL-10193	47.8	2	2	39	1.3	16.9	W	T	T
N16-10518	48.7	2	2	32	1.1	10.5	W	G	
N16-10740	50.1	2	3	35	1.1	10.5	W	T	
N16-9124	50.8	2	2	31	1.2	11.0	W	G	
N16-9134	50.1	1	2	34	1.2	10.7	W	G	
N16-9198	50.0	3	2	35	1.1	9.8	W	G	
N94-7441	49.4	2	2	34	1.1	8.8	W	G	
SC17-5537RR2	48.4	3	2	38	1.2	16.1	P	G	
Mean	48.2	2	2	35	1.2	13.9			
LSD(0.05)	0.8	2	0	2	0.2	0.6			
CV(%)	1.6	116	31	10	16.0	5.7			

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

TABLE 116 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST VII 2020

STRAIN/	*SCN Cyst Score (1-5 Scale)†*			*PRK*	*SRK*	*SC*	*SC*
VARIETY	*Race 2*	*Race 3*	*Race 5*	*GA*	*GA*	*RATING*	*SCORE*
AGS-738RR	4	.	2	.	1.0	R	1.0
AG74X8 RR2X	4	.	5	.	1.0	R	1.0
N7003CN	1	.	1	.	1.3	SS	3.0
NC-Wilder	4	.	5	.	.	S	5.0
AGS 747LL	5	.	5	.	1.0	SS	3.0
G15-2017R2	5	.	5	.	1.3	MS	4.0
G15-2379R2	5	.	5	.	1.0	R	1.0
G16-4418R2	3	.	2	.	1.0	R	1.0
G16-5129R2	5	.	5	.	1.5	MS	4.0
G16-5923R2	5	.	5	.	1.0	R	1.0
G16-5967R2	5	.	5	.	1.3	R	1.0
G16LL-10193	5	.	5	.	4.8	MS	4.0
N16-10518	5	.	5	.	1.0	MS	4.0
N16-10740	5	.	4	.	3.0	R	1.0
N16-9124	4	.	4	.	3.0	R	1.0
N16-9134	5	.	4	.	5.0	SS	3.0
N16-9198	4	.	5	.	2.3	R	1.0
N94-7441	5	.	4	.	.	R	1.0
SC17-5537RR2	5	.	5	.	1.3	MS	4.0

†The race 2 and 5 SCN populations used in these tests were typed as HG (*Heterodera glycines*) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 117 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST VII 2020 †

STRAIN/ VARIETY	*Athens, GA(A)*	*Bossier City, LA*	*Calhoun, GA*	*Clayton, NC*	*Clemson, SC*	*Kinston, NC*	*Plains, GA*
AGS-738RR	63.9	58.5	50.5	37.5	.	37.5	76.1
AG74X8 RR2X	65.0	40.2	38.9	44.7	40.0	35.2	52.3
N7003CN	38.8	45.1	57.6	35.2	40.9	35.0	73.1
NC-Wilder	56.1	57.4	58.5	38.3	46.7	30.6	85.5
AGS 747LL	47.0	57.6	57.9	39.8	42.1	37.3	75.2
G15-2017R2	62.8	56.8	57.0	42.9	42.7	37.0	82.2
G15-2379R2	65.9	50.2	62.3	41.2	46.3	37.3	80.6
G16-4418R2	65.7	43.2	62.5	44.4	46.1	31.2	86.5
G16-5129R2	55.8	53.3	53.3	36.6	46.5	34.5	78.7
G16-5923R2	64.0	51.4	66.2	45.5	45.2	36.6	81.2
G16-5967R2	66.0	42.3	60.1	32.5	42.7	32.9	85.7
G16LL-10193	56.9	45.8	59.5	31.2	50.3	32.0	78.9
N16-10518	64.2	42.4	55.7	33.8	29.3	33.7	75.8
N16-10740	49.3	45.2	54.1	36.9	30.4	26.5	69.8
N16-9124	58.0	54.6	46.4	31.4	33.4	25.8	67.1
N16-9134	55.5	38.2	48.6	34.3	33.8	32.4	73.6
N16-9198	61.3	47.6	50.0	33.1	40.6	30.5	75.5
N94-7441	64.5	45.2	54.3	36.8	39.5	26.7	79.1
SC17-5537RR2	60.5	52.6	54.1	37.7	43.0	33.5	75.2
Mean	59.0	48.8	55.1	37.6	41.1	33.0	76.4
LSD(0.05)	11.7	12.2	8.7	8.0	9.1	7.5	8.0
LSD(0.10)	9.7	10.2	7.2	6.7	7.6	6.2	6.7
CV(%)	12.0	15.2	9.5	12.3	12.9	13.7	6.3

†Data not included in the test mean: None excluded

TABLE 117 - SEED YIELD (BUSHELS PER ACRE) (continued)
UNIFORM TEST VII 2020 †

STRAIN/ VARIETY	*Plymouth, NC*	*Tallassee, AL*	*Tifton, GA*	*Test Mean*
AGS-738RR	35.8	56.0	56.6	51.6
AG74X8 RR2X	32.6	58.4	42.2	44.7
N7003CN	33.3	48.5	56.0	46.3
NC-Wilder	36.4	56.1	58.9	52.5
AGS 747LL	34.1	51.5	54.6	49.7
G15-2017R2	37.1	48.3	56.6	52.3
G15-2379R2	37.9	57.5	55.8	53.5
G16-4418R2	41.1	56.2	54.7	53.2
G16-5129R2	34.1	49.3	57.8	50.0
G16-5923R2	35.6	55.9	60.8	54.2
G16-5967R2	38.9	56.4	56.6	51.5
G16LL-10193	35.6	49.5	62.9	50.3
N16-10518	31.8	49.1	49.5	46.5
N16-10740	32.2	36.9	53.5	43.5
N16-9124	28.6	57.6	52.2	45.6
N16-9134	30.4	52.4	50.0	44.9
N16-9198	38.9	63.5	57.5	49.8
N94-7441	34.0	51.3	49.8	48.1
SC17-5537RR2	36.8	55.5	60.1	50.9
Mean	35.0	53.2	55.1	49.4
LSD(0.05)	7.3	12.9	6.9	4.4
LSD(0.10)	6.0	10.7	5.7	3.7
CV(%)	12.1	14.5	7.6	13.8

TABLE 118 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	*Athens, GA(A)*	*Bossier City, LA*	*Calhoun, GA*	*Clayton, NC*	*Clemson, SC*	*Kinston, NC*	*Plymouth, NC*
AGS-738RR	10/22	10/19	10/21	10/31	10/21	10/22	10/30
AG74X8 RR2X	1	1	4	2	4	1	9
N7003CN	3	4	-1	7	7	4	4
NC-Wilder	3	3	-4	7	4	-1	5
AGS 747LL	3	0	3	4	4	2	5
G15-2017R2	2	1	2	0	4	-3	1
G15-2379R2	0	0	1	2	3	0	4
G16-4418R2	1	2	2	6	5	0	7
G16-5129R2	-2	3	5	2	5	4	0
G16-5923R2	-2	1	2	1	5	1	3
G16-5967R2	2	2	-1	5	4	3	7
G16LL-10193	2	3	-4	8	4	2	0
N16-10518	4	1	-7	3	4	4	3
N16-10740	3	3	0	4	4	-3	5
N16-9124	4	2	-7	6	3	1	5
N16-9134	1	0	-7	4	4	0	3
N16-9198	2	3	-5	7	5	3	5
N94-7441	3	2	-6	3	4	0	4
SC17-5537RR2	2	2	-1	6	4	1	3
Mean	2	2	-1	4	4	1	4
LSD(0.05)	1	2	5	5	1	2	7
CV(%)	36	71	280	64	20	84	97

TABLE 118 - RELATIVE MATURITY (continued)
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	Tallassee, AL	Tifton, GA	Test Mean
AGS-738RR	10/21	10/22	10/23
AG74X8 RR2X	9	0	3
N7003CN	10	0	4
NC-Wilder	8	0	3
AGS 747LL	6	-5	2
G15-2017R2	8	0	2
G15-2379R2	6	-3	1
G16-4418R2	9	-2	3
G16-5129R2	5	-2	2
G16-5923R2	6	-4	2
G16-5967R2	10	0	3
G16LL-10193	7	0	2
N16-10518	12	-1	2
N16-10740	6	-4	2
N16-9124	9	-1	2
N16-9134	5	-3	1
N16-9198	9	0	3
N94-7441	7	0	2
SC17-5537RR2	7	-2	3
Mean	7	-1	2
LSD(0.05)	4		2
CV(%)	35	0	116

TABLE 119 - PLANT HEIGHT (INCHES)
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clayton, NC	Clemson, SC	Kinston, NC	Plains, GA
AGS-738RR	39	35	35	36	.	36	32
AG74X8 RR2X	42	23	34	31	35	34	22
N7003CN	40	41	33	37	32	36	34
NC-Wilder	42	35	33	35	29	39	35
AGS 747LL	37	34	35	35	34	35	33
G15-2017R2	43	37	32	40	35	39	35
G15-2379R2	41	39	36	37	35	41	32
G16-4418R2	46	38	34	39	36	38	38
G16-5129R2	47	41	34	41	36	39	39
G16-5923R2	42	38	32	36	36	39	33
G16-5967R2	36	43	36	41	37	40	37
G16LL-10193	48	43	37	42	34	40	39
N16-10518	38	31	34	38	34	31	30
N16-10740	37	37	37	40	35	39	32
N16-9124	34	31	34	32	33	28	29
N16-9134	33	33	34	33	42	35	33
N16-9198	42	32	35	38	36	35	36
N94-7441	42	32	34	35	35	32	34
SC17-5537RR2	47	39	34	41	35	41	35
Mean	41	36	35	37	35	36	34
LSD(0.05)	2	4	4	.	3	5	3
CV(%)	3	7	8	.	4	6	6

TABLE 119 - PLANT HEIGHT (INCHES) (continued)
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	Plymouth, NC	Tallassee, AL	Tifton, GA	Test Mean
AGS-738RR	28	36	29	34
AG74X8 RR2X	24	42	22	31
N7003CN	28	39	31	35
NC-Wilder	29	33	29	34
AGS 747LL	31	41	27	34
G15-2017R2	30	41	31	36
G15-2379R2	30	43	29	36
G16-4418R2	31	41	30	37
G16-5129R2	33	44	36	39
G16-5923R2	31	37	31	35
G16-5967R2	34	38	34	38
G16LL-10193	33	41	32	39
N16-10518	28	34	24	32
N16-10740	31	31	28	35
N16-9124	28	32	27	31
N16-9134	29	35	28	34
N16-9198	28	38	29	35
N94-7441	31	36	27	34
SC17-5537RR2	32	40	33	38
Mean	30	38	29	35
LSD(0.05)	4	8	4	3
CV(%)	6	13	9	10

TABLE 120 - PLANT LODGING (1-5)
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clayton, NC	Clemson, SC	Kinston, NC	Plains, GA
AGS-738RR	2.3	2.0	2.0	1.5	.	1.8	1.3
AG74X8 RR2X	1.3	1.0	2.3	1.0	2.0	1.8	1.3
N7003CN	2.7	4.7	1.7	2.0	2.0	2.0	1.7
NC-Wilder	3.0	3.3	1.0	2.5	3.3	2.3	2.3
AGS 747LL	2.7	2.0	2.0	2.0	2.0	1.8	1.5
G15-2017R2	3.0	1.7	1.0	2.0	3.3	1.8	1.8
G15-2379R2	2.0	1.7	1.7	1.5	2.3	2.0	1.3
G16-4418R2	1.7	2.7	1.3	1.5	3.0	1.8	1.7
G16-5129R2	3.3	2.7	1.7	1.5	2.0	1.8	1.7
G16-5923R2	2.0	2.3	1.3	1.5	2.0	2.0	1.5
G16-5967R2	2.7	2.7	1.0	1.5	2.3	1.8	1.7
G16LL-10193	2.7	3.3	1.3	1.5	2.0	1.5	1.7
N16-10518	2.0	2.7	1.0	1.5	2.3	1.5	1.8
N16-10740	3.0	4.0	2.3	1.5	4.0	2.0	2.0
N16-9124	3.0	3.0	2.3	2.5	3.7	2.0	1.5
N16-9134	3.0	2.3	2.3	2.5	2.0	2.0	2.0
N16-9198	3.0	1.7	1.7	2.5	2.7	1.8	1.5
N94-7441	2.0	1.0	1.0	1.5	2.0	1.5	1.5
SC17-5537RR2	2.0	2.0	1.7	1.5	2.3	1.8	1.5
Mean	2.5	2.5	1.6	1.8	2.5	1.8	1.6
LSD(0.05)	0.6	0.9	1.4	.	0.6	0.5	0.5
CV(%)	14.0	22.8	53.2	.	15.3	13.1	19.0

TABLE 120 - PLANT LODGING (1-5) (continued)
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	Plymouth, NC	Tallassee, AL	Tifton, GA	Test Mean
AGS-738RR	1.3	.	1.3	1.8
AG74X8 RR2X	1.3	.	1.0	1.4
N7003CN	1.0	.	1.7	2.2
NC-Wilder	1.8	.	2.3	2.4
AGS 747LL	1.5	.	1.7	1.9
G15-2017R2	1.5	.	1.3	1.9
G15-2379R2	1.0	.	1.7	1.7
G16-4418R2	1.5	.	1.3	1.8
G16-5129R2	1.3	.	2.0	2.0
G16-5923R2	1.5	.	1.7	1.8
G16-5967R2	1.5	.	1.7	1.9
G16LL-10193	1.3	.	2.0	1.9
N16-10518	1.3	.	1.3	1.7
N16-10740	1.5	.	2.0	2.5
N16-9124	1.5	.	2.0	2.4
N16-9134	2.0	.	2.0	2.2
N16-9198	1.3	.	2.0	2.0
N94-7441	1.5	.	2.0	1.5
SC17-5537RR2	1.5	.	2.0	1.8
Mean	1.4	.	1.7	1.9
LSD(0.05)	0.4	.	0.7	0.4
CV(%)	15.2	.	24.1	31.1

TABLE 121 - SEED QUALITY (1-5)
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clayton, NC	Clemson, SC	Kinston, NC	Plains, GA
AGS-738RR	1.5	1.0	.	.	.	.	1.2
AG74X8 RR2X	1.5	1.0	.	.	.	.	1.2
N7003CN	2.0	1.7	.	.	.	.	2.0
NC-Wilder	1.5	1.0	.	.	.	.	1.2
AGS 747LL	1.5	1.0	.	.	.	.	1.2
G15-2017R2	1.5	1.3	.	.	.	.	1.2
G15-2379R2	1.5	1.0	.	.	.	.	1.0
G16-4418R2	1.3	1.0	.	.	.	.	1.0
G16-5129R2	1.5	1.0	.	.	.	.	1.2
G16-5923R2	1.5	1.0	.	.	.	.	1.2
G16-5967R2	1.3	1.0	.	.	.	.	1.0
G16LL-10193	1.8	1.0	.	.	.	.	1.5
N16-10518	1.3	1.0	.	.	.	.	1.0
N16-10740	1.3	1.0	.	.	.	.	1.2
N16-9124	1.5	1.0	.	.	.	.	1.2
N16-9134	1.7	1.0	.	.	.	.	1.0
N16-9198	1.5	1.0	.	.	.	.	1.0
N94-7441	1.3	1.0	.	.	.	.	1.0
SC17-5537RR2	1.5	1.0	.	.	.	.	1.2
Mean	1.5	1.1	.	.	.	.	1.2
LSD(0.05)	0.3	0.3	.	.	.	.	0.4
CV(%)	11.6	17.5	.	.	.	.	20.2

TABLE 121 - SEED QUALITY (1-5) (continued)
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	*Plymouth, NC*	*Tallassee, AL*	*Tifton, GA*	*Test Mean*
AGS-738RR	.	1.0	.	1.2
AG74X8 RR2X	.	1.0	.	1.2
N7003CN	.	1.0	.	1.7
NC-Wilder	.	1.0	.	1.2
AGS 747LL	.	1.0	.	1.2
G15-2017R2	.	1.0	.	1.2
G15-2379R2	.	1.0	.	1.1
G16-4418R2	.	1.0	.	1.1
G16-5129R2	.	1.0	.	1.2
G16-5923R2	.	1.0	.	1.2
G16-5967R2	.	1.0	.	1.1
G16LL-10193	.	1.0	.	1.3
N16-10518	.	1.0	.	1.1
N16-10740	.	1.0	.	1.1
N16-9124	.	1.0	.	1.2
N16-9134	.	1.0	.	1.2
N16-9198	.	1.0	.	1.1
N94-7441	.	1.0	.	1.1
SC17-5537RR2	.	1.0	.	1.2
Mean	.	1.0	.	1.2
LSD(0.05)	.		.	0.2
CV(%)	.	0.0	.	15.8

TABLE 122 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	*Athens, GA(A)*	*Bossier City, LA*	*Calhoun, GA*	*Clayton, NC*	*Clemson, SC*	*Kinston, NC*	*Plains, GA*
AGS-738RR	14.6	14.2	.	14.4	.	13.4	15.3
AG74X8 RR2X	17.8	14.8	.	17.2	.	15.6	16.7
N7003CN	17.9	15.5	.	18.0	.	17.7	17.0
NC-Wilder	16.0	15.5	.	16.0	.	14.0	16.7
AGS 747LL	16.3	14.3	.	15.6	.	14.5	16.8
G15-2017R2	15.7	14.0	.	14.5	.	14.0	15.9
G15-2379R2	14.9	14.4	.	15.2	.	14.6	15.3
G16-4418R2	14.3	12.2	.	14.6	.	13.7	14.7
G16-5129R2	16.2	15.7	.	16.7	.	15.6	16.9
G16-5923R2	15.1	13.0	.	14.3	.	14.5	15.3
G16-5967R2	18.0	15.7	.	17.2	.	16.9	17.7
G16LL-10193	18.1	15.7	.	18.1	.	16.1	17.7
N16-10518	10.7	9.4	.	10.7	.	10.5	11.0
N16-10740	10.7	9.7	.	11.2	.	9.4	11.0
N16-9124	11.7	10.8	.	11.9	.	10.7	11.7
N16-9134	11.7	10.2	.	10.9	.	10.2	11.4
N16-9198	10.5	9.5	.	10.5	.	9.6	10.1
N94-7441	9.2	8.3	.	9.8	.	8.4	8.9
SC17-5537RR2	16.7	15.6	.	16.6	.	15.8	16.4
Mean	14.5	13.1	.	14.4	.	13.4	14.5
LSD(0.05)	0.8		.	1.1	.	1.0	1.7
CV(%)	3.5		.	4.7	.	4.3	7.0

TABLE 122 - SEED SIZE (GRAMS PER 100 SEED) (continued)
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	*Plymouth, NC*	*Tallassee, AL*	*Tifton, GA*	*Test Mean*
AGS-738RR	13.6	14.1	.	14.1
AG74X8 RR2X	15.8	15.3	.	16.3
N7003CN	16.2	16.0	.	17.0
NC-Wilder	16.0	17.1	.	15.9
AGS 747LL	15.0	13.6	.	15.2
G15-2017R2	14.5	14.1	.	14.7
G15-2379R2	14.9	14.4	.	14.8
G16-4418R2	14.1	13.1	.	13.9
G16-5129R2	15.6	14.7	.	15.9
G16-5923R2	14.4	13.9	.	14.4
G16-5967R2	17.7	16.5	.	17.2
G16LL-10193	15.4	16.9	.	16.9
N16-10518	10.5	10.3	.	10.5
N16-10740	10.8	10.4	.	10.5
N16-9124	10.6	10.2	.	11.0
N16-9134	10.3	10.0	.	10.7
N16-9198	9.2	9.4	.	9.8
N94-7441	8.7	8.6	.	8.8
SC17-5537RR2	15.5	16.2	.	16.1
Mean	13.6	13.4	.	13.9
LSD(0.05)	1.1	1.7	.	0.6
CV(%)	4.7	7.3	.	5.7

TABLE 123 - OIL (%)†
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clayton, NC	Clemson, SC	Kinston, NC	Plains, GA	Plymouth, NC	Tallassee, AL	Tifton, GA	Test Mean
AGS-738RR	19.5	.	.	18.2	.	18.2	19.2	17.7	19.1	.	18.6
AG74X8 RR2X	18.8	.	.	17.3	.	18.6	19.5	16.7	18.4	.	18.2
N7003CN	19.2	.	.	16.8	.	17.7	19.3	17.9	18.8	.	18.3
NC-Wilder	19.5	.	.	18.5	.	19.0	19.9	18.3	19.6	.	19.1
AGS 747LL	18.7	.	.	17.1	.	17.9	19.6	17.4	20.0	.	18.5
G15-2017R2	18.9	.	.	17.5	.	17.1	18.9	17.0	18.3	.	18.0
G15-2379R2	18.2	.	.	17.5	.	17.6	19.1	17.0	18.8	.	18.0
G16-4418R2	18.8	.	.	17.2	.	17.3	19.8	17.2	19.5	.	18.3
G16-5129R2	18.3	.	.	17.7	.	17.7	18.9	17.1	19.2	.	18.1
G16-5923R2	18.9	.	.	17.2	.	17.4	19.0	16.9	18.6	.	18.0
G16-5967R2	19.1	.	.	17.6	.	18.5	19.7	17.4	19.4	.	18.6
G16LL-10193	19.4	.	.	18.1	.	18.6	20.0	18.6	19.5	.	19.0
N16-10518	18.5	.	.	17.2	.	17.8	18.5	17.9	17.9	.	17.9
N16-10740	17.9	.	.	16.8	.	17.5	18.0	17.2	17.8	.	17.5
N16-9124	16.8	.	.	15.4	.	16.3	17.0	16.2	16.4	.	16.4
N16-9134	17.6	.	.	15.6	.	16.4	17.1	16.2	16.2	.	16.5
N16-9198	17.0	.	.	15.1	.	15.7	16.4	15.4	16.1	.	16.0
N94-7441	17.0	.	.	15.5	.	16.7	16.8	16.4	16.5	.	16.5
SC17-5537RR2	18.7	.	.	17.3	.	18.0	19.0	17.6	18.1	.	18.1
Mean	18.5	.	.	17.0	.	17.6	18.7	17.2	18.3	.	17.9
LSD(0.05)	0.4	.	.	.	.	.	0.4	.	.	.	0.4
CV(%)	1.2	.	.	.	.	.	1.2	.	.	.	2.2

†Oil percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial were reported for some locations in 2021.

TABLE 124 - PROTEIN (%)†
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clayton, NC	Clemson, SC	Kinston, NC	Plains, GA	Plymouth, NC	Tallassee, AL	Tifton, GA	Test Mean
AGS-738RR	34.0	.	.	34.8	.	35.3	34.8	34.8	35.0	.	34.9
AG74X8 RR2X	34.7	.	.	37.3	.	34.6	34.5	37.3	35.7	.	35.6
N7003CN	34.3	.	.	35.4	.	36.6	34.2	35.1	36.2	.	35.2
NC-Wilder	34.6	.	.	34.8	.	34.4	34.6	35.4	35.3	.	35.0
AGS 747LL	35.5	.	.	37.2	.	36.0	35.4	36.1	35.1	.	36.0
G15-2017R2	34.6	.	.	36.8	.	37.1	35.3	36.9	37.2	.	36.2
G15-2379R2	36.2	.	.	36.8	.	36.3	34.7	36.3	36.6	.	36.2
G16-4418R2	35.2	.	.	37.3	.	36.6	35.0	36.5	35.8	.	36.0
G16-5129R2	34.9	.	.	36.0	.	36.4	35.0	36.5	35.1	.	35.7
G16-5923R2	34.9	.	.	37.1	.	37.3	35.4	36.4	36.8	.	36.2
G16-5967R2	33.3	.	.	35.3	.	34.5	31.6	35.1	33.9	.	33.8
G16LL-10193	34.6	.	.	36.5	.	36.3	34.4	35.7	36.9	.	35.6
N16-10518	35.9	.	.	37.4	.	36.6	35.9	37.1	37.7	.	36.7
N16-10740	37.6	.	.	38.8	.	37.2	37.5	38.3	38.1	.	38.0
N16-9124	38.7	.	.	40.1	.	38.8	38.6	38.8	39.0	.	39.1
N16-9134	37.5	.	.	39.3	.	38.4	38.0	38.7	38.9	.	38.5
N16-9198	36.9	.	.	40.4	.	38.9	38.4	39.2	39.0	.	38.7
N94-7441	37.1	.	.	40.1	.	37.2	37.3	38.1	38.4	.	38.0
SC17-5537RR2	35.4	.	.	37.9	.	36.0	35.9	37.2	36.9	.	36.5
Mean	35.6	.	.	37.3	.	36.5	35.6	36.8	36.7	.	36.4
LSD(0.05)	0.9	.	.	.	.	.	1.0	.	.	.	0.7
CV(%)	1.5	.	.	.	.	.	1.7	.	.	.	1.9

†Protein percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial in some locations were reported in 2020.

TABLE 125 - MEAL (%)†
UNIFORM GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Calhoun, GA	Clayton, NC	Clemson, SC	Kinston, NC	Plains, GA	Plymouth, NC	Tallassee, AL	Tifton, GA	Test Mean
AGS-738RR	45.9	.	.	46.3	.	46.8	46.8	45.9	47.0	.	46.6
AG74X8 RR2X	46.4	.	.	49.0	.	46.2	46.7	48.7	47.5	.	47.4
N7003CN	46.1	.	.	46.2	.	48.3	46.1	46.5	48.4	.	46.9
NC-Wilder	46.7	.	.	46.4	.	46.1	47.0	47.0	47.7	.	47.0
AGS 747LL	47.5	.	.	48.8	.	47.7	47.8	47.5	47.7	.	47.9
G15-2017R2	46.4	.	.	48.5	.	48.6	47.3	48.4	49.4	.	47.9
G15-2379R2	48.2	.	.	48.5	.	47.9	46.7	47.5	48.9	.	48.0
G16-4418R2	47.2	.	.	48.9	.	48.1	47.4	47.9	48.3	.	47.9
G16-5129R2	46.5	.	.	47.6	.	48.0	47.0	47.9	47.2	.	47.3
G16-5923R2	46.7	.	.	48.7	.	49.0	47.4	47.7	49.1	.	48.0
G16-5967R2	44.8	.	.	46.5	.	46.0	42.7	46.2	45.7	.	45.1
G16LL-10193	46.6	.	.	48.4	.	48.4	46.7	47.6	49.8	.	47.8
N16-10518	47.9	.	.	49.1	.	48.4	47.9	49.0	49.9	.	48.7
N16-10740	49.8	.	.	50.7	.	49.0	49.6	50.3	50.4	.	50.1
N16-9124	50.6	.	.	51.5	.	50.3	50.5	50.3	50.8	.	50.8
N16-9134	49.4	.	.	50.6	.	49.9	49.8	50.2	50.5	.	50.1
N16-9198	48.3	.	.	51.7	.	50.1	49.9	50.4	50.5	.	50.0
N94-7441	48.6	.	.	51.6	.	48.5	48.7	49.5	50.0	.	49.4
SC17-5537RR2	47.3	.	.	49.7	.	47.7	48.1	49.1	49.0	.	48.4
Mean	47.4	.	.	48.9	.	48.2	47.6	48.3	48.8	.	48.2
LSD(0.05)	1.1	.	.	.	.	.	1.2	.	.	.	0.8
CV(%)	1.4	.	.	.	.	.	1.6	.	.	.	1.6

†Meal percentage reported on a 13% moisture basis beginning in 2018.
Protein and oil data from all replicates of a trial were reported for some locations in 2020.

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TABLE 126 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP VII 2020

Ent	*Strain/Variety*	*Parentage*	*Source*	*Fn*	*Trans-genic†*	*Special Traits‡*
1	AGS-738RR	Commercial check	Commercial		RR1	
2	AG74X8 RR2X	Commercial check	Commercial		RRX	
3	N7003CN	Commercial check	Commercial		Conv	
4	NC-Wilder	Commercial check	Commercial		Conv	
5	AGS 747LL	Commercial check	Commercial		LL	
6	G17-11158	N07-14717 x Santee	Zenglu Li	F5d	Conv	
7	G17-11315	G08PR-394 x G00-3213	Zenglu Li	F5d	Conv	
8	G17-2218R2	N05-7432 x G10PR-56466R2	Zenglu Li	F5d	RR2	
9	G17-3336R2	N08-391 x G10PR-56248R2	Zenglu Li	F6d	RR2	
10	G17-4942R2	N07-14182 x G10PR-56248R2	Zenglu Li	F5d	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	BC3 F2d	RR1	
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	BC3 F2d	RR2	
15	N09-13890	TCPR01-83 x N01-11136	Carter	F4	Conv	diversity/drought
16	N11-10295	N01-11298 x N04-9646	Carter	F4	Conv	diversity/drought
17	N14-7142	G00-3213 x TCHM06-Morph-204	Carter	F4	Conv	protein
18	N14-7563	N6002 x NC-Roy	Carter	F4	Conv	diversity/protein
19	N14-7719	N07-14704 (sib of N6001) x NC-Roy	Carter	F4	Conv	diversity/protein
20	N14-7472	N6001 x NC-Roy	Carter	F4	Conv	diversity/protein
21	N14-7822	N6001 x NC-Roy	Carter	F4	Conv	diversity/protein
22	N16-8470	NC-Roy x LG01-5087-3	Carter	F4	Conv	diversity
23	SC17-6511RR1	TN05-5018 x SC06-676RR	Fallen		RR1	
24	SC17-DRC22	Jing Huang 18 x N8002	Fallen		Conv	
25	SC17-DRC27	S11-21092 x N8002	Fallen		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 127 - GENERAL SUMMARY OF PERFORMANCE
PRELIMINARY TEST VII 2020

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	53.4	7	12	0	2.0	32	2	.	3	R	1
AG74X8 RR2X	42.3	25	23	3	1.6	28	5	.	5	R	1
N7003CN	49.8	16	17	5	2.8	36	1	.	1	SS	3
NC-Wilder	55.6	3	5	4	3.1	36	4	.	5	MS	4
AGS 747LL	53.2	9	10	2	2.1	36	4	.	5	SS	3
G17-11158	50.7	15	11	1	1.7	32	3	.	5	R	1
G17-11315	53.3	8	10	0	2.2	36	3	.	5	R	1
G17-2218R2	54.0	6	8	3	2.0	36	4	.	5	MS	4
G17-3336R2	55.3	4	6	3	2.4	39	4	.	5	R	1
G17-4942R2	52.2	10	11	1	2.3	38	4	.	4	R	1
G17-5173R2	57.7	1	5	0	1.7	33	4	.	4	MS	4
G17-8737LL	56.0	2	6	3	2.3	34	4	.	4	MR	2
G17PR-1071HOLNR	51.0	14	15	2	2.1	33	2	.	3	MS	4
G18-6534HOLNR2	49.3	18	15	1	1.8	38	2	.	2	MS	4
N09-13890	48.6	20	20	3	2.1	36	4	.	4	R	1
N11-10295	48.2	21	19	5	2.8	39	4	.	4	R	1
N14-7142	51.6	11	10	8	3.2	38	3	.	4	MS	4
N14-7563	49.7	17	17	3	3.1	38	4	.	3	MR	2
N14-7719	48.9	19	14	7	3.2	46	4	.	4	MS	4
N14-7472	47.7	22	20	2	2.4	37	3	.	4	MS	4
N14-7822	54.6	5	9	4	2.5	40	3	.	4	S	5
N16-8470	46.1	23	18	1	3.2	39	4	.	5	R	1
SC17-6511RR1	51.3	12	15	3	2.4	38	2	.	3	MS	4
SC17-DRC22	51.3	13	14	3	3.0	38	5	.	4	MS	4
SC17-DRC27	43.8	24	20	6	3.1	51	4	.	5	S	5
Mean	51.0	.	.	3	2.4	37	.	.	.		.
LSD(0.05)	6.4	.	.	3	0.6	3	.	.	.		.
CV(%)	12.4	.	.	76	25	9	.	.	.		.

† Data not included in the test mean: Bossier City, LA

‡The race 2 and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 128 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST VII 2020

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
AGS-738RR	1.2	13.7	34.6	19.0	46.4			
AG74X8 RR2X	1.1	15.6	34.8	18.8	46.6			
N7003CN	1.6	16.5	34.8	18.7	46.5			
NC-Wilder	1.2	15.7	34.7	19.4	46.8			
AGS 747LL	1.2	15.0	35.5	18.7	47.4			
G17-11158	1.3	15.7	37.4	18.5	49.8	W	G	T
G17-11315	1.6	16.6	35.8	19.4	48.3	W	G	T
G17-2218R2	1.1	12.7	37.8	16.6	49.2	P	T	T
G17-3336R2	1.2	15.1	36.7	18.1	48.7	W	T	T
G17-4942R2	1.3	15.2	37.5	17.5	49.4	W	T	T
G17-5173R2	1.4	15.2	35.8	18.7	47.8	P	T	T
G17-8737LL	1.2	16.1	36.4	18.0	48.3	P	T	T
G17PR-1071HOLNR	1.3	13.9	35.7	19.3	48.0	P	T	T
G18-6534HOLNR2	1.2	13.2	36.9	19.2	49.7	W	T	T
N09-13890	1.3	16.4	35.9	18.6	47.9	P	T	
N11-10295	1.2	13.1	37.3	17.4	49.1	W	G	
N14-7142	1.1	15.4	36.6	18.5	48.9	P	G	
N14-7563	1.4	15.4	37.6	17.3	49.4	P	G	
N14-7719	1.2	13.6	38.6	17.2	50.7	P	G	
N14-7472	1.4	17.0	36.9	17.8	48.8	P	G	
N14-7822	1.4	15.4	37.9	17.8	50.1	P	G	
N16-8470	1.6	11.8	34.3	18.6	45.8	W	G	
SC17-6511RR1	1.3	12.3	35.6	18.0	47.2	P	T	
SC17-DRC22	1.1	11.9	34.6	19.2	46.5	P	G	
SC17-DRC27	1.3	14.2	37.0	18.0	49.0	W	T	
Mean	1.3	14.7	36.3	18.3	48.2			
LSD(0.05)	0.4	0.9	0.9	0.5	1.0			
CV(%)	24.5	6.1	1.8	1.9	1.5			

§ 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 2020 †

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	66.5	39.9	31.3	80.2	35.5	53.4
AG74X8 RR2X	52.5	24.0	25.4	56.7	34.5	42.3
N7003CN	57.3	37.5	29.6	77.2	35.3	49.8
NC-Wilder	64.0	47.1	36.1	83.6	38.8	55.6
AGS 747LL	58.1	35.8	37.2	79.8	37.8	53.2
G17-11158	62.9	40.1	35.3	65.9	38.5	50.7
G17-11315	61.8	34.6	30.6	81.8	38.8	53.3
G17-2218R2	60.2	45.8	32.0	84.2	39.6	54.0
G17-3336R2	56.6	44.6	39.0	84.3	41.3	55.3
G17-4942R2	60.4	41.0	32.1	78.1	38.0	52.2
G17-5173R2	72.7	51.9	36.7	83.1	38.2	57.7
G17-8737LL	67.0	37.5	37.0	84.5	35.5	56.0
G17PR-1071HOLNR1	59.9	41.4	31.8	80.8	30.3	51.0
G18-6534HOLNR2	56.5	32.5	32.2	70.6	38.0	49.3
N09-13890	56.1	44.7	28.8	80.1	28.3	48.6
N11-10295	51.9	31.0	31.7	74.2	35.1	48.2
N14-7142	59.6	40.8	33.4	69.3	44.1	51.6
N14-7563	54.0	39.4	35.2	77.0	32.4	49.7
N14-7719	59.4	27.5	31.9	64.4	39.8	48.9
N14-7472	51.0	32.0	28.3	73.7	37.5	47.7
N14-7822	65.8	30.4	34.9	80.3	37.5	54.6
N16-8470	50.3	28.5	32.7	66.0	35.5	46.1
SC17-6511RR1	58.6	37.1	31.3	80.9	34.2	51.3
SC17-DRC22	56.9	34.4	29.5	78.0	40.6	51.3
SC17-DRC27	50.9	27.8	32.5	58.3	33.7	43.8
Mean	58.8	37.1	32.7	75.7	36.8	51.0
LSD(0.05)	11.5	10.4	7.5	8.9	6.3	6.4
LSD(0.10)	9.6	8.7	6.2	7.4	5.2	5.4
CV(%)	11.9	17.1	13.9	7.2	10.2	12.4

† Data not included in the test mean: Bossier City, LA

TABLE 130 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	*Athens, GA(A)*	*Bossier City, LA*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Test Mean*
AGS-738RR	10/19	10/25	10/23	.	10/27	10/24
AG74X8 RR2X	3	2	1	.	7	3
N7003CN	5	3	4	.	7	5
NC-Wilder	7	1	2	.	4	4
AGS 747LL	4	1	1	.	0	2
G17-11158	3	-2	1	.	1	1
G17-11315	1	-1	3	.	-1	0
G17-2218R2	3	1	1	.	6	3
G17-3336R2	4	2	3	.	3	3
G17-4942R2	2	0	0	.	1	1
G17-5173R2	0	2	-2	.	2	0
G17-8737LL	3	2	4	.	3	3
G17PR-1071HOLNR1	0	0	1	.	6	2
G18-6534HOLNR2	-5	2	2	.	4	1
N09-13890	3	1	4	.	5	3
N11-10295	7	1	3	.	7	5
N14-7142	9	4	7	.	11	8
N14-7563	5	-1	2	.	7	3
N14-7719	9	4	5	.	10	7
N14-7472	4	-2	2	.	3	2
N14-7822	6	-2	4	.	9	4
N16-8470	1	-2	1	.	3	1
SC17-6511RR1	5	0	4	.	4	3
SC17-DRC22	6	0	2	.	3	3
SC17-DRC27	8	4	6	.	8	6
Mean	4	1	3	.	4	3
LSD(0.05)	1	2	3	.	4	3
CV(%)	16	173	57	.	49	76

TABLE 131 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	*Athens, GA(A)*	*Bossier City, LA*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Test Mean*
AGS-738RR	35	35	34	29	27	32
AG74X8 RR2X	36	27	28	23	26	28
N7003CN	46	39	33	34	29	36
NC-Wilder	38	38	38	33	32	36
AGS 747LL	44	34	37	34	31	36
G17-11158	39	33	34	27	29	32
G17-11315	46	40	33	33	27	36
G17-2218R2	46	39	34	31	31	36
G17-3336R2	48	41	36	37	32	39
G17-4942R2	46	43	36	35	32	38
G17-5173R2	40	31	35	28	30	33
G17-8737LL	42	37	33	28	29	34
G17PR-1071HOLNR1	39	35	36	30	27	33
G18-6534HOLNR2	47	42	37	33	31	38
N09-13890	43	37	35	33	31	36
N11-10295	49	44	38	38	28	39
N14-7142	46	43	34	34	33	38
N14-7563	45	37	37	40	33	38
N14-7719	53	51	39	45	44	46
N14-7472	43	38	36	34	35	37
N14-7822	47	41	38	39	34	40
N16-8470	48	40	40	34	34	39
SC17-6511RR1	45	42	38	33	31	38
SC17-DRC22	42	41	36	37	33	38
SC17-DRC27	57	56	43	57	42	51
Mean	44	39	36	34	31	37
LSD(0.05)	3	5	5	4	5	3
CV(%)	4	8	6	7	7	9

TABLE 132 - PLANT LODGING (1-5)
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	1.7	4.0	1.5	1.8	1.3	2.0
AG74X8 RR2X	1.3	2.7	1.8	1.0	1.5	1.6
N7003CN	3.3	4.7	2.0	2.5	1.3	2.8
NC-Wilder	3.7	5.0	2.5	2.7	1.5	3.1
AGS 747LL	2.7	3.3	2.0	1.3	1.3	2.1
G17-11158	1.7	2.7	1.8	1.0	1.5	1.7
G17-11315	1.7	4.0	1.5	2.3	1.3	2.2
G17-2218R2	2.0	3.3	1.8	1.3	1.5	2.0
G17-3336R2	2.3	4.3	1.8	2.2	1.3	2.4
G17-4942R2	3.0	4.0	1.8	1.5	1.3	2.3
G17-5173R2	2.0	2.3	2.0	1.0	1.3	1.7
G17-8737LL	2.3	4.0	1.8	1.2	2.3	2.3
G17PR-1071HOLNR1	2.7	3.3	1.8	1.3	1.3	2.1
G18-6534HOLNR2	2.0	3.3	1.5	1.0	1.5	1.8
N09-13890	2.7	3.3	1.5	1.5	1.5	2.1
N11-10295	3.3	5.0	1.8	2.7	1.0	2.8
N14-7142	3.7	5.0	2.0	3.5	1.5	3.2
N14-7563	3.7	4.7	2.3	3.2	1.5	3.1
N14-7719	3.7	5.0	2.0	3.2	1.8	3.2
N14-7472	3.0	3.7	1.8	1.8	1.5	2.4
N14-7822	2.7	4.0	1.8	2.3	1.5	2.5
N16-8470	3.7	4.3	2.3	3.8	1.5	3.2
SC17-6511RR1	2.3	4.3	2.0	1.8	1.3	2.4
SC17-DRC22	2.7	4.7	2.3	3.0	2.3	3.0
SC17-DRC27	3.3	5.0	2.0	3.0	2.3	3.1
Mean	2.7	4.0	1.9	2.1	1.5	2.4
LSD(0.05)	0.8	1.0	0.5	0.8	0.8	0.6
CV(%)	19.0	15.0	13.5	22.7	25.6	24.7

TABLE 133 - SEED QUALITY (1-5)
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	1.3	1.0	.	1.3	.	1.2
AG74X8 RR2X	1.3	1.0	.	1.0	.	1.1
N7003CN	2.2	1.0	.	1.7	.	1.6
NC-Wilder	1.2	1.0	.	1.3	.	1.2
AGS 747LL	1.5	1.0	.	1.0	.	1.2
G17-11158	1.5	1.0	.	1.3	.	1.3
G17-11315	1.5	1.0	.	2.3	.	1.6
G17-2218R2	1.3	1.0	.	1.0	.	1.1
G17-3336R2	1.5	1.0	.	1.0	.	1.2
G17-4942R2	1.5	1.3	.	1.2	.	1.3
G17-5173R2	1.8	1.0	.	1.5	.	1.4
G17-8737LL	1.2	1.0	.	1.3	.	1.2
G17PR-1071HOLNR1	1.3	1.0	.	1.5	.	1.3
G18-6534HOLNR2	1.5	1.0	.	1.0	.	1.2
N09-13890	1.7	1.0	.	1.3	.	1.3
N11-10295	1.2	1.3	.	1.2	.	1.2
N14-7142	1.0	1.0	.	1.2	.	1.1
N14-7563	1.8	1.0	.	1.3	.	1.4
N14-7719	1.3	1.0	.	1.2	.	1.2
N14-7472	1.5	1.3	.	1.5	.	1.4
N14-7822	1.5	1.0	.	1.8	.	1.4
N16-8470	1.5	1.7	.	1.5	.	1.6
SC17-6511RR1	1.5	1.0	.	1.5	.	1.3
SC17-DRC22	1.3	1.0	.	1.0	.	1.1
SC17-DRC27	1.8	1.0	.	1.0	.	1.3
Mean	1.5	1.1	.	1.3	.	1.3
LSD(0.05)	0.4	0.4	.	0.4	.	0.4
CV(%)	17.3	21.3	.	20.5	.	24.5

TABLE 134 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	13.3	13.8	13.6	14.7	13.2	13.7
AG74X8 RR2X	15.9	14.8	15.3	16.5	15.4	15.6
N7003CN	17.4	15.5	16.1	16.9	16.4	16.5
NC-Wilder	15.3	15.7	14.6	16.6	16.5	15.7
AGS 747LL	14.8	14.6	14.2	16.8	14.8	15.0
G17-11158	16.0	14.5	15.4	17.2	15.3	15.7
G17-11315	15.2	16.0	16.9	18.7	16.1	16.6
G17-2218R2	13.4	11.8	11.9	13.4	13.1	12.7
G17-3336R2	15.8	15.7	14.2	15.9	14.4	15.1
G17-4942R2	15.2	15.6	14.6	16.1	15.1	15.2
G17-5173R2	16.2	15.3	14.2	15.4	15.4	15.2
G17-8737LL	16.1	15.3	16.3	17.2	15.3	16.1
G17PR-1071HOLNR1	13.7	13.1	14.1	14.8	13.8	13.9
G18-6534HOLNR2	12.3	12.8	13.7	12.8	14.6	13.2
N09-13890	16.6	15.3	16.1	17.5	16.3	16.4
N11-10295	14.2	12.9	12.7	13.2	12.7	13.1
N14-7142	15.5	15.0	15.5	15.1	16.2	15.4
N14-7563	15.2	12.9	15.8	16.1	16.1	15.4
N14-7719	13.5	12.8	13.7	14.1	13.7	13.6
N14-7472	17.4	13.3	17.0	18.8	17.3	17.0
N14-7822	15.6	14.0	14.8	17.2	15.1	15.4
N16-8470	11.3	11.2	11.8	12.1	12.7	11.8
SC17-6511RR1	12.1	12.0	12.4	12.6	12.4	12.3
SC17-DRC22	12.3	11.1	12.2	12.6	11.1	11.9
SC17-DRC27	15.6	11.8	14.1	15.7	13.2	14.2
Mean	14.8	13.9	14.4	15.5	14.6	14.7
LSD(0.05)	1.2	.	0.8	1.3	1.2	0.9
CV(%)	4.7	.	3.5	5.2	5.1	6.1

TABLE 135 - OIL (%)†
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	19.6	.	18.3	19.5	18.5	19.0
AG74X8 RR2X	19.3	.	18.3	19.5	18.2	18.8
N7003CN	19.1	.	18.1	19.3	18.5	18.7
NC-Wilder	19.7	.	19.3	19.8	18.6	19.4
AGS 747LL	19.1	.	18.7	19.8	17.3	18.7
G17-11158	19.0	.	18.0	19.4	17.6	18.5
G17-11315	19.6	.	19.2	20.0	18.7	19.4
G17-2218R2	17.4	.	15.9	17.5	15.4	16.6
G17-3336R2	18.3	.	17.6	19.0	17.5	18.1
G17-4942R2	17.6	.	17.2	18.0	17.3	17.5
G17-5173R2	19.1	.	18.4	19.6	17.6	18.7
G17-8737LL	18.8	.	17.2	18.6	17.5	18.0
G17PR-1071HOLN	20.2	.	18.8	19.8	18.3	19.3
G18-6534HOLNR2	19.2	.	19.2	19.9	18.7	19.2
N09-13890	19.5	.	18.7	19.1	17.2	18.6
N11-10295	18.3	.	17.1	18.2	16.2	17.4
N14-7142	19.1	.	18.3	19.4	17.3	18.5
N14-7563	18.0	.	16.9	18.0	16.2	17.3
N14-7719	18.2	.	16.7	17.5	16.4	17.2
N14-7472	18.4	.	17.4	18.8	16.4	17.8
N14-7822	19.1	.	17.1	17.6	17.5	17.8
N16-8470	18.9	.	18.2	19.3	17.8	18.6
SC17-6511RR1	18.5	.	17.8	18.8	17.1	18.0
SC17-DRC22	19.6	.	18.9	20.1	18.1	19.2
SC17-DRC27	18.9	.	17.5	18.5	17.3	18.0
Mean	18.9	.	17.9	19.0	17.5	18.3
LSD(0.05)	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	1.9

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

TABLE 136 - PROTEIN (%)†
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	33.5	.	34.9	35.1	34.8	34.6
AG74X8 RR2X	33.7	.	35.3	34.7	35.6	34.8
N7003CN	34.7	.	35.7	34.5	34.3	34.8
NC-Wilder	34.6	.	34.3	34.6	35.3	34.7
AGS 747LL	34.9	.	34.9	35.0	37.1	35.5
G17-11158	35.9	.	38.4	36.8	38.3	37.4
G17-11315	35.1	.	35.7	36.4	36.1	35.8
G17-2218R2	37.0	.	37.9	37.0	39.2	37.8
G17-3336R2	36.0	.	36.7	36.6	37.3	36.7
G17-4942R2	37.4	.	37.5	37.4	37.6	37.5
G17-5173R2	35.3	.	36.1	35.5	36.4	35.8
G17-8737LL	36.2	.	37.5	35.9	36.2	36.4
G17PR-1071HOLN	34.6	.	36.0	36.1	36.0	35.7
G18-6534HOLNR2	36.8	.	36.5	37.0	37.4	36.9
N09-13890	34.6	.	35.2	35.9	37.8	35.9
N11-10295	36.4	.	37.8	37.0	37.9	37.3
N14-7142	35.8	.	36.0	36.5	38.2	36.6
N14-7563	36.8	.	38.0	36.8	38.8	37.6
N14-7719	37.3	.	38.8	39.4	39.1	38.6
N14-7472	35.3	.	37.2	36.5	38.9	36.9
N14-7822	35.7	.	39.2	38.8	37.9	37.9
N16-8470	34.1	.	34.4	33.7	35.1	34.3
SC17-6511RR1	34.7	.	35.6	34.6	37.5	35.6
SC17-DRC22	34.3	.	34.4	34.1	35.4	34.6
SC17-DRC27	35.6	.	37.5	37.5	37.3	37.0
Mean	35.4	.	36.5	36.1	37.0	36.3
LSD(0.05)	.	.	.	.	.	0.9
CV(%)	.	.	.	.	.	1.8

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

TABLE 137 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	45.2	.	46.5	47.4	46.4	46.4
AG74X8 RR2X	45.4	.	46.9	46.8	47.3	46.6
N7003CN	46.6	.	47.4	46.4	45.7	46.5
NC-Wilder	46.8	.	46.2	46.9	47.1	46.8
AGS 747LL	46.9	.	46.6	47.4	48.8	47.4
G17-11158	48.2	.	50.9	49.7	50.5	49.8
G17-11315	47.4	.	48.0	49.4	48.3	48.3
G17-2218R2	48.7	.	49.0	48.7	50.4	49.2
G17-3336R2	47.9	.	48.5	49.1	49.2	48.7
G17-4942R2	49.3	.	49.3	49.6	49.4	49.4
G17-5173R2	47.4	.	48.1	47.9	48.0	47.8
G17-8737LL	48.4	.	49.2	48.0	47.6	48.3
G17PR-1071HOLN	47.1	.	48.2	49.0	47.9	48.0
G18-6534HOLNR2	49.5	.	49.1	50.3	50.0	49.7
N09-13890	46.8	.	47.1	48.2	49.6	47.9
N11-10295	48.4	.	49.6	49.1	49.2	49.1
N14-7142	48.1	.	47.9	49.2	50.2	48.9
N14-7563	48.7	.	49.7	48.8	50.4	49.4
N14-7719	49.6	.	50.6	51.9	50.9	50.7
N14-7472	47.0	.	48.9	48.8	50.6	48.8
N14-7822	47.9	.	51.3	51.2	49.9	50.1
N16-8470	45.8	.	45.7	45.4	46.4	45.8
SC17-6511RR1	46.2	.	47.0	46.3	49.1	47.2
SC17-DRC22	46.4	.	46.1	46.5	46.9	46.5
SC17-DRC27	47.7	.	49.3	49.9	49.1	49.0
Mean	47.5	.	48.3	48.5	48.7	48.2
LSD(0.05)	.	.	.	.	.	1.0
CV(%)	.	.	.	.	.	1.5

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

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST VII 2020 †

STRAIN/ VARIETY	*Palmitic Acid*	*Stearic Acid*	*Oleic Acid*	*Linoleic Acid*	*Linolenic Acid*
AGS-738RR	11.1	3.2	23.7	54.2	7.8
AG74X8 RR2X	11.1	3.6	19.3	58.0	8.0
N7003CN	12.0	3.0	20.9	55.9	8.2
G17PR-1071HOLNR1	7.8	2.8	79.5	6.4	3.5
G18-6534HOLNR2	7.4	2.9	79.2	8.2	2.3
Mean	9.9	3.1	44.5	36.5	6.0
LSD(0.05)	0.6	0.2	2.6	2.2	0.4
CV(%)	4.2	5.2	3.9	4.1	4.6

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

SEED PALMITIC ACID (%)
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	*Athens, GA(A)*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Test Mean*
AGS-738RR	11.6	10.2	11.9	10.8	11.1
AG74X8 RR2X	11.4	11.3	11.1	10.7	11.1
N7003CN	12.1	11.5	12.6	12.0	12.0
G17PR-1071HOLNR1	8.4	7.6	7.6	7.8	7.8
G18-6534HOLNR2	7.2	7.2	7.6	7.7	7.4
Mean	10.1	9.6	10.1	9.8	9.9
LSD(0.05)	.	.	.	.	0.6
CV(%)	,	,	,	,	4.2

SEED STEARIC ACID (%)
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	*Athens, GA(A)*	*Kinston, NC*	*Plains, GA*	*Plymouth, NC*	*Test Mean*
AGS-738RR	3.3	3.2	3.0	3.3	3.2
AG74X8 RR2X	3.6	3.7	3.2	3.7	3.6
N7003CN	2.8	3.2	3.0	3.0	3.0
G17PR-1071HOLNR1	2.8	3.0	2.7	2.8	2.8
G18-6534HOLNR2	2.9	2.8	3.1	2.9	2.9
Mean	3.1	3.2	3.0	3.1	3.1
LSD(0.05)	.	.	.	.	0.2
CV(%)	,	,	,	,	5.2

SEED OLEIC ACID (%)
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	22.5	26.4	21.3	24.8	23.7
AG74X8 RR2X	18.8	18.6	18.6	21.2	19.3
N7003CN	20.8	22.2	19.4	21.0	20.9
G17PR-1071HOLNR1	78.5	79.2	82.3	77.9	79.5
G18-6534HOLNR2	79.5	78.2	81.5	77.6	79.2
Mean	44.0	44.9	44.6	44.5	44.5
LSD(0.05)	.	.	.	.	2.6
CV(%)	,	,	,	,	3.9

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	54.8	52.2	56.6	53.2	54.2
AG74X8 RR2X	58.1	58.1	59.6	56.3	58.0
N7003CN	56.7	54.5	56.9	55.5	55.9
G17PR-1071HOLNR1	6.6	6.6	4.7	7.6	6.4
G18-6534HOLNR2	8.1	9.4	5.9	9.5	8.2
Mean	36.9	36.2	36.7	36.4	36.5
LSD(0.05)	.	.	.	.	2.2
CV(%)	,	,	,	,	4.1

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP VII 2020

STRAIN/ VARIETY	Athens, GA(A)	Kinston, NC	Plains, GA	Plymouth, NC	Test Mean
AGS-738RR	7.9	8.0	7.3	7.9	7.8
AG74X8 RR2X	8.2	8.3	7.4	8.1	8.0
N7003CN	7.6	8.6	8.2	8.4	8.2
G17PR-1071HOLNR1	3.7	3.7	2.8	3.9	3.5
G18-6534HOLNR2	2.3	2.4	2.0	2.3	2.3
Mean	5.9	6.2	5.5	6.1	6.0
LSD(0.05)	.	.	.	.	0.4
CV(%)	,	,	,	,	4.6

TABLE 138 - PARENTAGE OF ENTRIES
UNIFORM GROUP VIII 2020

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG79X9RR2X/SR	Commercial check	Commercial		RRX	
2	N8001	Commercial check	Commercial		Conv	
3	N8002	Commercial check	Commercial		Conv	
4	AGS 798R2	Commercial check	Commercial		RR2	
5	G14-4316R2	N05-7462 x G00-3880(3)RR2Y	Zenglu Li	F6d	RR2	
6	G14-4396R2	N06-7564 x G00-3213(3)RR2Y	Zenglu Li	F6d	RR2	
7	G15LL-9205	NCC06-899 x [G00-3213(2) x A5547-127 Liberty]	Zenglu Li	F6d	LL	
8	G16-1216R2	G00-3880R2 x Benning EMGH	Zenglu Li	F4d	RR2	
9	G16-5022R2	G10PR-56444R2 x G11PR-407R2	Zenglu Li	F5d	RR2	
10	G16LL-10180	G08-394 x [G00-3213(2) x A5547-127 Liberty]	Zenglu Li	F6d	LL	
11	G16LL-10316	N05-7432 x [G00 3213(2) x A5547-127 Liberty]	Zenglu Li	F6d	LL	
12	N14-8522	NMS4-44-329 x N7103	Carter	F4	Conv	diversity/elevated protein
13	N14-8537	NMS4-44-329 x N7103	Carter	F4	Conv	diversity/elevated protein
14	N16-9171	N7103 x NMS5-48-2-75	Carter	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 2020

STRAIN/		AVG.	YIELD†			PROTEIN‡			OIL‡		
VARIETY	RANK	RANK	2020	19-20	18-20	2020	19-20	18-20	2020	19-20	18-20
AG79X9RR2X/SR	6	7	56.6	54.5	.	35.2	35.7	.	18.1	18.3	.
N8001	13	12	50.9	50.6	48.9	36.7	36.3	36.4	17.1	17.9	18.2
N8002	3	5	59.2	54.2	52.0	36.0	36.2	36.2	17.9	18.1	18.4
AGS 798R2	5	6	57.7	52.3	49.7	36.1	36.5	36.5	18.3	18.5	18.8
G14-4316R2	2	3	59.4	56.9	54.9	33.9	34.0	33.9	19.0	19.6	19.9
G14-4396R2	4	5	59.1	56.3	55.0	37.2	37.4	37.3	16.7	17.3	17.6
G15LL-9205	1	5	60.6	57.7	.	34.9	34.6	.	19.4	20.1	.
G16-1216R2	11	10	53.4	.	.	36.7	.	.	18.1	.	.
G16-5022R2	8	9	55.5	.	.	37.9	.	.	18.0	.	.
G16LL-10180	7	8	55.7	.	.	37.4	.	.	18.3	.	.
G16LL-10316	10	7	54.6	.	.	36.3	.	.	17.3	.	.
N14-8522	12	9	53.1	51.4	.	37.6	37.4	.	17.6	18.0	.
N14-8537	14	11	50.3	48.3	46.8	36.8	37.1	37.3	17.6	17.7	17.8
N16-9171	9	8	55.1	51.9	.	37.5	37.9	.	17.0	17.1	.
Mean	.	.	55.8	.	.	36.4	.	.	17.9	.	.
LSD(0.05)	.	.	4.6	.	.	0.8	.	.	0.4	.	.
CV(%)	.	.	9.8	.	.	2.1	.	.	2.2	.	.

† 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 2020

STRAIN/ VARIETY	MEAL† PRO %	MAT INDEX	LOD	HT	SEED QUALITY	SEED SIZE	FL. COLOR	PUB. COLOR	POD COLOR
AG79X9RR2X/SR	46.7	0	1	40	1.8	17.2			
N8001	48.2	1	2	39	1.8	14.2			
N8002	47.8	1	3	37	1.3	14.2			
AGS 798R2	48.1	1	2	37	1.8	14.8			
G14-4316R2	45.6	-1	2	38	1.7	17.2	W	T	T
G14-4396R2	48.5	-4	3	37	1.6	14.4	W	T	T
G15LL-9205	47.1	-2	2	39	1.3	14.0	W	G	T
G16-1216R2	48.7	0	2	41	1.7	14.3	P	T	T
G16-5022R2	50.1	1	2	40	1.6	13.6	P	T	T
G16LL-10180	49.5	1	1	40	1.3	16.0	W	G	T
G16LL-10316	47.5	2	2	44	1.5	15.0	W	T	T
N14-8522	49.6	0	2	33	1.3	9.4	P	G	
N14-8537	48.5	1	3	39	1.4	9.9	P	T	
N16-9171	49.1	0	2	34	1.5	9.5	W	T	
Mean	48.2	0	2	38	1.5	13.8			
LSD(0.05)	0.9	2	1	2	0.4	0.7			
CV(%)	1.8	3726	34	7	25.0	6.2			

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

TABLE 141 - GENERAL SUMMARY OF PEST REACTION
UNIFORM TEST VIII 2020

STRAIN/ VARIETY	SCN Cyst Score (1-5 Scale)†			PRK GA	SRK GA	SC RATING	SC SCORE
	Race 2	Race 3	Race 5				
AG79X9RR2X/SR	5	.	5	.	1.3	MS	4.0
N8001	4	.	5	.	1.8	SS	3.0
N8002	5	.	5	.	5.0	S	5.0
AGS 798R2	2	.	2	.	1.0		.
G14-4316R2	5	.	5	.	1.0	MR	2.0
G14-4396R2	5	.	5	.	1.0	MS	4.0
G15LL-9205	4	.	5	.	1.0	S	5.0
G16-1216R2	4	.	5	.	1.0	MS	4.0
G16-5022R2	4	.	5	.	1.0	SS	3.0
G16LL-10180	5	.	5	.	1.0	MS	4.0
G16LL-10316	5	.	5	.	1.0	SS	3.0
N14-8522	5	.	5	.	1.0	R	1.0
N14-8537	4	.	5	.	1.0	R	1.0
N16-9171	4	.	5	.	1.0	R	1.0

†The race 2 and 5 SCN populations used in these tests were typed as HG (*Heterodera glycines*) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 142 - SEED YIELD (BUSHELS PER ACRE)
UNIFORM TEST VIII 2020 †

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Tallassee, AL	Tifton, GA	Test Mean
AG79X9RR2X/SR	62.9	39.0	40.2	84.2	50.3	62.9	56.6
N8001	56.1	37.7	31.9	79.5	43.4	57.0	50.9
N8002	69.0	41.4	38.1	85.1	56.0	65.5	59.2
AGS 798R2	61.2	42.6	39.8	79.8	57.8	64.8	57.7
G14-4316R2	62.9	44.5	41.1	83.2	59.2	65.8	59.4
G14-4396R2	68.9	39.7	40.8	82.9	56.1	66.1	59.1
G15LL-9205	56.6	47.0	38.5	87.3	69.6	64.7	60.6
G16-1216R2	55.3	42.7	38.8	78.5	49.0	55.9	53.4
G16-5022R2	58.3	38.5	36.4	84.6	51.3	64.0	55.5
G16LL-10180	59.4	37.3	40.3	85.0	56.8	55.4	55.7
G16LL-10316	59.4	40.8	40.7	85.3	44.9	56.4	54.6
N14-8522	62.4	45.7	32.0	74.1	48.0	56.1	53.1
N14-8537	59.2	42.9	35.7	66.6	42.9	54.6	50.3
N16-9171	60.7	39.5	39.6	82.3	52.7	56.1	55.1
Mean	60.9	41.4	38.1	81.3	52.7	60.4	55.8
LSD(0.05)	6.2	7.9	6.3	7.8	11.1	4.9	4.6
LSD(0.10)	5.2	6.6	5.3	6.4	9.2	4.0	3.8
CV(%)	6.1	11.2	9.9	5.7	12.6	4.8	9.8

†Data not included in the test mean: None excluded

TABLE 143 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
UNIFORM GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Tallassee, AL	Tifton, GA	Test Mean
AG79X9RR2X/SR	10/25	11/5	10/27	11/11	10/22	10/30
N8001	4	-2	0	0	3	1
N8002	4	-1	0	0	2	1
AGS 798R2	2	1	1	0	0	1
G14-4316R2	0	-3	-1	0	-3	-1
G14-4396R2	-1	-7	-2	0	-8	-4
G15LL-9205	-5	-2	2	0	-3	-2
G16-1216R2	1	-1	0	0	2	0
G16-5022R2	2	0	1	-1	2	1
G16LL-10180	1	1	2	0	2	1
G16LL-10316	4	1	4	-1	2	2
N14-8522	0	0	-3	0	0	0
N14-8537	2	-1	2	-1	2	1
N16-9171	3	-4	-1	-1	2	0
Mean	1	-1	0	0	0	0
LSD(0.05)	1	3	2	1	.	2
CV(%)	47	101	247	317	.	3726

TABLE 144 - PLANT HEIGHT (INCHES)
UNIFORM GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Tallassee, AL	Tifton, GA	Test Mean
AG79X9RR2X/SR	44	48	41	36	37	39	40
N8001	43	44	36	35	37	37	39
N8002	40	41	36	35	36	33	37
AGS 798R2	40	40	39	31	35	37	37
G14-4316R2	41	46	34	33	37	38	38
G14-4396R2	39	36	41	34	38	35	38
G15LL-9205	46	46	42	33	35	35	39
G16-1216R2	48	42	42	38	38	37	41
G16-5022R2	44	47	40	35	38	37	40
G16LL-10180	45	49	38	36	37	35	40
G16LL-10316	51	46	43	41	41	41	44
N14-8522	36	39	34	26	33	30	33
N14-8537	43	43	36	35	38	37	39
N16-9171	37	42	36	33	31	31	34
Mean	43	44	38	34	37	36	39
LSD(0.05)	4	.	6	5	5	3	2
CV(%)	6	.	7	8	8	5	7

TABLE 145 - PLANT LODGING (1-5)
UNIFORM GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Tallassee, AL	Tifton, GA	Test Mean
AG79X9RR2X/SR	1.0	1.0	1.5	1.0		2.0	1.4
N8001	2.3	2.0	1.8	1.0	4.0	3.3	2.3
N8002	3.3	2.5	2.0	1.3	2.5	3.7	2.6
AGS 798R2	1.7	1.5	1.8	1.0	5.0	2.0	2.0
G14-4316R2	1.7	2.0	2.3	1.0	3.0	3.3	2.2
G14-4396R2	2.0	2.0	2.3	1.3	3.3	4.0	2.5
G15LL-9205	3.3	1.5	2.0	1.0	1.7	3.3	2.2
G16-1216R2	3.0	1.5	2.0	1.3	1.0	2.7	1.9
G16-5022R2	2.0	1.5	2.0	1.0	3.0	2.3	1.9
G16LL-10180	1.0	1.0	1.8	1.0		2.0	1.4
G16LL-10316	1.7	2.0	2.0	1.0	2.5	2.0	1.8
N14-8522	1.3	1.5	2.0	1.0	4.0	2.0	1.9
N14-8537	3.0	2.0	2.5	1.7	3.0	4.0	2.7
N16-9171	1.7	2.0	2.0	1.0	1.0	3.0	1.8
Mean	2.1	1.7	2.0	1.1	2.8	2.8	2.0
LSD(0.05)	0.7	.	0.4	0.5	3.1	0.8	0.7
CV(%)	20.3	.	8.9	26.8	41.3	16.3	34.1

TABLE 146 - SEED QUALITY (1-5)
UNIFORM GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Tallassee, AL	Tifton, GA	Test Mean
AG79X9RR2X/SR	1.0	.	.	1.8	1.0	3.3	1.8
N8001	1.0	.	.	1.7	1.0	3.3	1.8
N8002	1.0	.	.	1.0	1.0	2.0	1.3
AGS 798R2	1.0	.	.	1.7	1.0	3.3	1.8
G14-4316R2	1.0	.	.	1.7	1.0	3.0	1.7
G14-4396R2	1.0	.	.	1.5	1.0	3.0	1.6
G15LL-9205	1.0	.	.	1.0	1.0	2.0	1.3
G16-1216R2	1.0	.	.	1.5	1.0	3.3	1.7
G16-5022R2	1.0	.	.	1.8	1.0	2.7	1.6
G16LL-10180	1.0	.	.	1.0	1.0	2.0	1.3
G16LL-10316	1.0	.	.	1.2	1.0	3.0	1.5
N14-8522	1.0	.	.	1.0	1.0	2.0	1.3
N14-8537	1.0	.	.	1.0	1.0	2.7	1.4
N16-9171	1.0	.	.	1.0	1.0	3.0	1.5
		.	.				
Mean	1.0	.	.	1.3	1.0	2.8	1.5
LSD(0.05)	.	.	.	0.5	.	0.9	0.4
CV(%)	.	.	.	24.3	.	19.2	25.1

TABLE 147 - SEED SIZE (GRAMS PER 100 SEED)
UNIFORM GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Tallassee, AL	Tifton, GA	Test Mean
AG79X9RR2X/SR	16.9	17.6	18.0	19.6	15.4	15.9	17.2
N8001	15.5	14.4	13.8	17.1	11.4	12.8	14.2
N8002	15.1	14.5	13.5	16.2	12.5	13.5	14.2
AGS 798R2	14.9	15.2	15.4	16.8	12.4	13.9	14.8
G14-4316R2	16.4	17.7	17.6	20.1	15.6	15.7	17.2
G14-4396R2	14.3	15.0	15.3	16.1	12.9	12.8	14.4
G15LL-9205	13.3	14.8	14.5	15.5	13.2	12.9	14.0
G16-1216R2	14.2	15.7	14.4	16.0	12.7	13.0	14.3
G16-5022R2	13.9	14.9	13.7	14.9	12.0	12.3	13.6
G16LL-10180	15.6	17.6	16.8	17.6	14.8	13.3	16.0
G16LL-10316	15.7	15.9	15.1	16.9	12.6	13.6	15.0
N14-8522	9.6	10.0	8.9	10.8	8.0	9.1	9.4
N14-8537	9.4	10.8	10.5	11.6	7.6	9.1	9.9
N16-9171	9.3	9.5	9.9	10.5	8.5	9.5	9.5
Mean	13.9	14.6	14.1	15.7	12.1	12.7	13.8
LSD(0.05)	0.9	0.8	0.7	0.8	2.4	0.7	0.7
CV(%)	3.8	3.5	3.1	3.2	11.6	3.4	6.2

TABLE 149 - OIL (%)†
UNIFORM GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Tallassee, AL	Tifton, GA	Test Mean
AG79X9RR2X/SR	18.8	17.6	17.7	18.2	18.5	.	18.1
N8001	17.5	16.6	16.5	18.0	16.9	.	17.1
N8002	18.5	17.3	17.1	18.8	17.6	.	17.9
AGS 798R2	18.6	17.9	17.2	19.1	18.9	.	18.3
G14-4316R2	19.4	18.5	18.2	19.5	19.6	.	19.1
G14-4396R2	17.1	16.1	15.8	17.7	16.7	.	16.7
G15LL-9205	19.9	18.6	18.4	20.2	20.1	.	19.5
G16-1216R2	18.9	17.4	16.7	18.8	18.7	.	18.2
G16-5022R2	18.8	17.3	17.0	19.1	18.1	.	18.1
G16LL-10180	19.6	16.8	17.7	19.1	18.2	.	18.3
G16LL-10316	18.0	16.3	16.4	18.3	17.7	.	17.4
N14-8522	18.2	17.2	17.1	17.9	17.5	.	17.5
N14-8537	17.9	17.1	16.9	18.3	17.6	.	17.6
N16-9171	17.3	16.8	16.5	17.3	16.9	.	16.9
Mean	18.5	17.2	17.1	18.6	18.1	.	17.9
LSD(0.05)	0.4	.	.	0.4	0.7	.	0.4
CV(%)	1.4	.	.	1.2	2.0	.	2.2

†Oil percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial were reported for some locations in 2021.

TABLE 149 - PROTEIN (%)†
UNIFORM GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Tallassee, AL	Tifton, GA	Test Mean
AG79X9RR2X/SR	34.1	36.0	35.5	35.2	35.1	.	35.2
N8001	36.4	37.1	36.7	35.6	37.7	.	36.8
N8002	35.8	36.1	36.1	34.7	37.3	.	36.1
AGS 798R2	35.2	36.0	37.2	35.8	36.1	.	36.1
G14-4316R2	32.9	34.8	33.9	33.5	34.6	.	34.0
G14-4396R2	36.5	38.0	38.2	35.8	37.7	.	37.2
G15LL-9205	33.9	35.3	36.2	34.2	34.8	.	34.9
G16-1216R2	35.0	37.2	38.1	36.5	36.8	.	36.7
G16-5022R2	36.5	39.4	38.6	36.3	38.5	.	37.7
G16LL-10180	35.1	40.1	38.1	36.3	37.6	.	37.2
G16LL-10316	34.9	37.3	38.1	34.2	37.0	.	36.1
N14-8522	36.6	38.5	37.5	37.4	37.9	.	37.6
N14-8537	35.8	37.5	37.4	36.4	36.7	.	36.8
N16-9171	36.7	37.3	38.1	37.3	38.1	.	37.6
Mean	35.4	37.2	37.1	35.6	36.8	.	36.4
LSD(0.05)	1.0	.	.	1.0	1.0	.	0.8
CV(%)	1.7	.	.	1.6	1.6	.	2.1

†Protein percentage reported on a 13% moisture basis beginning in 2015.
Protein and oil data from all replicates of a trial in some locations were reported in 2020.

TABLE 151 - MEAL (%)†
UNIFORM GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Tallassee, AL	Tifton, GA	Test Mean
AG79X9RR2X/SR	45.6	47.4	46.8	46.7	46.8	.	46.7
N8001	47.9	48.3	47.8	47.2	49.3	.	48.2
N8002	47.7	47.5	47.3	46.4	49.2	.	47.8
AGS 798R2	47.1	47.7	48.9	48.0	48.4	.	48.1
G14-4316R2	44.4	46.4	45.0	45.2	46.7	.	45.6
G14-4396R2	47.8	49.2	49.3	47.3	49.2	.	48.5
G15LL-9205	46.1	47.1	48.2	46.6	47.4	.	47.1
G16-1216R2	46.9	48.9	49.7	48.9	49.2	.	48.7
G16-5022R2	48.9	51.8	50.6	48.7	51.0	.	50.1
G16LL-10180	47.4	52.3	50.4	48.8	49.9	.	49.5
G16LL-10316	46.3	48.4	49.6	45.5	48.8	.	47.5
N14-8522	48.6	50.5	49.2	49.5	49.9	.	49.6
N14-8537	47.4	49.2	48.9	48.5	48.5	.	48.5
N16-9171	48.2	48.7	49.6	49.0	49.9	.	49.1
						.	
Mean	47.2	48.8	48.7	47.6	48.9		48.2
LSD(0.05)	1.2	.	.	1.1	1.1	.	0.9
CV(%)	1.5	.	.	1.4	1.2	.	1.8

†Meal percentage reported on a 13% moisture basis beginning in 2018.
Protein and oil data from all replicates of a trial were reported for some locations in 2020.

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TABLE 151 - PARENTAGE OF ENTRIES
PRELIMINARY GROUP VIII 2020

Ent	Strain/Variety	Parentage	Source	Fn	Trans-genic†	Special Traits‡
1	AG79X9RR2X/SR	Commercial check	Commercial		RRX	
2	N8001	Commercial check	Commercial		Conv	
3	N8002	Commercial check	Commercial		Conv	
4	AGS 798R2	Commercial check	Commercial		RR2	
5	G17-11222	G08PR-394 x G00-3213	Zenglu Li	F5d	Conv	
6	G17-11274	G08PR-394 x G00-3213	Zenglu Li	F5d	Conv	
7	G17-3780R2	N08-521 x G10PR-56248R2	Zenglu Li	F6d	RR2	
8	G17-3878R2	N08-521 x G10PR-56466R2	Zenglu Li	F5d	RR2	
9	G17-5496R2	G11-1162R2 x G11-1397R2	Zenglu Li	F5d	RR2	
10	G17-6512R2	G10PR-224R2 x G11-1162R2	Zenglu Li	F5d	RR2	
11	G17-7222HOLNR2	G10PR-56264R2-HOLL	Zenglu Li	BC3 F2d	RR2	HOLN
12	G17-8463LL	N08-391 x [G00-3880(4) x A5547-127 LIBERTY]	Zenglu Li	F5d	LL	
13	G17-8932LL	NMS4-1-77 x [G00-3880(4) x A5547-127 LIBERTY]	Zenglu Li	F5d	LL	
14	SC17-6518LRR1	SC07-1518RR x S11-21072	Fallen		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 152 - GENERAL SUMMARY OF PERFORMANCE
PRELIMINARY TEST VIII 2020

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
AG79X9RR2X/SR	63.2	3	7	0	1.5	41	5	.	4	S	5
N8001	59.0	11	9	-3	2.5	39	4	.	5	MS	4
N8002	64.1	2	5	2	3.0	37	4	.	4	MS	4
AGS 798R2	65.1	1	3	-1	2.4	39	3	.	2	R	1
G17-11222	58.8	12	10	-4	2.5	41	4	.	4	SS	3
G17-11274	62.0	8	8	-1	2.3	42	3	.	3	R	1
G17-3780R2	62.0	7	7	0	2.6	42	4	.	4	R	1
G17-3878R2	63.2	4	7	0	2.3	41	4	.	4	MS	4
G17-5496R2	58.6	13	10	-3	1.8	43	4	.	4	R	1
G17-6512R2	62.3	5	6	0	2.2	41	3	.	3	MS	4
G17-7222HOLNR2	56.4	14	11	-1	2.1	39	4	.	5	MS	4
G17-8463LL	61.2	9	8	-2	2.3	39	5	.	5	R	1
G17-8932LL	62.3	6	6	-2	2.1	36	4	.	4	R	1
SC17-6518LRR1	59.9	10	9	-6	1.9	38	3	.	1	SS	3
Mean	61.3	.	.	-2	2.2	40	.	.	.		.
LSD(0.05)	8.7	.	.	2	0.5	3	.	.	.		.
CV(%)	10.7	.	.	113	20	6	.	.	.		.

† Data not included in the test mean: Bossier City, LA, and Kinston, NC.

‡The race 2 and 5 SCN populations used in these tests were typed as HG (Heterodera glycines) Type 1.2.5.7 and HG Type 2.5.7, respectively.

TABLE 153 - GENERAL SUMMARY OF PERFORMANCE (continued)
PRELIMINARY TEST VIII 2020

STRAIN/ VARIETY	SEED QUALITY	SEED SIZE	PROTEIN§ %	OIL§ %	MEAL PRO%	FL COLOR	PUB. COLOR	POD COLOR
AG79X9RR2X/SR	1.3	17.5	34.5	18.2	45.9			
N8001	1.3	13.7	36.3	17.2	47.7			
N8002	1.2	14.2	35.8	17.8	47.4			
AGS 798R2	1.2	14.6	35.6	18.5	47.4			
G17-11222	1.3	15.3	36.4	18.1	48.3	W	T	T
G17-11274	1.2	14.9	35.4	19.0	47.4	W	T	T
G17-3780R2	1.2	13.3	36.6	18.1	48.6	W	T	T
G17-3878R2	1.2	14.1	36.7	18.2	48.8	W	T	T
G17-5496R2	1.3	16.4	37.4	18.0	49.6	W	T	T
G17-6512R2	1.2	15.9	37.1	18.2	49.3	W	T	T
G17-7222HOLNR2	1.2	13.6	37.3	18.6	49.8	W	T	T
G17-8463LL	1.1	15.1	36.0	18.4	48.0	W	T	T
G17-8932LL	1.2	14.1	36.7	17.9	48.6	W	T	T
SC17-6518LRR1	1.2	11.2	35.6	17.6	46.9	P	T	
Mean	1.2	14.6	36.3	18.1	48.1			
LSD(0.05)	0.2	0.9	1.1	0.5	1.3			
CV(%)	12.0	6.1	2.2	2.0	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 2020 †

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	69.5	31.6	42.4	27.8	77.8	63.2
N8001	57.7	40.8	37.4	22.0	81.3	59.0
N8002	70.0	45.6	34.8	27.8	87.4	64.1
AGS 798R2	62.1	39.1	47.4	28.0	85.7	65.1
G17-11222	53.5	41.9	46.6	28.5	77.1	58.8
G17-11274	68.8	27.9	36.8	30.2	80.4	62.0
G17-3780R2	58.8	33.4	46.3	29.0	81.0	62.0
G17-3878R2	60.3	46.4	50.6	25.5	78.5	63.2
G17-5496R2	63.3	37.3	37.4	27.6	75.0	58.6
G17-6512R2	60.8	33.2	42.5	27.8	83.8	62.3
G17-7222HOLNR2	56.4	37.5	44.5	16.7	68.2	56.4
G17-8463LL	61.3	27.2	44.6	27.5	77.6	61.2
G17-8932LL	65.0	32.1	39.5	28.8	82.4	62.3
SC17-6518LRR1	61.9	42.8	36.4	28.1	81.3	59.9
Mean	62.1	36.9	41.9	26.8	79.8	61.3
LSD(0.05)	7.8	11.5	9.8	7.7	7.9	8.7
LSD(0.10)	6.5	9.5	8.1	6.4	6.6	7.2
CV(%)	7.6	18.5	13.3	16.1	5.9	10.7

† Data not included in the test mean: Bossier City, LA, and Kinston, NC.

TABLE 156 - RELATIVE MATURITY (DAYS EARLIER (-) OR LATER (+) THAN ENTRY 1)
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	*Athens, GA(A)*	*Bossier City, LA*	*Clayton, NC*	*Kinston, NC*	*Plains, GA*	*Test Mean*
AG79X9RR2X/SR	10/24	10/29	11/3	10/26	.	10/28
N8001	1	-3	-9	-2	.	-3
N8002	3	2	-1	3	.	2
AGS 798R2	2	-3	-3	1	.	-1
G17-11222	-1	-3	-12	-2	.	-4
G17-11274	0	-1	-5	1	.	-1
G17-3780R2	0	-1	-2	3	.	0
G17-3878R2	1	-1	-1	1	.	0
G17-5496R2	-1	-3	-5	-1	.	-3
G17-6512R2	0	-1	-3	3	.	0
G17-7222HOLNR2	-1	-3	-3	1	.	-1
G17-8463LL	1	-3	-7	-1	.	-2
G17-8932LL	-1	-3	-5	-2	.	-2
SC17-6518LRR1	-4	-6	-11	-2	.	-6
Mean	0	-2	-4	0	.	-2
LSD(0.05)	1	1	5	2	.	2
CV(%)	324	-31	-52	620	.	113

TABLE 156 - PLANT HEIGHT (INCHES)
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	50	38	47	39	32	41
N8001	45	42	43	33	33	39
N8002	42	38	39	33	30	37
AGS 798R2	45	40	40	37	34	39
G17-11222	46	45	48	36	34	41
G17-11274	48	44	44	37	36	42
G17-3780R2	45	45	42	38	39	42
G17-3878R2	46	43	46	36	34	41
G17-5496R2	48	46	45	38	36	43
G17-6512R2	48	42	45	37	35	41
G17-7222HOLNR2	46	42	40	31	34	39
G17-8463LL	45	39	41	38	34	39
G17-8932LL	40	35	38	36	31	36
SC17-6518LRR1	43	41	40	36	32	38
Mean	46	42	43	36	34	40
LSD(0.05)	3	4	.	5	3	3
CV(%)	4	6	.	7	6	6

TABLE 157 - PLANT LODGING (1-5)
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	1.0	2.7	1.0	1.8	1.0	1.5
N8001	2.7	4.3	3.0	2.0	1.0	2.5
N8002	3.3	5.0	2.5	2.3	1.7	3.0
AGS 798R2	2.3	4.3	2.5	1.8	1.0	2.4
G17-11222	2.3	4.7	2.5	2.0	1.0	2.5
G17-11274	2.0	4.7	1.5	1.7	1.3	2.3
G17-3780R2	2.3	5.0	2.5	1.7	1.3	2.6
G17-3878R2	2.0	4.7	2.0	2.0	1.0	2.3
G17-5496R2	1.0	4.0	1.5	1.5	1.0	1.8
G17-6512R2	2.3	4.3	1.5	1.5	1.0	2.2
G17-7222HOLNR2	1.7	4.7	1.5	1.5	1.0	2.1
G17-8463LL	2.3	4.3	2.0	1.7	1.0	2.3
G17-8932LL	1.7	4.0	2.0	1.8	1.0	2.1
SC17-6518LRR1	1.3	3.7	2.0	1.5	1.0	1.9
Mean	2.0	4.3	2.0	1.8	1.1	2.2
LSD(0.05)	0.7	0.8	.	0.5	0.4	0.5
CV(%)	21.5	10.5	.	14.1	24.4	20.2

TABLE 158 - SEED QUALITY (1-5)
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	1.5	1.0	.	.	1.3	1.3
N8001	1.7	1.0	.	.	1.3	1.3
N8002	1.5	1.0	.	.	1.0	1.2
AGS 798R2	1.5	1.0	.	.	1.2	1.2
G17-11222	1.7	1.0	.	.	1.2	1.3
G17-11274	1.5	1.0	.	.	1.2	1.2
G17-3780R2	1.5	1.0	.	.	1.0	1.2
G17-3878R2	1.5	1.0	.	.	1.2	1.2
G17-5496R2	1.5	1.0	.	.	1.5	1.3
G17-6512R2	1.5	1.0	.	.	1.0	1.2
G17-7222HOLNR2	1.5	1.0	.	.	1.0	1.2
G17-8463LL	1.3	1.0	.	.	1.0	1.1
G17-8932LL	1.5	1.0	.	.	1.0	1.2
SC17-6518LRR1	1.5	1.0	.	.	1.0	1.2
Mean	1.5	1.0	.	.	1.1	1.2
LSD(0.05)	0.2	.	.	.	0.3	0.2
CV(%)	8.8	.	.	.	16.6	12.0

TABLE 159 - SEED SIZE (GRAMS PER 100 SEED)
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	17.6	16.1	16.1	17.3	19.8	17.5
N8001	15.5	12.4	10.5	14.1	15.9	13.7
N8002	16.0	13.6	12.9	13.8	14.5	14.2
AGS 798R2	16.2	13.7	12.7	14.5	15.6	14.6
G17-11222	16.0	14.1	13.5	15.4	17.0	15.3
G17-11274	16.0	13.2	13.7	15.1	15.8	14.9
G17-3780R2	13.9	12.4	12.2	13.8	14.2	13.3
G17-3878R2	14.4	13.4	13.9	14.1	14.6	14.1
G17-5496R2	16.7	16.3	15.4	16.5	16.9	16.4
G17-6512R2	16.3	14.9	14.6	16.0	17.5	15.9
G17-7222HOLNR2	13.5	15.3	12.9	13.4	13.6	13.6
G17-8463LL	15.8	15.0	13.0	14.9	16.7	15.1
G17-8932LL	14.2	13.4	12.1	14.6	15.9	14.1
SC17-6518LRR1	11.1	11.5	9.9	11.7	12.2	11.2
Mean	15.2	14.0	13.1	14.7	15.7	14.6
LSD(0.05)	0.9	.	1.4	0.9	1.0	0.9
CV(%)	3.4	.	6.6	3.8	3.9	6.1

TABLE 160 - OIL (%)†
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2	19.0	.	17.3	18.3	18.3	18.2
N8001	18.0	.	15.9	17.1	18.0	17.2
N8002	18.7	.	15.9	17.6	19.0	17.8
AGS 798R2	18.6	.	17.5	17.8	19.9	18.5
G17-11222	18.3	.	17.4	17.7	19.0	18.1
G17-11274	19.3	.	17.7	18.9	20.0	19.0
G17-3780R2	18.3	.	17.1	18.1	18.9	18.1
G17-3878R2	18.6	.	17.3	18.2	18.9	18.2
G17-5496R2	19.0	.	17.1	17.5	18.4	18.0
G17-6512R2	18.5	.	17.2	17.8	19.0	18.2
G17-7222HO	18.8	.	17.8	18.2	19.5	18.6
G17-8463LL	19.2	.	17.3	17.8	19.5	18.4
G17-8932LL	18.4	.	17.2	17.6	18.3	17.9
SC17-6518LI	18.0	.	16.2	17.1	19.2	17.6
Mean	18.6	.	17.1	17.8	19.0	18.1
LSD(0.05)	.	.	.	.	.	0.5
CV(%)	.	.	.	.	.	2.0

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

TABLE 161 - PROTEIN (%)†
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2	32.5	.	35.5	34.3	35.9	34.5
N8001	35.5	.	38.0	36.3	35.5	36.3
N8002	35.8	.	37.9	35.0	34.7	35.8
AGS 798R2	35.7	.	36.5	36.3	33.9	35.6
G17-11222	36.7	.	36.9	36.5	35.6	36.4
G17-11274	34.8	.	37.4	35.0	34.3	35.4
G17-3780R2	35.2	.	38.6	36.7	36.1	36.6
G17-3878R2	36.2	.	38.0	36.3	36.5	36.7
G17-5496R2	35.9	.	37.7	37.9	38.0	37.4
G17-6512R2	36.8	.	39.0	37.3	35.5	37.1
G17-7222HO	36.8	.	38.3	37.5	36.8	37.3
G17-8463LL	35.2	.	37.3	36.5	35.0	36.0
G17-8932LL	36.3	.	37.4	36.4	36.8	36.7
SC17-6518LI	34.3	.	38.1	36.1	33.8	35.6
Mean	35.5	.	37.6	36.3	35.6	36.3
LSD(0.05)	.	.	.	.	.	1.1
CV(%)	.	.	.	.	.	2.2

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

TABLE 162 - ESTIMATED MEAL PROTEIN (%)†
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Bossier City, LA	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2	43.6	.	46.6	45.6	47.8	45.9
N8001	47.1	.	49.1	47.5	47.0	47.7
N8002	47.9	.	48.9	46.1	46.5	47.4
AGS 798R2	47.7	.	48.1	48.0	45.9	47.4
G17-11222	48.8	.	48.6	48.1	47.8	48.3
G17-11274	46.9	.	49.4	46.9	46.5	47.4
G17-3780R2	46.8	.	50.6	48.7	48.4	48.6
G17-3878R2	48.3	.	49.9	48.2	48.8	48.8
G17-5496R2	48.1	.	49.5	49.9	50.6	49.6
G17-6512R2	49.1	.	51.2	49.3	47.6	49.3
G17-7222HO	49.3	.	50.6	49.8	49.7	49.8
G17-8463LL	47.4	.	49.0	48.2	47.2	48.0
G17-8932LL	48.3	.	49.0	48.0	49.0	48.6
SC17-6518LI	45.4	.	49.4	47.3	45.5	46.9
Mean	47.5	.	49.3	48.0	47.7	48.1
LSD(0.05)	.	.	.	.	.	1.3
CV(%)	.	.	.	.	.	1.9

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

SUMMARY OF SEED FATTY ACIDS (%)
PRELIMINARY TEST VIII 2020 †

STRAIN/ VARIETY	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid
AG79X9RR2X/SR	11.9	3.5	19.9	56.7	7.9
N8001	13.0	3.1	17.2	56.2	10.4
N8002	11.7	3.0	17.5	58.8	9.0
G17-7222HOLNR2	7.9	2.8	76.4	10.1	2.7
Mean	11.1	3.1	32.8	45.5	7.5
LSD(0.05)	0.3	0.2	1.3	1.4	0.8
CV(%)	1.9	4.7	2.5	2.0	6.5

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

SEED PALMITIC ACID (%)
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	12.1	11.9	11.6	11.8	11.9
N8001	13.0	13.4	13.0	12.8	13.0
N8002	11.5	11.6	11.9	11.6	11.7
G17-7222HOLNR2	8.2	7.8	7.7	8.0	7.9
Mean	11.2	11.2	11.1	11.0	11.1
LSD(0.05)	.	.	.	.	0.3
CV(%)	.	.	.	.	1.9

SEED STEARIC ACID (%)
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	3.5	3.4	3.7	3.5	3.5
N8001	3.2	3.2	3.1	3.1	3.1
N8002	3.0	2.9	3.2	2.9	3.0
G17-7222HOLNR2	2.9	2.6	2.6	3.0	2.8
Mean	3.2	3.1	3.1	3.1	3.1
LSD(0.05)	.	.	.	.	0.2
CV(%)	.	.	.	.	4.7

SEED OLEIC ACID (%)
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	20.2	17.7	21.1	20.8	19.9
N8001	18.5	15.7	17.0	17.5	17.2
N8002	18.9	16.6	17.4	17.3	17.5
G17-7222HOLNR2	76.1	75.6	76.3	77.8	76.4
Mean	33.4	31.4	32.9	33.3	32.8
LSD(0.05)	.	.	.	.	1.3
CV(%)	.	.	.	.	2.5

SEED LINOLEIC ACID (%)
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	56.2	57.9	55.8	57.1	56.7
N8001	55.6	55.8	56.1	57.3	56.2
N8002	58.0	58.9	58.4	59.8	58.8
G17-7222HOLNR2	10.2	11.3	10.4	8.7	10.1
Mean	45.0	46.0	45.2	45.7	45.5
LSD(0.05)	.	.	.	.	1.4
CV(%)	.	.	.	.	2.0

SEED LINOLENIC ACID (%)
PRELIMINARY GROUP VIII 2020

STRAIN/ VARIETY	Athens, GA(A)	Clayton, NC	Kinston, NC	Plains, GA	Test Mean
AG79X9RR2X/SR	8.0	9.0	7.8	6.9	7.9
N8001	9.7	11.8	10.8	9.5	10.4
N8002	8.6	9.9	9.1	8.5	9.0
G17-7222HOLNR2	2.6	2.7	2.9	2.6	2.7
Mean	7.2	8.4	7.7	6.9	7.5
LSD(0.05)	.	.	.	.	0.8
CV(%)	.	.	.	.	6.5