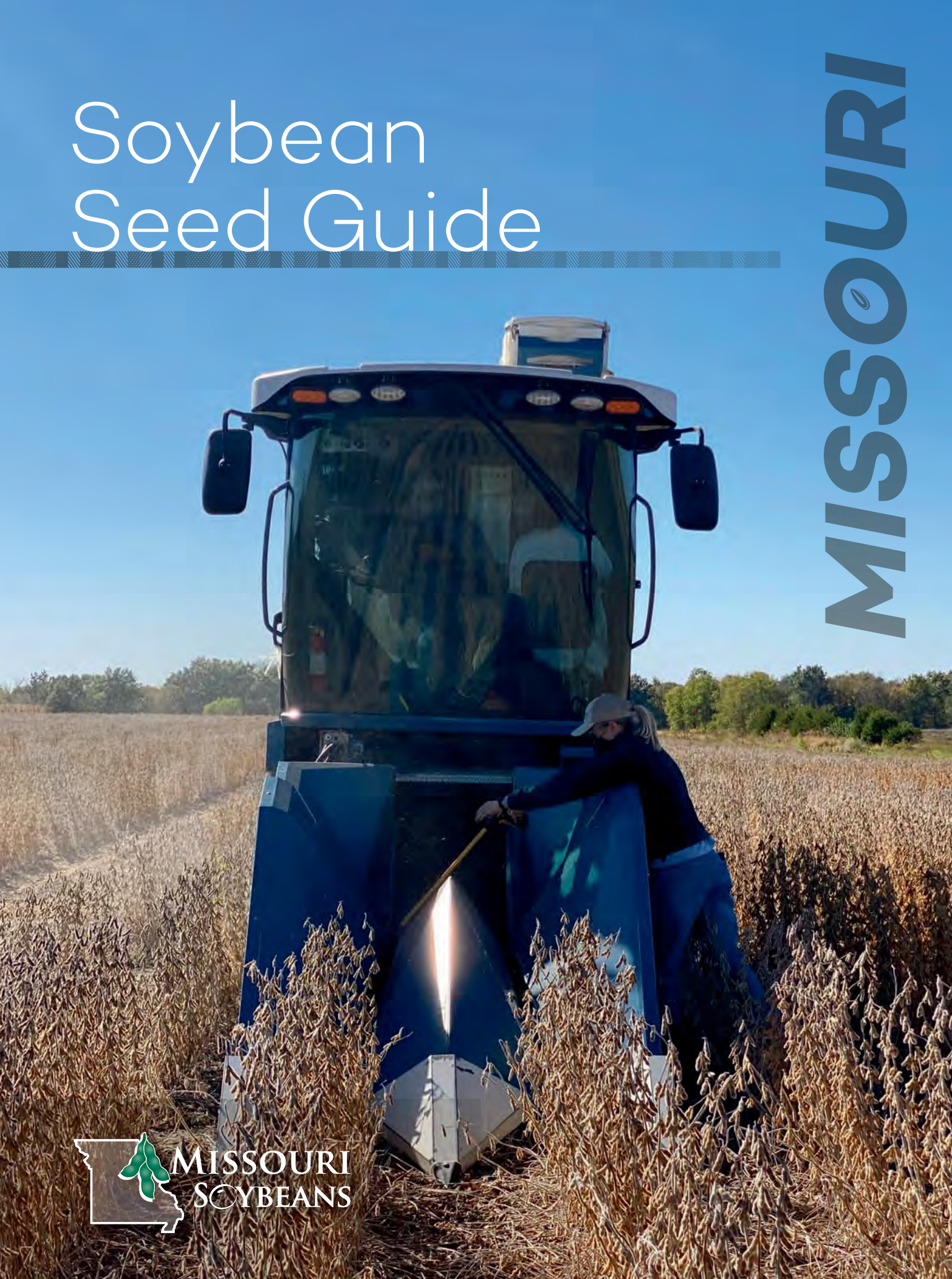
Soybean Seed Guide

MISSOURI



Missouri Soybeans

Soybean Breeder Bios

Dr. Pengyin Chen

Dr. Pengyin Chen serves as the David M. Haggard Endowed Professor of Soybean Breeding at the University of Missouri. He joined the team within the University's College of Agriculture, Food & Natural Resources Division of Plant Sciences in September 2016 after many years with the University of Arkansas' soybean program.

Chen leads the Southern Missouri Soybean Breeding Program, based at the Fisher Delta Research Center in Portageville. His research program focuses on conventional and herbicide tolerant variety development and germplasm enhancement. He also develops value-added specialty varieties for various food and feed markets.

Chen received his doctorate in plant breeding and genetics from Virginia Polytechnic Institute and State University, and his masters and bachelors of science degrees from Northwestern University of Agriculture.

Dr. Andrew Scaboo

Dr. Andrew Scaboo serves as an assistant professor in the University of Missouri's College of Agriculture, Food & Natural Resources Division of Plant Sciences. He also leads the Northern Missouri Soybean Breeding Program, as he has since joining the team in Missouri in 2012.

Prior to joining the team at the University of Missouri in 2012 as a senior research scientist, Scaboo worked as a post-doctoral Research Geneticist with the USDA-ARS soybean breeding program at North Carolina State University. He previously earned bachelor of science and master of science degrees from the University of Tennessee, and his doctorate at University of Arkansas.

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Publication Overview

MISSOURI SOYBEAN MERCHANDISING COUNCIL

Mission

We are committed to promoting and advancing innovative research, production and marketing solutions to maximize Missouri soybean farmer profitability.

Vision

Empowering Missouri Soybean farmers through innovation.

The Missouri Soybean Merchandising Council (MSMC) is a farmer run organization dedicated to improving the profitability of the Missouri soybean farmer through a combination of marketing, research and commercialization programs. Thirteen farmer-directors are elected in statewide elections to serve his or her geographic region and oversee the investment of 50 percent of Missouri's checkoff dollars. MSMC activities are coordinated through a full-time staff in Jefferson City, Missouri. This publication highlighting Missouri's soybean varieties and traits developed through soybean checkoff-supported research comes as a direct result of those efforts.

Leadership Recognition

MSMC Board Members:

Robert Alpers, Prairie Home
Kevin Mainord, East Prairie
Cecil DeMott, Rock Port
Kyle Durham, Norborne
Denny Mertz, Chesterfield
Tim Gottman, Monroe City
John Kelley, Faucett
Mark Lehenbauer, Palmyra
Bob Littleton, Dalton
Tim Lichte, Lexington
Baughn Merideth, Caruthersville
Aaron Porter, Dexter
Lewis Rone, Portageville

MSA Board Members:

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Dan Brunjes, Labadie
Dane Diehl, Butler
Renee Fordyce, Bethany
John Hunter, Dexter
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Andrew Lance, Barnard
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Tom Raffety, Wyatt
Garrett Riekhof, Higginsville
Peter Rost Jr., New Madrid
Ronnie Russell, Richmond
Kate Lambert, Laclede
Bruce Wilson, Mexico
Matt Wright, Emden
Russell Wolf, Tipton

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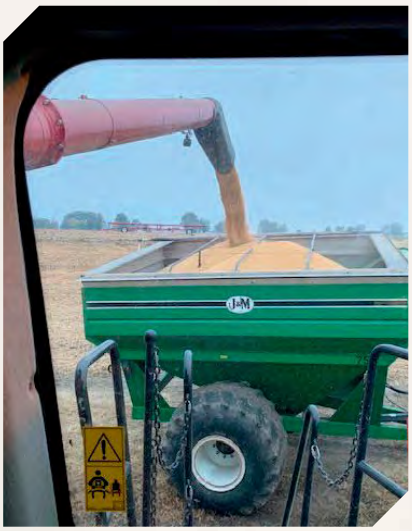
Neal Bredehoeft, Alma
Pat Hobbs, Dudley
Meagan Kaiser, Bowling Green
Lewis Rone, Portageville

ASA Board Members:

C. Brooks Hurst, Tarkio
Matt McCrate, Cape Girardeau
Ronnie Russell, Richmond

Seed Advisory Committee

Taking soybean lines from the research program through the commercialization process is a team effort, bringing together Missouri farmers, and staff from the University of Missouri and the Missouri Soybean Merchandising Council on the Seed Advisory Committee.



*For more information on the Seed Advisory Committee, contact **Sam Bish**, Senior Licensing and Business Development Associate for the University of Missouri, at **bishs@missouri.edu** and **(573) 882-5016**.*

Chairman Column

Central to the mission and vision for the Missouri Soybean Merchandising Council, two priorities are dominant: Missouri soybean farmers and innovation. The farmers we serve and the innovation we use to address challenges are the basis for our commitment to service and strategic plan. Thanks to farmers' investments in the soy checkoff, research has historically led the charge in improving opportunities and profitability for Missouri's soybean producers, and this year is no different. The following pages showcase soybean varieties developed here in Missouri, through checkoff-supported research, available for licensing, seed development and commercial production.

Kyle Durham
MSMC Chairman
Norborne

Seeing the impact of investments into soybean breeding firsthand amplifies my excitement to share these varieties with you here. Investments into new trait technologies and soybean varieties tailored to our growing conditions, from soil types to anticipated moisture availability and pest pressures, are a primary way to bring Missouri farmers a return on their checkoff dollars. We're working to address not only challenges specific to farming in the Show-Me State – we're also adding diversity to the soybean germplasm and strengthening our ability to respond to future pressures.

It's my honor and pleasure on behalf of the Missouri Soybean Merchandising Council board of directors, our research team and partners, and our state's more than 30,000 soybean farmers to bring you this guide. We're proud to bring you additional choices in the highly consolidated and highly competitive seed market, and appreciate your support in making this work possible.

Funding and ROI

The Missouri Soybean Merchandising Council's farmer leaders look to address challenges and improve opportunities for their fellow growers when prioritizing soybean checkoff investments into research. Investment areas over the past year included agronomic research, soybean breeding, soybean and crop physiology, as well as feed, food and new uses for soy. Soybean breeding research account for the largest share of Missouri's soybean checkoff investment.

Funding is divided into specific projects, as outlined in the Annual Research Report, and reviewed each year. Support is also dedicated to the Southern and Northern Soybean Breeding programs as a budget line item focused on developing soybean lines tailored to Missouri's variations in growing conditions.

2021 Soybean Variety Releases

SA17-2742

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*2.7*
Flower Color	*Purple*
Pubescence Color	*Grey*
Pod Wall Color	*Tan*
Hila Color	*Buff*
Height (inches)	*28*
Lodging	*1.2*
Seed per lb.	*2850*
Seed luster	*Shiny*
Oleic Acid	*79.1*
Phytophthora Rot	*Field Tolerant*
SCN	*PI88788 (Race 3, 14 resistance)*
SDS	*Moderately Susceptible*
Stem Canker	*Moderately Susceptible*
Frogeye	*Moderately Susceptible*
Root Knot	*Not tested*
Protein %	*36.8*
Oil %	*19.3*
Chloride	*Not tested*
Herbicide	*Conventional*
Linolenic Acid	*0.9*

Performance of SA17-2742 across two years and 9 environments in Missouri during 2018 and 2019. Maturity is presented as September 1 = 1 and Yield is presented as bushels per acre.

Name Year (Locations)	Yield 2019 (3)	Maturity 2019 (3)	Yield 2018 (6)	Maturity 2018 (6)	Oleic Acid 2018 (3)	Linolenic Acid 2018 (3)	Oleic Acid 2019 (7)	Linolenic Acid 2019 (7)
SA17-13168-1	65.0	28	62.3	12	79.3	3.4	79.2	3.9
SA17-2742	**62.5**	**28**	**67.2**	**11**	**78.7**	**0.9**	**79.S**	**0.8**
LD11 -2170	79.4	30	65.2	18				
AG3956	78.7	37	65.2	24				
AG3555	76.7	31	57.2	17				
P38A10	84.4	39	73.9	27				
P39A82S	80.7	37	69.0	25				
TEST MEAN	71.3	30	60.8	17				
CV	6.3	5.3	12.5	16.8				
LSD (0.05)	4.2	1.5	9.5	3.5				

SOYLEIC™

SA14-9653

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*3.6*
Flower Color	*Purple*
Pubescence Color	*Tawny*
Pod Wall Color	*Brown*
Hila Color	*Black*
Height (inches)	*36*
Lodging	*2.0*
Seed per lb.	*2580*
Seed luster	*Shiny*
Phytophthora Rot	*Field Tolerant*
SCN	*PI88788 (Race 3, 14 resistance)*
SDS	*Moderately Susceptible*
Stem Canker	*Moderately Susceptible*
Frogeye	*Moderately Susceptible*
Root Knot	*Not tested*
Protein %	*35.6*
Oil %	*18.4*
Chloride	*Not tested*
Herbicide	*Conventional*

Performance of SA14-9653 across two years and 11 environments in Missouri during 2016 and 2017

Name Year (Locations)	Yield 2017 (6 MO)	Maturity 2017 (6 MO)	Yield 2016 (5 MO)	Maturity 2016 (5 MO)	Yield 2016 - 2017 (11 MO)	Maturity 2016 - 2017 (11 MO)
93Y41	79.2	25				
AG3832	79.1	27	85.9	35	82.2	31
SA14-9653	**78.1**	**27**	**82.9**	**32**	**80.3**	**29**
P33T60	75.5	25				
AG38X6	75.4	28				
AG3555	75	24				
TEST MEAN	67.5	26				
CV	8.5	5.9				
$LSD_{(0.05)}$	4.1	1				

Performance of SA14-9653 across 10 locations in 7 states (IA, IL, IN, KS, MO, NE, and OH) during 2017 in the USDA Uniform Soybean Tests – Northern Region

Name	Yield	% Test Mean	Maturity	Lodging	Height	Seed Weight	Protein	Oil
LD11-2170	74.2	107	9/25	1.3	34	16.4	34.0	19.2
IA3048	72.3	104	1.4	1.8	36	15.9	34.5	17.9
LD07-3395bf	71.2	103	5.3	1.3	32	16.6	32.3	19.9
U11-920017	66.2	95	-4.6	1.7	32	17.7	32.7	19.3
SA13-9653	**73.0**	**105**	**3.3**	**2.0**	**36**	**17.6**	**35.6**	**18.4**
TEST MEAN	69.4		27.4	1.4	34.2	16.0		
CV	11.0		40.0	32.5	9.3	4.9		
$LSD_{(0.05)}$	4.0		6.0	0.3	1.8	0.5		

SHOW ME SOY 3901C - SA13-1385

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*3.9*
Flower Color	*Purple*
Pubescence Color	*Tawny*
Pod Wall Color	*Tan*
Hila Color	*Black*
Height (inches)	*35*
Lodging	*1.5*
Seed per lb.	*2970*
Seed luster	*Shiny*
Phytophthora Rot	*Field Tolerant*
SCN	*PI88788 (Race 3, 14 resistance)*
SDS	*Moderately Susceptible*
Stem Canker	*Moderately Susceptible*
Frogeye	*Moderately Susceptible*
Root Knot	*Not tested*
Protein %	*33.1*
Oil %	*19.2*
Chloride	*Not tested*
Herbicide	*Conventional*

Performance of SA13-1385 across three years and 18 environments in Missouri during 2015, 2016, and 2017

Name Year (Locations)	Yield 2017 (6 MO)	Maturity 2017 (6 MO)	Yield 2016 (7 MO)	Maturity 2016 (7 MO)	Yield 2015 (5 MO)	Maturity 2015 (5 MO)	Yield 2015-2017 (18 MO)	Maturity 2015-2017 (18 MO)
AG43X7	77.0	32						
AG40X6	75.8	27						
SA13-1385	**74.5**	**26**	**70.3**	**30**	**68.9**	**31**	**71.3**	**29**
P39T28X	73.4	26						
AG3956	70.9	25						
94Y21	66.0	27						
AG4034			74.7	30	68.1	32		
NKS39-U2			73.5	29	69.4	32		
93Y92			73.1	30	68.9	31		
AG4232			71.7	34	67.9	36		
TEST MEAN	65.9	27	70.6	31	66.9	32		
CV	9.3	5.7	8.2	7.1	5.8	3.9		
$LSD_{(0.05)}$	4.0	1.0	3.5	1.0	2.8	1.0		

Performance of SA13-1385 across 13 locations in 7 states (IA, IL, IN, KS, MO, NE, and OH) during 2017 in the USDA Uniform Soybean Tests – Northern Region

Name	Yield	% Test Mean	Maturity	Lodging	Height	Seed Weight	Protein	Oil
LD11-2170	70.2	106	9/25	1.2	32	16.4	34.1	19.7
IA3048	66.5	100	0.2	1.7	34	15.9	34.2	18.5
LD07-3395bf	68.4	103	5.2	1.5	32	16.5	31.8	20.3
U11-920017	63.0	95	-4.5	1.5	32	17.2	31.8	19.8
SA13-1385	**70.3**	**106**	**6.0**	**1.5**	**35**	**15.3**	**33.1**	**19.2**
TEST MEAN	66.3		28.1		33.8	16.0		
CV	10.3		6.3		7.8	6.8		
$LSD_{(0.05)}$	2.8		0.7		1.1	0.6		

SA13-1310

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*3.9*
Flower Color	*Purple*
Pubescence Color	Grey
Pod Wall Color	*Brown*
Hila Color	*Imperfect Black*
Height (inches)	*35*
Lodging	*1.4*
Seed per lb.	*2700*
Seed luster	*Shiny*
Phytophthora Rot	*Field Tolerant*
SCN	*PI88788 (Race 3, 14 resistance)*
SDS	*Moderately Susceptible*
Stem Canker	*Moderately Susceptible*
Frogeye	*Moderately Susceptible*
Root Knot	*Not tested*
Protein %	*35.0*
Oil %	*18.5*
Chloride	*Not tested*
Herbicide	*Conventional*

Performance of SA13-1310 across three years and 18 environments in Missouri during 2015, 2016, and 2017

Name Year (Locations)	Yield 2017 (6 MO)	Maturity 2017 (6 MO)	Yield 2016 (7 MO)	Maturity 2016 (7 MO)	Yield 2015 (5 MO)	Maturity 2015 (5 MO)	Yield 2015-2017 (18 MO)	Maturity 2015-2017 (18 MO)
AG43X7	77.0	32						
AG40X6	75.8	27						
SA13-1310	**71.7**	**26**	**77.3**	**30**	**70.6**	**31**	**73.6**	**29**
P39T28X	73.4	26						
AG3956	70.9	25						
94Y21	66.0	27						
AG4034			74.7	30	68.1	32		
NKS39-U2			73.5	29	69.4	32		
93Y92			73.1	30	68.9	31		
AG4232			71.7	34	67.9	36		
TEST MEAN	65.9	27	70.6	31	66.9	32		
CV	9.3	5.7	8.2	7.1	5.8	3.9		
$LSD_{(0.05)}$	4.0	1.0	3.5	1.0	2.8	1.0		

Performance of SA13-1310 across 13 locations in 7 states (IA, IL, IN, KS, MO, NE, and OH) during 2017 in the USDA Uniform Soybean Tests – Northern Region

Name	Yield	% Test Mean	Maturity	Lodging	Height	Seed Weight	Protein	Oil
LD11-2170	70.2	106	9/25	1.2	32	16.4	34.1	19.7
IA3048	66.5	100	0.2	1.7	34	15.9	34.2	18.5
LD07-3395bf	68.4	103	5.2	1.5	32	16.5	31.8	20.3
U11-920017	63.0	95	-4.5	1.5	32	17.2	31.8	19.8
SA13-1310	**70.5**	**106**	**6.5**	**1.4**	**35**	**16.7**	**35.0**	**18.5**
TEST MEAN	66.3		28.1		33.8	16.0		
CV	10.3		6.3		7.8	6.8		
$LSD_{(0.05)}$	2.8		0.7		1.1	0.6		

SA13-2699

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*3.9*
Flower Color	*Purple*
Pubescence Color	Grey
Pod Wall Color	*Tan*
Hila Color	*Imperfect Black*
Height (inches)	*37*
Lodging	*1.3*
Seed per lb.	*2970*
Seed luster	*Shiny*
Phytophthora Rot	*Field Tolerant*
SCN	*PI88788 (Race 3, 14 resistance)*
SDS	*Moderately Susceptible*
Stem Canker	*Moderately Susceptible*
Frogeye	*Moderately Susceptible*
Root Knot	*Not tested*
Protein %	*34.6*
Oil %	*18.4*
Chloride	*Not tested*
Herbicide	*Conventional*

Performance of SA13-2699 across four years and 23 environments in Missouri during 2015, 2016, 2017, and 2018. Maturity is presented as September 1 = 1 and Yield is presented as bushels per acre

Name Year (Locations)	Yield 2018 (5)	Maturity 2018 (5)	Yield 2017 (6)	Maturity 2017 (6)	Yield 2016 (7)	Maturity 2016 (7)	Yield 2015 (5)	Maturity 2015 (5)
AG40X6			75.8	27				
SA13-2699	**66.2**	**23**	**74.0**	**26**	**71.9**	**30**	**69.9**	**31**
P39T28X	69.2	23	73.4	26				
AG3956	67.3	22	70.9	25				
94Y21			66.0	27				
AG4034					74.7	30	68.1	32
NKS39-U2					73.5	29	69.4	32
93Y92					73.1	30	68.9	31
AG4232					71.7	34	67.9	36
P38A10	70.6	23						
P36A18X	69.9	22						
AG38X6	66.7	24						
P39A82S	64.9	21						
AG3555	60.2	16						
TEST MEAN	59.3	21	65.9	27	70.6	31	66.9	32
CV	11.2	9.5	9.3	5.7	8.2	7.1	5.8	3.9
$LSD_{(0.05)}$	4.8	1.5	4.0	1.0	3.5	1.0	2.8	1.0

Performance of SA13-2699 across 13 locations in 7 states (IA, IL, IN, KS, MO, NE, and OH) during 2017 in the USDA Uniform Soybean Tests – Northern Region

Name	Yield	% Test Mean	Maturity	Lodging	Height	Seed Weight	Protein	Oil
LD11-2170	70.2	106	9/25	1.2	32	16.4	34.1	19.7
IA3048	66.5	100	0.2	1.7	34	15.9	34.2	18.5
LD07-3395bf	68.4	103	5.2	1.5	32	16.5	31.8	20.3
U11-920017	63.0	95	-4.5	1.5	32	17.2	31.8	19.8
SA13-2699	**67.8**	**102**	**7.1**	**1.3**	**37**	**15.8**	**34.6**	**18.4**
TEST MEAN	66.3		28.1		33.8	16.0		
CV	10.3		6.3		7.8	6.8		
$LSD_{(0.05)}$	2.8		0.7		1.1	0.6		

S13-2743C

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*4.1*
Flower Color	*White*
Pubescence Color	*Grey*
Pod Wall Color	*Brown*
Hila Color	*Buff*
Height (inches)	*37*
Lodging Score	*2.0*
Seed per lb.	*3300*
Seed luster	*Intermediate*
Phytophthora Rot	*Resistant*
SCN	*R to races 3,14*
SDS	*Resistant*
Stem Canker	*Resistant*
Frogeye	*Susceptible*
Root Knot	*Susceptible*
Protein %	*34.4*
Oil %	*19.9*
Chloride	*Includer*
Herbicide	*Conventional*

Four Year Means for Yield (Bu/A) by Soil Type, Maturity, Height, & Lodging
Southeast MO, 2014-2017

Variety	Loam	Clay	Sand	4 Year Mean YLD	Maturity	Height (Inches)	Lodging Score
S13-2743C	**67.4**	**65.7**	**28.9**	**60.0**	**9/21**	**34**	**2.0**
AG 43X7	73.8	67.7	25.2	63.1	9/25	38	2.5
AG4135	68.1	69.4	30.7	61.9	9/21	34	2.3
# Locations	8	6	3	17	14	14	14

Performance of S13-2743C versus two commodity checks in the Regional Uniform Trial Test-Southern States (2017) across 8 sites

Variety	YLD Bu/A	Maturity	Height (Inches)	Lodging Score
S13-2743C	**65.1**	**9/14**	**38**	**2.0**
Asgrow AG4232	59.5	9/17	35	2.2
Asgrow AG4135	64.6	9/13	35	1.9

Summary of recently released lines from the University of Mis

Line	Year	Type	RM	GH	FC	PC	PW	HC	SCN
S11-17025C	2015	Conv	5.2	D	W	T	Tan	Black	R: 1,2,3,5
S11-16653C	2016	Conv	5.3	D	W	G	Tan	Buff	R: 1,2,3,5; M
S12-4718C	2016	Conv	5.3	D	W	LT	Tan	Black	R: 1,2,3,5
S11-20242C	2017	Conv	5.1	SD	W	T	Tan	Black	R: 1,2,3,5
S13-2743C	2018	Conv	4.1	I	W	G	Brown	Buff	R: 3,14
S13-3851C	2018	Conv	4.4	I	P	LT	Tan	Black	S
S13-10590C	2019	Conv	4.3	I	W	T	Tan	Black	MR: 1,
S13-10592C	2019	Conv	4.5	I	W	T	Tan	Black	S
S13-1955C	2019	Conv	5.5	D	W	T	Tan	Black	R: 2,3,5
S15-10434C	2019	Conv	5.5	D	P	T	Tan	Black	R: 1,2,3,5
S16-14730C	2020	Conv	4.7	I	P	T	Tan	Black	R: 3; MR:
S16-11644C	2020	Conv	4.9	SD	W	T	Tan	Imp. Black	R: 2; MR:
S16-7922C	2020	Conv	4.9	SD	W	T	Tan	Imp. Black	MR: 2,3
S16-11651C	2020	Conv	5.3	SD	W	T	Tan	Black	R: 5; MR:
S16-15170C	2020	Conv	5.3	I	W	G	Tan	Buff	R: 5; MR
S11-20356R	2014	RR1	4.9	SD	P	T	Tan	Black	R: 1,2,3,5
S11-20337R	2015	RR1	4.9	SD	P	T	Tan	Black	R: 1,2,3,5
S11-20195R	2015	RR1	5.3	I	P	T	Tan	Black	R: 1,2,3,5
S14-15146R	2017	RR1/STS	4.6	I	W	T	Tan	Black	S
S14-9017R	2017	RR1	5.3	SD	W	LT	Tan	Black	R: 1,2,3
S14-15138R	2018	RR1/STS	4.8	I	W	T	Tan	Black	MR: 3,1
S16-5540R	2020	RR1	4.6	SD	W	T	Tan	Black	R: 2,3,
S10-2635RY	2015	R2Y	4.1	I	P	G	Tan	Imp. Black	MR: 3,1
S11-9618RY	2015	R2Y	4.4	I	P	G	Brown	Imp. Black	R: 1,2,3,5
S16-3747GT	2020	R2Y	5.0	D	W	LT	Tan	Imp. Black	R: 5; MR:
S16-16641R	2019	RR1/HO	4.8	D	W	T	Tan	Black	R: 1,2,3
S15-17812C	2019	Conv/HOLL	4.8	I	W	G	Tan	Buff	R: 2
S16-16814R	2020	RR1/HO	4.7	D	W	G	Tan	Buff	R: 2,3,
SA17-2742	2020	Conv/HOLL	2.8	I	P	G	Tan	Buff	R: 3,14
SA14-9653	2019	Conv	3.7	I	P	T	Brown	Black	R: 3,14
SA13-1385	2019	Conv	3.9	I	P	T	Tan	Black	R: 3,14
SA14-1310	2019	Conv	3.9	I	P	G	Brown	Imp. Black	R: 3,14
SA13-2699	2020	Conv	3.9	I	P	G	Tan	Imp. Black	R: 3,14
SA17-8882	2020	Conv/HOLL	4	I	P	T	Brown	Black	R: 3,14

Conv = Conventional; HO = High oleic, HOLL = High oleic low linolenic.

RM: Relative Maturity; GH: Growth Habit, D = Determinate, SD = Semi-determinate, I = Indeterminate.

FC: Flower color, W = White, P = Purple.

PC: Pubescence Color, G = Gray, T = Tawny, LT = Light tawny; PW: Podwall color; HC: Hilum color.

SCN: Soybean cyst nematode; RKN: Southern root-knot nematode; RN: Reniform nematode.

SC: Stem Canker; PRR: Phytophtora root rot; FLS: Frogeye leaf spot; SDS: Sudden death syndrome; CRT: Charcoal rot; PHO: Phomopsi

R = Resistant, MR = Moderately resistant, MS = Moderately susceptible, S = Susceptible, T = Tolerant.

MET: Metribuzin; STS: Sulfonyl-Urea tolerant soybean, T = Tolerant, S = Susceptible.

Salt: Inc = Includer; Exc = Excluder.

ssouri - Delta Center soybean breeding program (2014 - 2020)

	RKN	RN	SC	PRR	FLS	SDS	CRT	PHO	MET	STS	Salt	Seed Available
5,14	R	R	MS	T	R	R	-	-	T	S	Exc	Foundation-19
MR: 14	R	R	R	T	S	MR	-	-	T	S	Exc	
5,14	R	R	R	T	R	R	-	-	T	S	Exc	Foundation-19
5,14	R	R	MS	T	R	R	-	-	T	S	Exc	
4	S	S	R	R	R	R	S	S	T	S	Inc	Foundation-19
	S	S	R	R	S	R	S	S	T	S	Inc	Foundation-20
2	R	S	MS	T	R	R	R	S	T	S	Exc	Foundation-20
	S	S	R	T	S	R	R	S	T	S	Exc	Foundation-20
,14	R	R	MS	T	R	R	R	R	T	S	Inc	Foundation-20
5,14	R	R	MS	T	-	R	R	R	T	S	Exc	Foundation-19
2,5	MR	S	R	T	R	R	R	S	T	S	Inc	Foundation-20
3,5	R	MS	S	R	R	R	R	S	T	S	Exc	Breeder-20
3,5	R	MR	R	T	R	R	R	S	T	S	Exc	Breeder-20
2,3	R	MR	R	R	R	R	R	S	T	S	Exc	Breeder-20
R: 2	S	S	R	T	R	R	S	S	T	S	Exc	Breeder-20
5,14	R	R	R	T	R	R	-	-	T	-	Exc	Foundation-19
5,14	R	R	MS	T	S	MR	-	-	T	S	Exc	
5,14	R	R	MS	T	R	MR	-	-	T	S	Exc	
	S	S	R	T	R	MR	R	S	T	T	Inc	Foundation-20
,5	MS	R	R	R	R	R	MR	S	T	S	Inc	Foundation-19
14	S	S	R	T	R	R	MS	R	T	T	Inc	Foundation-20
5	R	R	S	T	R	R	R	S	T	S	Exc	Foundation-20
14	S	S	R	T	R	MR	-	-	T	S	Exc	
5,14	R	S	-	T	R	MR	-	-	T	S	Exc	
2,3	R	MS	R	T	S	R	R	S	T	S	Exc	Breeder-20
,5	R	R	R	R	S	R	S	R	T	S	Exc	Foundation-19
	R	MR	R	R	R	R	S	S	T	S	-	Foundation-20
5	R	R	MS	T	R	R	R	R	T	S	-	Breeder-20
4	-	-	28	1.2	-	-	-	-	-	-	-	Foundation-20
4	-	-	-	T	-	-	-	-	-	-	-	Foundation-20
4	-	-	-	T	-	-	-	-	-	-	-	Foundation-19
4	-	-	-	T	-	-	-	-	-	-	-	Foundation-21
4	-	-	-	T	-	-	-	-	-	-	-	Foundation-22
4	-	-	31	1.6	-	-	-	-	-	-	-	Foundation-20

s longicolla.

SA17-8882

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*4.1*
Flower Color	*Purple*
Pubescence Color	*Tawny*
Pod Wall Color	*Brown*
Hila Color	*Black*
Height (inches)	*31*
Lodging	*1.6*
Seed per lb.	*2920*
Seed luster	*Shiny*
Oleic Acid	*77.8*
Phytophthora Rot	*Field Tolerant*
SCN	*PI88788 (Race 3, 14 resistance)*
SDS	*Moderately Susceptible*
Stem Canker	*Moderately Susceptible*
Frogeye	*Moderately Susceptible*
Root Knot	*Not tested*
Protein %	*37.3*
Oil %	*19.1*
Chloride	*Not tested*
Herbicide	*Conventional*
Linolenic Acid	*2.6*

Performance of SA17-8882 across two years and 9 environments in Missouri during 2018 and 2019. Maturity is presented as September 1 = 1 and Yield is presented as bushels per acre.

Name Year (Locations)	Yield 2019 (3)	Maturity 2019 (3)	Yield 2018 (6)	Maturity 2018 (6)	Oleic Acid 2018 (3)	Linolenic Acid 2018 (3)	Oleic Acid 2019 (8)	Linolenic Acid 2019 (8)
SA17-8882	**63.9**	**29**	**62 .7**	**28**	**75.7**	**2.8**	**79.9**	**2.3**
AG3956	62.9	27	62.8	25				
P94Y21	64.7	30	57.3	29				
LD06-7620	63.9	32	60.1	24				
LD07-3395bf	66.1	28	58.8	21				
TEST MEAN	61.4	29	52.2	23				
CV	6.6	1.3	12.9	14.7				
LSD (0.05)	3.4	1.3	10.9	5.6				

SHOW ME SOY 4301C - S13-10590C

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*4.3*
Flower Color	*White*
Pubescence Color	*Tawny*
Pod Wall Color	*Tan*
Hila Color	*Black*
Height (inches)	*34*
Lodging	*2.9*
Seed per lb.	*3000*
Seed luster	*Intermediate*
Protein	*34.7%*
Oil	*20.7%*
Phytophthora Rot	*Field Tolerant*
SDS	*Resistant*
Stem Canker	*Moderately Susceptible*
Frogeye	*Resistant*
Charcoal	*Resistant*
Chloride	*Excluder*
Metribuzin	*Tolerant*
SCN	*Moderately Resistant to Races 1 and 2*
Root Knot	*Resistant*
Reniform	*Susceptible*

Five Year Means for Yield (bu/ac) by Soil Type, Maturity, Height, and Lodging
Southeast MO, 2014-2018

Variety	Loam	Clay	Sand	5-Year Mean	Maturity	Height	Lodging
S13-10590C	**58.2**	**67.9**	**28.9**	**59.9**	**21-Sep**	**34.0**	**2.9**
AG 43X7	66.6	62.6	25.2	61.8	25-Sep	38.0	2.5
AG 4135	63.4	67.0	30.7	60.3	21-Sep	37.0	2.3
Locations	10	8	3	21	21	21	21

Performance of S13-10590C in the USDA Uniform Test
Southern States (2016 – 2018)

Variety	2016	2017	2018	Average	Height	Maturity	Lodging
S13-10590C	**74.4**	**62.5**	**62.9**	**66.6**	**35.0**	**18-Sep**	**2.1**
AG 4232	68.2	59.5	66.9	64.8	35.0	17-Sep	2.2
AG 3934	66.7	48.7	64.5	59.9	28.0	13-Sep	1.9
Locations	7	8	8	23	23	23	23

S13-3851C

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*4.4*
Flower Color	*Purple*
Pubescence Color	*Lt. Tawny*
Pod Wall Color	*Tan*
Hila Color	*Black*
Height (inches)	*34*
Lodging Score	*2.5*
Seed per lb.	*3000*
Seed luster	*Intermediate*
Phytophthora Rot	*Resistant*
SCN	*Susceptible*
SDS	*Resistant*
Stem Canker	*Resistant*
Frogeye Leaf spot	*Susceptible*
Root Knot	*Susceptible*
Protein %	*34.4*
Oil %	*19.9*
Chloride	*Includer*
Herbicide	*Conventional*

Four Year Means for Yield (Bu/A) by Soil Type, Maturity, Height, & Lodging
Southeast MO, 2014-2017

Variety	Loam	Clay	Sand	4 Year Mean YLD	Maturity	Height (Inches)	Lodging Score
S13-3851C	**72.8**	**72.8**	**37.0**	**68.6**	**10/6**	**37**	**2.6**
AG4232	72.5	69.0	32.8	66.4	10/4	37	2.5
AG4632	72.6	77.4	39.9	70.8	10/9	41	2.7
# Locations	8	7	2	17	13	13	13

Performance of S13-3851C versus two commodity checks in the Uniform Group IV-S early test - Southern States across 8 sites, 2017

Variety	Yld Bu/A	Maturity	Height (Inches)	Lodging Score
S13-3851C	**61.9**	**9/19**	**35**	**2.0**
AG4232RR2Y	59.5	9/17	35	2.2
AG3934RR2	48.7	9/10	28	1.9

S13-10592C

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*4.5*
Flower Color	*White*
Pubescence Color	*Tawny*
Pod Wall Color	*Tan*
Hila Color	*Black*
Height (inches)	*36*
Lodging	*2.1*
Seed per lb.	*3100*
Seed luster	*Intermediate*
Protein	*35.3%*
Oil	*20.0%*
Phytophthora Rot	*Susceptible*
SDS	*Resistant*
Stem Canker	*Resistant*
Frogeye	*Susceptible*
Charcoal	*Resistant*
Chloride	*Excluder*
Metribuzin	*Tolerant*
SCN	*Susceptible*
Root Knot	*Susceptible*
Reniform	*Susceptible*

Five Year Means for Yield (bu/ac) by Soil Type, Maturity, Height, and Lodging
Southeast MO, 2014-2018

Variety	Loam	Clay	Sand	5-Year Mean	Maturity	Height	Lodging
S13-10592C	**66.6**	**59.9**	**28.9**	**60.5**	**19-Sep**	**27.0**	**2.8**
AG 43X7	70.9	62.7	25.2	64.5	14-Sep	34.0	2.2
AG 4632	72.6	64.7	30.7	63.8	20-Sep	30.0	2.4
Locations	10	9	3	22	22	22	22

Performance of S13-10592C in the USDA Uniform Test
Southern States (2016 – 2018)

Variety	2016	2017	2018	Average	Height	Maturity	Lodging
S13-10592C	**71.2**	**63.7**	**61.6**	**65.5**	**36.0**	**17-Sep**	**2.1**
AG 4135	72.0	64.6	64.5	67.0	35.0	13-Sep	1.9
AG 4232	68.2	59.5	66.9	64.9	35.0	17-Sep	2.2
Locations	7	8	8	23	23	23	23

S14-15146GT

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*4.6*
Flower Color	*White*
Pubescence Color	*Tawny*
Pod Wall Color	*Tan*
Hila Color	*Black*
Height (inches)	*34*
Lodging Score	*3.0*
Seed per lb.	*3300*
Seed luster	*Intermediate*
Phytophthora Rot	*Field tolerant*
SCN	*Moderately susceptible*
SDS	*Moderately resistant*
Stem Canker	*Resistant*
Frogeye	*Resistant*
Root Knot	*Moderately susceptible*
Protein %	*34.1*
Oil %	*20.3*
Chloride	*Includer*
Herbicide	*RR1*

Three Year Means of S14-15146GT versus two commodity checks for Yield (Bu/A) by Soil Type, Maturity, Height, & Lodging, Southeast MO, 2015-2017

Variety	Loam	Clay	Sand	3 Year Mean YLD	Maturity	Height (Inches)	Lodging Score
S14-15146GT	**76.0**	**70.7**	**34.6**	**71.1**	**10/4**	**39**	**3.0**
AG4632	73.2	73.0	27.6	68.6	10/4	42	2.8
AG4232	71.1	68.0	20.7	64.9	9/29	37	2.6
# Locations	6	3	1	10	7	7	7

Performance of S14-15146GT versus two checks in the Regional Uniform Trial IV-Late Test-Southern States (2017) over 13 sites

Variety	Yld Bu/A	Maturity	Height (Inches)	Lodging Score
S14-15146GT	**58.0**	**9/24**	**31**	**1.7**
Asgrow AG4632	63.5	9/24	36	2.1
Asgrow AG4835	60.8	9/27	36	1.7

S16-5540R

Agronomic Traits & Disease Ratings

Growth Habit	*Semi-Determinate*
Relative Maturity	*4.6*
Flower Color	*White*
Pubescence Color	*Tawny*
Pod Wall Color	*Tan*
Hilum Color	*Black*
Height (inches)	*31*
Lodging Score	*1.9*
Seed per lb.	*3260*
Seed Luster	*Intermediate*
Protein	*36.5%*
Oil	*17.9%*
Phytophtora Rot	*Susceptible*
SDS	*Field Tolerant*
Stem Canker	*Susceptible*
Frogeye	*Field Tolerant*
Charcoal	*Unknown*
Chloride	*Excluder*
Metribuzin	*Unknown*
SCN	*Resistant to races 2, 3, 5*
Root-Knot	*Resistant*
Reniform	*Resistant*

2-Year mean for yield (bu/ac), maturity, height, and lodging in southeast MO (2017-2018) and 1-year performance across 8 southern states

Variety	2017-PYT	2018-AYT	2-Year Mean	2018-COOP	Maturity	Height	Lodging
S16-5540R	**70.4**	**67.0**	**68.5**	**70.5**	**10/6**	**28**	**2.8**
AG 4632	70.9	57.6	64.3	73.2	10/4	36	3.4
AG 43X7	74.0	62.3	68.1	62.8	10/1	37	3.0
Locations	4	5	9	8	9	9	9

Performance of S16-5540R in the USDA Uniform Test Southern States (2019)

Variety	2019-UT	Maturity	Height	Lodging
S16-5540R	**65.8**	**9/27**	**31**	**1.9**
AG 39X7	52.7	9/16	30	1.6
AG 4135	56.8	9/18	30	1.5
Locations	8	8	8	8

S16-14730C

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*	Oil	*18.2%*
Relative Maturity	*4.7*	Phytophthora Rot	*Susceptible*
Flower Color	*Purple*	SDS	*Field Tolerant*
Pubescence Color	*Tawny*	Stem Canker	*Resistant*
Pod Wall Color	*Tan*	Frogeye	*Field Tolerant*
Hilum Color¬	*Black*	Charcoal	*Unknown*
Height (inches)	*32*	Chloride	*Includer*
Lodging Score	*1.6*	Metribuzin	*Unknown*
Seed per lb.	*3210*	SCN	*R: 3; MR: 2, 5*
Seed luster	*Intermediate*	Root Knot	*Mod. Resistant*
Protein	*34.4%*	Reniform	*Susceptible*

2-Year mean for yield (bu/ac), maturity, height, and lodging in southeast MO (2017-2018) and 1-year performance across 8 southern states

Variety	2017-PYT	2018-AYT	2-Year Mean	2018-COOP	Maturity	Height	Lodging
S16-14730C	**69.0**	**61.8**	**65.0**	**64.2**	**10/5**	**33**	**2.8**
AG 4632	60.9	57.6	59.3	62.8	10/4	36	3.4
AG 46X7	78.0	66.4	72.2	73.2	10/2	38	2.8
Locations	4	5	9	8	9	9	9

Performance of S16-14730C in the USDA Uniform Test Southern States (2018-2019)

Variety	2018-UP	2019-UT	Average	Maturity	Height	Lodging
S16-14730C	**65.0**	**59.5**	**62.3**	**9/27**	**32**	**1.6**
AG 39X7	71.2	52.7	61.9	9/16	30	1.6
AG 4135	62.7	56.8	59.7	9/18	30	1.5
Locations	7	8	15	15	15	15

S14-15138GT

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*	Phytophthora Rot	*Field tolerant*
Relative Maturity	*4.8*	SCN	*Mod. Resistant races 3, 14*
Flower Color	*White*	SDS	*Resistant*
Pubescence Color	*Tawny*	Stem Canker	*Resistant*
Pod Wall Color	*Tan*	Frogeye Leaf spot	*Resistant*
Hila Color	*Black*	Root Knot	*Susceptible*
Height (inches)	*35*	Protein %	*35.8*
Lodging Score	*2.2*	Oil %	*19.2*
Seed per lb.	*3000*	Chloride	*Includer*
Seed luster	*Intermediate*	RR/Conventional	*RR1/STS*

Three Year Means of S14-15138GT for Yield (Bu/A) versus two commodity checks by Soil Type, and over years for Yield, Maturity, Height, & Lodging, Southeast MO, 2015-2017

Variety	Loam	Clay	Sand	3 Year Mean YLD	Maturity	Height (Inches)	Lodging Score
S14-15138GT	**69.2**	**67.6**	**39.2**	**65.8**	**9/29**	**35**	**2.6**
AG 4835	69.9	67.2	23.7	66.8	9/30	40	2.6
AG 4632	70.8	69.7	45.2	68.2	9/27	39	2.6
# Locations	6	5	1	12	7	5	5

Performance of S14-15138GT versus two checks in the Regional Uniform Trial IV-Late Test-Southern States (2017) over 13 sites

Variety	Yld Bu/A	Maturity	Height (Inches)	Lodging Score
SS14-15138GT	**61.4**	**9/27**	**33**	**1.8**
AG 4632RR2Y	63.5	9/24	36	2.1
AG 4835	60.8	9/27	36	1.7

S15-17812C HOLL

Agronomic Traits & Disease Ratings

Growth Habit	*Indeterminate*
Relative Maturity	*4.8*
Flower Color	*White*
Pubescence Color	*Gray*
Pod Wall Color	*Tan*
Hila Color	*Buff*
Height (inches)	*30*
Lodging	*1.8*
Seed per lb.	*3700*
Seed luster	*Intermediate*
Protein	*36.5%*
Oil	*19.0%*
Phytophthora Rot	*Susceptible*
SDS	*Resistant*
Stem Canker	*Resistant*
Frogeye	*Resistant*
Charcoal	*Susceptible*
Chloride	*Unknown*
Metribuzin	*Unknown*
SCN	*Resistant to Race 2*
Root Knot	*Resistant*
Reniform	*Moderately Resistant*

Three years mean for yield performance (bu/ac) in 25 locations across 6 states from 2016 to 2018

Variety	2016 PYT	2017 AYT	2018 AYT	2018 UT
S15-17812	**60.8**	**55.3**	**50.9**	**58.2**
AG 4135			45.5	
AG 4835	64.1		49.5	
AG 51X8			49.3	
AG 5335		69.7	55.0	
Ellis				55.9
P48T27X			48.6	
UA 5612				59.3
Check Average	64.1	68.2	49.6	57.6
% Check	94.9	81.1	102.7	101.0
Test Average	52.3	60.7	36.8	56.8
% Test	116.3	91.0	138.3	102.5
Ranking (%)	96.2	11.4	93.1	62.0
CV (%)	13.3	9.9	12.7	14.2
LSD (5%)	13.6	6.4	5.2	5.4
# Locations	3	3	3	16

Three years means of S15-17812 Oleic (18:1) and Linolenic (18:3) acid concentrations

Soybean Oil	2016	2017	2018	Average
Oleic acid (18:1)	83.3	83.9	85.0	84.1
Linolenic acid (18:3)	4.1	2.9	1.3	2.8

SOYLEIC™

S13-1955C

Agronomic Traits & Disease Ratings

Growth Habit	*Determinate*
Relative Maturity	*5.5*
Flower Color	*White*
Pubescence Color	*Tawny*
Pod Wall Color	*Tan*
Hila Color	*Black*
Height (inches)	*31*
Lodging	*2.3*
Seed per lb.	*3400*
Seed luster	*Intermediate*
Protein	*34.6%*
Oil	*19.9%*
Phytophthora Rot	*Field Tolerant*
SDS	*Resistant*
Stem Canker	*Moderately Susceptible*
Frogeye	*Resistant*
Charcoal	*Moderately Resistant*
Chloride	*Includer*
Metribuzin	*Tolerant*
SCN	*Resistant to races 2,3,5,14*
Root Knot	*Resistant*
Reniform	*Resistant*

Five Year Means for Yield (bu/ac) by Soil Type, Maturity, Height, and Lodging
Southeast MO, 2014-2018

Variety	Loam	Clay	Sand	5-Year Mean	Maturity	Height	Lodging
S13-1955C	**64.7**	**65.2**	**28.9**	**61.9**	**9-Oct**	**31.0**	**2.3**
AG 55X7	60.8	73.5	25.2	63.6	7-Oct	35.0	2.4
AG 5335	69.1	68.3	30.7	61.3	4-Oct	40.0	2.2
Locations	8	8	3	19	19	19	19

Performance of S13-1955C in the USDA Uniform Test
Southern States (2016 – 2018)

Variety	UP 2016	UT 2017	UT 2018	Average	Height	Maturity	Lodging
S13-1955C	**58.6**	**63.9**	**58.9**	**60.5**	**30.0**	**7-Oct**	**2.1**
AG 5335	66.7	62.0	57.6	62.1	37.0	3-Oct	1.7
AG 5534	58.5			58.5	33.0	6-Oct	1.8
Locations	10	15	9	34	34	34	34

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