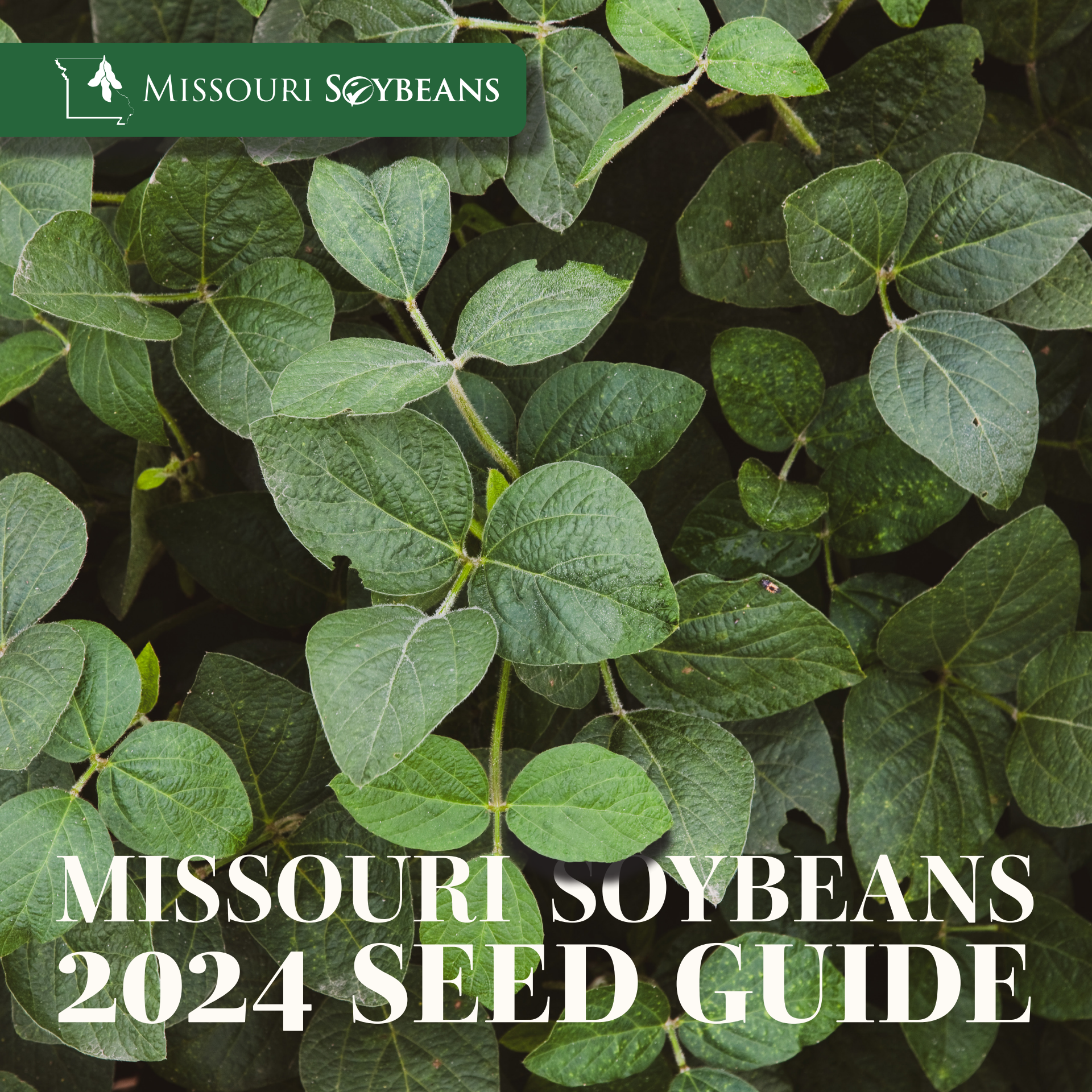
MISSOURI SOYBEANS
MISSOURI SOYBEANS
2024 SEED GUIDE

PIONEER®

AMERICA'S #1 SOYBEAN BRAND

FOR 20 YEARS AND COUNTING

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MISSOURI SOYBEANS

Missouri Soybean Merchandising Council

Mission

We are committed to promoting and advancing innovative reserach, 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 selected through statewide elections to serve his or her geographic region and oversee the investment 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

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 Technology Transfer Manager for the University of Missouri, at ***bishs@missouri.edu*** **or** ***(573) 882-5016.***

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SA17-2742 HOLL

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	79.5
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	0.8

PERFORMANCE OF SA17-2742 HOLL ACROSS TWO YEARS AND NINE ENVIRONMENTS IN MISSOURI DURING 2018 AND 2019.

MATURITY IS PRESENTED AS SEPTEMBER 1 = 1 AND YIELD IS PRESENTED AS BUSHELS PER ACRE.

Test, Year, (Loc.)	Yield, 2019, (3)	Maturity, 2019, (3)	Yield, 2018, (6)	Maturity, 2018, (6)	Oleic, 2018, (3)	Linolenic, 2018, (3)	Oleic, 2019, (7)	Linolenic, 2019, (7)
SA17-2742 HOLL	62.5	28	67.2	11	78.7	0.9	79.5	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				

NOTES

SOYLEIC®

SA19-311H HOLL

AGRONOMIC TRAITS & DISEASE RATINGS

Growth Habit	Indeterminate
Relative Maturity	3.8
Flower Color	Purple
Pubescence Color	Grey
Pod Wall Color	Tan
Hila Color	Imperfect Black
Height (Inches)	34
Lodging	2.2
Seed per lb.	3240
Seed Luster	Shiny
Phytophthora Rot	None
SCN	rhg1-b
Stem Canker	Rdc3
Frogeye	None
Root Knot	None
Brown Stem Rot	None
Protein %	35.7
Oil %	19.1
Chloride	Sensitive
Iron Chlorosis	Tolerant
PPO Herbicide	Tolerant
ALS Herbicide	Sensitive

YIELD PERFORMANCE 2022

Test, (Loc.)	2022-MO, (5)	2022-TSL, (17)	2022-NUST, (9)	2022-NUST, Maturity (Days)	2022-NUST, Height (in.)	2022-NUST, Lodging (1-5)
SA19-311H HOLL (3.8)	64.6	67.3	61.0	9/30	34	2.2
P33T60 (3.3)		65.0				
AG25XF1 (2.5)			62.0	9/23	32	1.5
AG38XF1 (3.8)			66.3	10/4	36	1.3
*P34A59PR (3.4)		64.5				
*P30A46PR (3.0)		64.2				
P38A10 (3.8)	73.3					
LD11-2170 (3.3)	65.0		66.6	9/26	31	1.4
Mean	64.4	66.0	60.2			
LSD (5%)	4.1	2.2	3.0			

* Plenish® Variety

SOYLEIC®

SA18-268PR HOLL

AGRONOMIC TRAITS & DISEASE RATINGS

Growth Habit	Indeterminate
Relative Maturity	3.9
Flower Color	White
Pubescence Color	Light Tawny
Pod Wall Color	Tan
Hila Color	Brown
Height (Inches)	29
Lodging	1.3
Seed per lb.	3200
Seed Luster	Shiny
Oleic Acid	83.7
Phytophthora Rot	Field Tolerant
SCN	PI88788 (Race 3, 14 resistance)
SDS	Moderately Susceptible
Stem Canker	Resistant
Frogeye	Moderately Susceptible
Root Knot	Not Tested
Protein %	38.6
Oil %	21.0
Chloride	Not Tested
Herbicide	Conventional
Linolenic Acid	2.2

PERFORMANCE OF SA18-268PR HOLL ACROSS TWO YEARS AND FOUR ENVIRONMENTS IN MISSOURI DURING 2019 AND 2020.

MATURITY IS PRESENTED AS SEPTEMBER 1 = 1 AND YIELD IS PRESENTED AS BUSHELS PER ACRE.

Test, Year, (Loc.)	Yield, 2019, (1)	Maturity, 2019, (1)	Yield,,2020,,(3)	Maturity, 2020, (3)	Oleic, 2020, (1)	Linolenic, 2020, (1)
SA18-268PR HOLL	64.5	29	68.0	34	83.9	2.2
P38A10	60.9	32	84.3	36		
LD11-2170	57.7	22	80.9	26		
P39A82S	46.0	29	73.1	34		
Grand Mean	55.6	30	67.8	30		
LSD$_{(0.05)}$	17.6	2.4	6.9	2.8		

NOTES

SOYLEIC®

SA18-350PR HOLL

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)	33
Lodging	1.3
Seed per lb.	3000
Seed Luster	Shiny
Oleic Acid	84.5
Phytophthora Rot	Field Tolerant
SCN	PI88788 (Race 3, 14 resistance)
SDS	Moderately Susceptible
Stem Canker	Resistant
Frogeye	Moderately Susceptible
Root Knot	Not Tested
Protein %	39.0
Oil %	20.8
Chloride	Not Tested
Herbicide	Conventional
Linolenic Acid	2.1

Performance of SA18-350PR HOLL across two years and four environments in Missouri during 2019 and 2020.

Maturity is presented as September 1 = 1 and Yield is presented as bushels per acre.

Test, Year, (Loc.)	Yield, 2019, (1)	Maturity, 2019, (1)	Yield, 2020, (3)	Maturity, 2020, (3)	Oleic Acid, 2020, (1)	Linolenic Acid, 2020, (1)
SA18-350PR HOLL	66.4	31	69.4	35	84.4	2.1
P38A10	62.4	32	84.3	36		
LD11-2170	61.5	22	80.9	26		
P39A82S	50.4	29	73.1	34		
Grand Mean	56.6	30	67.8	30		
LSD$_{(0.05)}$	11.2	2.4	6.9	2.8		

NOTES

SOYLEIC®

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

Test, Year, (Loc.)	Yield, 2017, (6)	Maturity, 2017, (6)	Yield, 2016, (7)	Maturity, 2016, (7)	Yield, 2015, (5)	Maturity, 2015, (5)	Yield, 2015-2017, (18)	Maturity, 2015-2017, (18)
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 seven 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		

SA17-8882 HOLL

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	79.9
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	2.3

PERFORMANCE OF SA17-8882 HOLL ACROSS TWO YEARS AND NINE ENVIRONMENTS IN MISSOURI DURING 2018 AND 2019.

MATURITY IS PRESENTED AS SEPTEMBER 1 = 1 AND YIELD IS PRESENTED AS BUSHELS PER ACRE.

Test, Year, (Loc.)	Yield, 2019, (3)	Maturity, 2019, (3)	Yield, 2018, (6)	Maturity, 2018, (6)	Oleic, 2018, (3)	Linolenic, 2018, (3)	Oleic, 2019, (8)	Linolenic, 2019, (8)
SA17-8882 HOLL	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				

NOTES

SOYLEIC

SA19-24408 HOLL

AGRONOMIC TRAITS & DISEASE RATINGS

Growth Habit	Indeterminate
Relative Maturity	4.1
Flower Color	Purple
Pubescence Color	Grey
Pod Wall Color	Tan
Hila Color	Imperfect Black
Height (Inches)	34
Lodging	1.3
Seed per lb.	3400
Seed Luster	Dull
Phytophthora Rot	None
SCN	rhg1-b
Stem Canker	Rdc3
Frogeye	None
Root Knot	None
Brown Stem Rot	None
Protein %	36.7
Oil %	18.8
Chloride	Sensitive
Iron Chlorosis	Sensitive
PPO Herbicide	Tolerant
ALS Herbicide	Sensitive

YIELD PERFORMANCE 2021-2022

Test, (Loc.)	2021-NUST, (6)	2022-TSI, (7)	2022-NUST, (9)	2022-NUST, Maturity (Days)	2022-NUST, Height (in.)	2022-NUST, Lodging (1-5)
SA19-24408 HOLL (4.1)	65.7	62.6	62.6	10/3	34	1.8
P40A40 (4.0)		72.1				
LD15-3818 (4.0)		75.2	68.8	10/1	35	1.4
AG38XF1 (3.8)			70.4	10/3	37	1.5
***P48A94PR (4.8)**		82.7				
***P46A45PR (4.6)**		73.6				
AG42XF2 (4.2)			67.1	10/4	40	1.8
LD07-3395bf (3.9)	66.4	71.9	65.8	9/30	32	1.5
Mean	62.9	65.8	62.4			
LSD (5%)	3.8	4.1	4.5			

* Plenish® Variety

NOTES

SOYLEIC®

SA19-24265 HOLL

AGRONOMIC TRAITS & DISEASE RATINGS

Growth Habit	Indeterminate
Relative Maturity	4.2
Flower Color	White
Pubescence Color	Tawny
Pod Wall Color	Tan
Hila Color	Black
Height (Inches)	37
Lodging	1.2
Seed per lb.	3000
Seed Luster	Dull
Phytophthora Rot	None
SCN	rhg1-b
Stem Canker	Rdc3
Frogeye	None
Root Knot	None
Brown Stem Rot	None
Protein %	36.7
Oil %	18.8
Chloride	Sensitive
Iron Chlorosis	Sensitive
PPO Herbicide	Tolerant
ALS Herbicide	Sensitive

YIELD PERFORMANCE 2021-2022

Test, (Loc.)	2021-NUST, (6)	2022-TSI, (7)	2021-NUST, Maturity (Days)	2021-NUST, Height (in.)	2022-NUST, Lodging (1-5)
SA19-24265 HOLL (4.2)	61.0	58.1	9/29	37	1.2
P40A40 (4.0)		72.1			
LD15-3818 (4.0)	67.9	75.2	9/26	35	1.6
AG38XF1 (3.8)					
*P48A94PR (4.8)		82.7			
*P46A45PR (4.6)		73.6			
AG42XF2 (4.2)					
LD07-3395bf (3.9)	66.4	71.9	9/23	33	1.6
Mean	62.9	65.8			
LSD (5%)	3.8	4.1			

* Plenish® Variety

NOTES

SOYLEIC®

S13-10592/ SHOWMESOY™ 4501C

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
Phytophthora Rot	Susceptible
SCN	Susceptible
SDS	Resistant
Stem Canker	Resistant
Frogeye	Susceptible
Root Knot	Susceptible
Protein %	35.3
Oil %	20.0
Chloride	Excluder
Charcoal	Resistant
Metribuzin	Tolerant
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**

*Check was AG 4232 instead of AG 43X7 in 2014-2016

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**

NOTES

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	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 Asgrow checks for Yield (Bu/A) by Soil Type, Maturity, Height, & Lodging, Southeast MO, 2015-2017

Variety	Loam**	Clay**	Sand	3-Year Mean	Maturity	Height	Lodging
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**

*Check In 2017 was AG43X7 dicamba variety instead of AG4232.
**All 2017 locations affected by Dicamba. Yield on Clay and Sand sites were severely affected and 2017 data was not included in 3 year means.

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

Variety	Yied (Bu/A)	Maturity	Height	Lodging
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

NOTES

S16-14730C

AGRONOMIC TRAITS & DISEASE RATINGS

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

2-Year mean for yield (bu/ac), maturity, height, and lodging in southeast MO (2017-2018) and two year performance in 13 locations across six southern states

Variety	2017-PYT	2018-AYT	2-Year Mean[3]	2018-COOP[4]	2020-COOP[4]	Maturity	Height	Lodging
S16-14730C	69.0	61.8	65.0	64.2	63.7	10/5	33	2.8
AG 4632[1]	60.9	57.6	59.3	62.8	70.3	10/4	36	3.4
AG 46X7[2]	78.0	66.4	72.2	73.2	68.3	10/2	38	2.8
Locations	**4**	**5**	**9**	**84**	**54**	**9**	**9**	**9**

[1]Check was AG 4835 in 2020. [2]Check was AG 48X7 in 2017 and AG46X6 in 2020. [3]Locations in southeast MO were severely affected by off-target Dicamba drift. [4]Total of 8 (2018) and 5 (2020) locations across AL, AR, LA, MO, MS, and TN.

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[1]	71.2	52.7	61.9	9/16	30	1.6
AG 4135[1]	62.7	56.8	59.7	9/18	30	1.5
Locations[2]	**7**	**8**	**15**	**15**	**15**	**15**

[1]Check was AG 43X7 instead of AG 39X7, AG 4232 instead of AG 4135 in 2018.
[2]Total of 7 (2018) and 8 (2019) locations across AL, AR, MO, and TN.

S17-2193C

AGRONOMIC TRAITS & DISEASE RATINGS

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

HEAD-TO-HEAD COMPARISON WITH COMMERCIAL CHECKS WITHIN SIMILAR MATURITY GROUPS ACROSS ALL TESTING ENVIRONMENTS (2018-2020)

Variety	Type[1]	Overall (2018-2020)[2]	PYT (2018)	AYT (2019)	COOP (2019-2020)
S17-2193C	Conv.	59.6	62.0	58.0	64.6
AG 4135	R2Y	-12.9[3]	-11.9	-[4]	-
AG 43X7	R2XT	-1.6	-4.3	-3.0	-0.9
AG 45X8	R2XT	0.4	-	-	2.1
AG 46X7	R2XT	1.6	-2.1	4.0	-6.4
AG 4835	R2Y	**-5.8**[5]	-1.8	**-13.0**	-1.1
AG 49X6	R2XT	-2.7	-	-	-1.8
AG 49X9	R2XT	0.8	-	-	1.3
AG 51X8	R2XT	**-22.1**	-21.1	-	-
Locations		21	2	5	14

[1]Herbicide tolerance package, Conv = Conventional (non-GMO), R2Y = Roundup Ready 2 Yield®, R2XT = Roundup Ready 2 Xtend®; [2]Overall performance across all testing environments; [3]Yield difference to S17-2193C represented in bu/ac. For example, -12.9 means the commercial check AG 4135 yielded 12.9 bu/ac below S17-2193C; [4]Data not available; [5]Bolded font indicates a significant difference between S17-2193C and the reference commercial check. In this case, AG 4835 yielded significantly less (5.8 bu/ac) than S17-2193C.

NOTES

S19-19741GT-HOLL

AGRONOMIC TRAITS & DISEASE RATINGS

Growth Habit	Indeterminate
Relative Maturity	4.7
Flower Color	White
Pubescence Color	Grey
Pod Wall Color	Tan
Hila Color	Buff
Height (Inches)	26
Lodging	1.5
Seed per lb.	3100
Seed Luster	Intermediate
Phytophthora Rot	Tolerant
SCN	R: 2, 3, 5
SDS	Susceptible
Stem Canker	Resistant
Frogeye	Susceptible
Root Knot	Resistant
Protein %	37.2
Oil %	20.0
Chloride	Excluder
Charcoal	Moderately Resistant
Metribuzin	Tolerant
Reniform	Resistant

HEAD-TO-HEAD COMPARISON WITH COMMERCIAL CHECKS WITHIN SIMILAR MATURITY GROUPS ACROSS ALL TESTING ENVIRONMENTS (2020-2021)

Variety	Type[1]	Overall (2020-2021)[2]	PYT (2020)	AYT (2021)	COOP (2021)
S19-19741GT-HOLL	Conv.	64.7	65.1	63.0	67.2
AG 4632	R2Y	2.5[3]	-[4]	2.0	-
AG 42XF1	R2XT	21.7	-	**21.0**	-
AG 46X6	R2XT	5.4	0.0	-	7.9
AG 4835	R2Y	-6.3	-7.5	-	-
AG 48X9	R2XT	-4.3	7.8	**-12.0**[5]	-
AG 49X9	R2XT	5.8	-	-	6.3
AG 52X9	R2XT	2.8	1.5	-	-
Locations		14	4	5	6

[1]Herbicide tolerance package, Conv = Conventional (non-GMO), R2Y = Roundup Ready 2 Yield®, R2XT = Roundup Ready 2 Xtend®; [2]Overall performance across all testing environments; [3]Yield difference to S19-19741HOLL represented in bu/ac. For example, 2.5 means the commercial check AG 4632 yielded 2.5 bu/ac above S19- 19741HOLL; [4]Data not available; [5]Bolded font indicates a significant difference between S19-19741HOLL and the reference commercial check. In this case, AG 48X9 yielded significantly less (12.0 bu/ac) than S19-19741HOLL.

NOTES

S15-17812 HOL

AGRONOMIC TRAITS & DISEASE RATINGS

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

Weighted yield average (bu/ac) in 54 locations across eight southern states in five years (2016-2020)

Variety	2016-PYT	2017-AYT	2018-AYT	2020-AYT	2017-UP	2018-UT	2019 UT	Mean
S15-17812C HOL	60.8	55.3	50.9	60.8	59.1	58.2	59.7	58.3
AG 4835[1]	64.1	-	49.5	60.9	59.1	-	-	58.4
AG 53X6[1]	-	-	49.3	72.7	-	57.6	55.9	58.2
Ellis	-	-	-	-	**60.4**	**55.9**	**59.2**	**58.1**
Locations	**3**	**4**	**4**	**5**	**10**	**16**	**12**	**54**

[1]Check was AG 55X7 instead of AG 53X6 in 2018-UT; AG 5335 instead of AG 4835 in 2017-UP.

4-years (2016-2019) means of S15-17812C Oleic (18:1) and Linolenic (18:3) acid concentrations

Soybean Oil	2016	2017	2018	2019	Average
Oleic acid (18:1)	83.3	83.9	85.0	84.4	84.2
Linolenic acid (18:3)	4.1	2.9	1.3	3.4	2.9

NOTES

S16-9090C

AGRONOMIC TRAITS & DISEASE RATINGS

Growth Habit	Semi-Determinate
Relative Maturity	5.2
Flower Color	White
Pubescence Color	Grey
Pod Wall Color	Tan
Hila Color	Black
Height (Inches)	30
Lodging	2.2
Seed per lb.	3400
Seed Luster	Intermediate
Phytophthora Rot	Tolerant
SCN	R: 3; MR: 2, 5
SDS	Unknown
Stem Canker	Susceptible
Frogeye	Susceptible
Root Knot	Resistant
Protein %	34.4
Oil %	20.0
Chloride	Excluder
Charcoal	Resistant
Metribuzin	Tolerant
Reniform	Resistant

HEAD-TO-HEAD COMPARISON WITH COMMERCIAL CHECKS WITHIN SIMILAR MATURITY GROUPS ACROSS ALL TESTING ENVIRONMENTS (2017-2020)

Variety	Type[1]	Overall, (2017-2020)[2]	PYT (2017)	AYT (2018)	COOP (2018, 2020)
S16-9090C	Conv.	65.5	68.5	63.0	68.0
AG 4835	R2Y	-1.7[3]	-[4]	-	-2.4
AG 49X6	R2XT	-2.0	-0.6	-	-
AG 51X8	R2XT	**-13.4**[5]	-	**-17.0**	**-9.3**
AG 52X9	R2XT	3.4	-	-	2.7
AG 5335	R2Y	-1.7	3.9	-3.0	-3.5
AG 55X7	R2XT	-0.8	-	-2.0	-0.1
P54A75X	R2XT	0.1	-	2.0	-2.9
P55A49X	R2XT	-0.7	-	1.0	-3.4
Locations		21	4	5	12

[1]Herbicide tolerance package, Conv = Conventional (non-GMO), R2Y = Roundup Ready 2 Yield®, R2XT = Roundup Ready 2 Xtend®; [2]Overall performance across all testing environments; [3]Yield difference to S16-9090C represented in bu/ac. For example, -1.7 means the commercial check AG 4835 yielded 1.7 bu/ac below S16-9090C; [4]Data not available; [5]Bolded font indicates a significant difference between S16-9090C and the reference commercial check. In this case, AG 51X8 yielded significantly less (13.4 bu/ac) than S16-9090C.

NOTES

S19-18135 LL55

AGRONOMIC TRAITS & DISEASE RATINGS

Growth Habit	Semi-Determinate
Relative Maturity	5.2
Flower Color	White
Pubescence Color	Tawny
Pod Wall Color	Tan
Hila Color	Imperfect Black
Height (Inches)	28
Lodging	1.3
Seed per lb.	3100
Seed Luster	Intermediate
Phytophthora Rot	Resistant
SCN	MR: 2, 5
SDS	Susceptible
Stem Canker	Resistant
Frogeye	Susceptible
Root Knot	Susceptible
Protein %	35.7
Oil %	19.3
Chloride	Excluder
Charcoal	Resistant
Metribuzin	Tolerant
Reniform	Resistant

HEAD-TO-HEAD COMPARISON WITH COMMERCIAL CHECKS WITHIN SIMILAR MATURITY GROUPS ACROSS ALL TESTING ENVIRONMENTS (2020-2021)

Variety	Type[1]	Overall (2020-2021)[2]	PYT (2020)	AYT (2021)	COOP (2021)
S19-18135 LL55	LL	72.4	68.9	68.0	72.2
AG 4835	R2XT	**6.9**[3]	-[4]	**10.0**	2.3
AG 49X6	R2XT	**10.6**	-	**12.0**	8.0
AG 51X8	R2XT	**3.0**	-	**0.3**	-
AG 52X9	LL	**-8.1**[5]	-3.7	-	-
AG 5335	LL	**-17.4**	**-12.9**	-	-
AG 55X7	LL	**-12.2**	**-7.8**	-	-
P54A75X	E3	1.8	6.2	-	-
Locations		14	4	5	5

[1]Herbicide tolerance package, LL = LibertyLink®, R2XT = Roundup Ready 2 Xtend®, E3 = Enlist E3®; [2]Overall performance across all testing environments; [3]Bolded font indicates a significant difference between S19-18135L and the reference commercial check. In this case, AG 49X9 yielded significantly more (6.9 bu/ac) than S19-18135L; [4]Data not available; [5]Yield difference to S19-18135L represented in bu/ac. For example, -8.1 means the commercial check CZ3930GTLL yielded 8.1 bu/ac below S19-18135L.

NOTES

S16-11651/ SHOWMESOY™ 5301C

AGRONOMIC TRAITS & DISEASE RATINGS

Growth Habit	Semi-Determinate
Relative Maturity	5.3
Flower Color	White
Pubescence Color	Tawny
Pod Wall Color	Tan
Hila Color	Black
Height (Inches)	31
Lodging	1.8
Seed per lb.	3390
Seed Luster	Intermediate
Phytophthora Rot	Resistant
SCN	R: 5; MR: 2, 3
SDS	Resistant
Stem Canker	Resistant
Frogeye	Resistant
Root Knot	Resistant
Protein %	35.4
Oil %	18.2
Chloride	Excluder
Charcoal	Resistant
Metribuzin	Tolerant
Reniform	Moderately Resistant

2-Year mean for yield (bu/ac), maturity, height, and lodging in southeast MO (2017-2018) and 2-year performance in 10 locations across six southern states

Variety	2017-PYT	2018-AYT	2-Year Mean[2]	2018-COOP[3]	2020-COOP[3]	Maturity	Height	Lodging
S16-11651C	73.1	66.2	69.2	70.0	68.3	10/11	29	2.6
AG 5335	71.7	65.6	68.7	72.6	65.4	10/11	40	2.8
AG 51X8[1]	65.1	52.8	58.9	66.3	64.3	10/10	42	2.8
Locations	**4**	**5**	**9**	**6**	**4**	**5**	**5**	**5**

[1]Check was AG 53X6 instead of AG 51X8 in 2017and AG 49X9 in 2020. [2]Locations in southeast MO were severely affected by off-target Dicamba drift. [3]Total of 6 (2018) and 4 (2020) locations AR, LA, MO, MS, TN, VA.

Performance of S16-11651C in the USDA Uniform Test Southern States (2018-2019)

Variety	2018-UP	2019-UT	Average	Maturity	Height	Lodging
S16-11651C	66.9	62.1	64.3	10/5	31	1.8
AG 53X6	60.6	55.9	58.3	10/4	28	1.5
Ellis	61.2	59.2	60.2	10/6	26	1.4
Locations[1]	**9**	**13**	**22**	**13**	**13**	**13**

[1]Total of 9 (2018) and 13 (2019) locations across AL, AR, MO, and TN.

2024 SUMMARY OF RELEASED LINES

			AGRONOMIC TRAITS						DISEASE RATINGS												
Line	Year	Type	Relative Maturity	Growth Habit	Flower Color	Pubescence Color	Podwall Color	Hilum Color	Soybean Cyst Nematode	Root Knot Nematode	Reniform Nematode	Stem Canker	Phytophtora Root Rot	Frogeye Leaf Spot	Sudden Death Syndrome	Charcoal Rot	Phomopsis Longicolla	Metribuzin	Sulfonyl-Urea Tolerant	Salt	Seed Available
SA17-2742 HOLL	2020	Conv/HOLL	2.8	I	P	G	Tan	Buff	R: 3,14	S	.	R	T	S	.	.	.	T	S	Inc	'24
SA19-311H HOLL	2023	Conv/HOLL	3.8	I	P	G	Tan	Imp. Black	R: 3,14	S	S	R	T	S	.	.	.	T	S	INC	'24
SA18-268PR HOLL	2022	Conv/HOLL	3.9	I	W	LT	Tan	Brown	R: 3,14	S	.	R	T	S	.	.	.	T	S	Inc	'24
SA18-350PR HOLL	2022	Conv/HOLL	3.9	I	P	G	Brown	Imp. Black	R: 3,14	S	.	R	T	S	.	.	.	T	S	Inc	'24
SA13-1310	2019	Conv	3.9	I	P	G	Brown	Imp. Black	R: 3,14	S	.	R	T	S	.	.	.	T	S	Inc	'24
SA17-8882 HOLL	2020	Conv/HOLL	4	I	P	T	Brown	Black	R: 3,14	S	.	R	T	S	.	.	.	T	S	Inc	'24
SA19-24408 HOLL	2023	Conv/HOLL	4.0	I	P	G	Tan	Imp. Black	R: 3,14	S	S	R	T	S	.	.	.	T	S	INC	'24
SA19-24265 HOLL	2023	Conv/HOLL	4.0	I	W	T	Tan	Black	R: 3,14	S	S	R	T	S	.	.	.	T	S	INC	'24
S13-10592/ ShowMeSoy 4501C	2022	Conv	4.5	I	W	T	Tan	Black	S	S	S	R	T	S	R	R	S	T	S	Exc	'24
S14-15146GT	2017	RR1/STS	4.6	I	W	T	Tan	Black	S	S	S	R	T	R	MR	R	S	T	T	Inc	'24
S16-14730C	2020	Conv	4.7	I	P	T	Tan	Black	R: 3; MR: 2,5	MR	S	R	T	R	R	R	S	T	S	Inc	'24
S17-2193C	2023	Conv	4.7	I	P	T	Black	Buff	S	S	R	R	T	S	R	R	S	.	S	Exc	'24
S19-19741GT-HOLL	2023	HOLL/RR1	4.7	I	W	G	Tan	Buff	R:1,3,5	R	S	R	T	S	S	S	S	.	.	Exc	'24
S15-17812 HOL	2019	Conv/HOL	4.8	I	W	G	Tan	Buff	R: 2	R	MR	R	R	R	R	S	S	T	S	-	'24
S16-9090C	2023	Conv	5.2	SD	W	G	Tan	Black	R: 3	R	R	S	T	S	.	R	R	.	S	Exc	'24
S19-18135 LL55	2023	Gluphos-inate	5.2	SD	W	T	Tan	Imp. Black	MR: 2	S	S	R	R	S	S	R	R	.	.	Exc	'24
S16-11651/ ShowMeSoy 5301C	2022	Conv	5.3	SD	W	T	Tan	Black	R: 5; MR: 2,3	R	MR	R	R	R	R	R	S	T	S	Exc	'24

Conv = Conventional; HO = High Oleic, HOLL = High Oleic low linolenic, HOL = High Oleic with one low-linolenic gene, 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: Phomopsis longicolla, 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

2024-2025 FOUNDATION SEED PIPELINE

			AGRONOMIC TRAITS						DISEASE RATINGS												
Line	Year	Type	Relative Maturity	Growth Habit	Flower Color	Pubescence Color	Podwall Color	Hilum Color	Soybean Cyst Nematode	Root Knot Nematode	Reniform Nematode	Stem Canker	Phytophtora Root Rot	Frogeye Leaf Spot	Sudden Death Syndrome	Charcoal Rot	Phomopsis Longicolla	Metribuzin	Sulfonyl-Urea Tolerant Soybean	Salt	Seed Available
SA18-12086	2024	Conv	4.3	I	W	G	Tan	Buff	R: 3,14	S	S	R	T	S	.	.	.	T	S	S	'25
SA19-10016	2024	Conv	3.8	I	P	LT	Tan	Black	R: 3,14	S	S	R	R	S	.	.	.	T	T	S	'25
SA19-10772	2024	Conv	4.0	I	P	LT	Tan	Black	R: 3,14	S	S	R	R	S	.	.	.	T	T	T	'25
S18-6013	2024	Conv	5.2	SD	W	T	Tan	Black	R:3,14	R	S	R	T	MR	R	R	S	T	.	Inc	'25
S18PR-190HOLL	2024	Conv/ HOLL	4.7	D	P	G	Tan	Imp. Black	R:2,3,5	MR	R	R	T	R	R	R	S	T	.	Mod. T	'25
S19-19923HOLL	2024	Conv/ HOLL	5	D	W	G	Tan	Buff	R:1,3,5,14	R	R	R	R	MR	R	R	S	T	S	Exc	'25

NOTES

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