



Extension
UNIVERSITY OF WISCONSIN-MADISON

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WISCONSIN Soybean Variety Performance Trials 2019

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2019 Wisconsin Soybean Performance Trials

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The Wisconsin Soybean Performance Trials are conducted each year with the producer's needs in mind. Our objective is to give producers the information to select varieties that will satisfy their specific goals and are most likely to perform best under their management practices.

How the entries were tested

Seed companies, private breeders and University research and Extension specialists voluntarily submitted any number of entries they wished. Most of these entries are commercially available, but experimental varieties were also tested. Several additional commercial and public cultivars were included for comparison.

Tests were conducted using conventional, reduced tillage or no-till practices. All performance trials were planted at 160,000 seeds/A, at row spacings listed in Table 1. Tests were conducted using a randomized complete block design with four replicates. Table 1 also lists the herbicides used for weed control in the conventional and glyphosate tolerant variety trials.

Growing conditions

Wisconsin soybean growers experienced below average growing conditions across the state in 2019. Above normal precipitation in May coupled with cool

temperatures delayed soybean planting. This was followed by normal to above normal precipitation patterns across most of the state through September. Below normal environmental growing conditions for most of 2019 led to a projected statewide average soybean yield of 46.0 bu/A, down 2.0 from 2019. Production is expected to be at 79.6 million bushels, which is well below the record crop of 2016. Source:

November 08, 2019 NASS report, www.nass.usda.gov

Growers experienced below average temperatures in June, July and August across WI. From May 1st through September 1st, the crop had accumulated approximately 50 less GDU's (base 50° F) than the 30-year normal in southern WI, and 150 less GDU's in central and northern WI. Statewide crop conditions were rated at about 66% good to excellent for most of the season.

Below average temperatures slowed crop maturity in September. As of November 12th, 71% of the WI soybean crop had been harvested, which is about 13% less than this time last year and 21% less than the 5-year average. Frequent rainfall and snow events in October delayed harvest throughout the month. The Marshfield and to a lesser extent Fond du Lac sites had Phytophthora Root Rot issues.

How performance was measured

Yield: Plots were weighed and moisture was determined in the field using electronic equipment on

the plot harvester. Yields are reported in bushels (60 pounds/bushel) per acre at 13% moisture content.

Lodging: Lodging scores were based on the average erectness of the main stem of plants at maturity (1 = all plants erect, 2 = slight lodging, 3 = plants lodged at 45 degree angle, 4 = severe lodging, 5 = all plants flat).

Maturity: An entry was considered mature when at least 95% of the pods had turned their mature color. Seven to ten days of drying weather are generally required before soybeans are ready to harvest. Variety performance is presented by brand, and then from earliest to latest based on the company supplied relative maturity of the variety.

Protein and oil

Seed samples from all varieties grown in select locations were collected and analyzed using a near infrared transmittance (NIRT) grain analyzer to determine grain composition. Our goal in providing this information is to increase soybean value transparency so producers can consider the protein and oil content of varieties planted as well as the yield. The factor that influences protein the most and that is under control of a producer is variety selection. Data from the Wisconsin Soybean Variety Tests indicates that proper variety selection can result in 200 more pounds per acre of protein and oil without compromising grain yield.

Phytophthora Root Rot (caused by *Phytophthora sojae*)

There are many races of *P. sojae*. Resistance genes are incorporated into varieties (see Table 10) to provide complete or partial resistance to this organism as follows:

Gene Races

Rps1-a	1, 2, 10, 11, 13-18, 24
Rps1-b	1, 3-9, 13-15, 17, 18, 21, 22
Rps1-c	1-3, 6-11, 13, 15, 17, 21, 23, 24
Rps1-k	1-11, 13-15, 17, 18, 22, 24
Rps3-a	1-5, 8, 9, 11, 13, 14, 16, 18, 23, 25
Rps4	1-4, 10, 12, 16, 18-21, 25
Rps6	1-4, 10, 12, 14-16, 18-21, 25

Selection of soybean varieties with the appropriate resistance gene is paramount for its control. Race 3 is the predominant form of *Phytophthora* in Wisconsin soils. Thus, the long-used Rps1-a gene is not providing protection 95% of the time. Race 4 occurs in 25% of Wisconsin soybean fields. Growers have an excellent chance of controlling race 3 by planting varieties with the Rps1-c or Rps1-k gene. The Rps1-k gene provides complete resistance against most races of *Phytophthora* found in Wisconsin. That being said, race 25 has been found here in Wisconsin, and the Rps1-k gene does not protect against that race. Many varieties express tolerance (partial resistance) to all races of *Phytophthora*, but varieties with this form of resistance are vulnerable in the early seedling phase. Certain fungicides applied to seed can provide a window of protection to tolerant varieties during emergence. Variety tolerance ratings are not reported and can be supplied by seed industry representatives. The information shown in Table 10 is based on information supplied by public breeders or companies that are releasing or marketing the variety.

White Mold (caused by *Sclerotinia sclerotiorum*)

The white mold fungus infects through the flowers during early reproductive growth; symptoms are delayed until early pod formation, and plant death is evident as the crop progresses towards maturity. White mold was a moderate issue in some fields in central and northeast Wisconsin in 2019. White mold in southern Wisconsin was sporadic and likely did not cause much yield reduction. The reaction of soybean varieties to the white mold pathogen is expressed as plant mortality in the presence of high white mold pressure and reduced grain yield when incidence is above 10%. Varieties that express 25% or less plant incidence generally yield well in the presence of white mold. However, for every 10% increase in white mold incidence at the R7 growth stage, one can expect yield to be reduced 2-5 bu/A.

Soybean Cyst Nematode (*Heterodera glycines*)

Soybean cyst nematode (SCN) has gained significant importance as a yield-limiting pathogen in Wisconsin. A major concern is that growers are not aware of its presence on their farms. SCN can cause severe stunting and chlorosis of soybean plants, but these symptoms are not always common; SCN can also cause major yield loss without obvious symptoms. The most common “symptom” caused by SCN is a yield decline over years even though best crop management practices are used. Significant advances have been made to improve varieties for resistance to SCN. High yield performance in the presence of SCN is an excellent strategy to help select varieties that are resistant or tolerant in SCN infested fields. Watch for white mold when SCN resistant varieties are planted for the first time in SCN infested fields. SCN can suppress dense crop canopies required for white mold to develop. Many SCN resistant varieties are also resistant to brown stem rot. Free SCN soil testing for growers is available through a grant from the Wisconsin Soybean

Marketing Board. For testing kits please email: freescntest@mailplus.wisc.edu. For more information on SCN please visit: <https://www.thescncoalition.com/partners/university-partners/university-wisconsin-madison>

Brown Stem Rot (caused by *Phialophora gregata*)

Brown stem rot (BSR) is a major disease of soybeans in Wisconsin. In 2019, very low levels of BSR were detected in a handful of fields in Wisconsin. External symptoms of BSR are not observed until after pod development begins. There are examples where fields have both BSR and sudden death syndrome, which can make diagnoses difficult since foliar symptoms are similar. There are two pathotypes of the pathogen that cause BSR. The defoliating pathotype causes more severe internal stem discoloration and defoliation of leaves, compared with the non-defoliating pathotype that only causes internal stem symptoms. The non-defoliating pathotype may be becoming more prevalent, so be sure to cut soybean stems to identify symptoms if you notice plant that are unthrifty, stunted, or yellowing prematurely. Select resistant varieties if BSR has been a problem in the field.

Sudden Death Syndrome (caused by *Fusarium virguliforme*)

Sudden death syndrome (SDS) incidence was very prevalent in 2019, especially south and south-central Wisconsin. SDS is caused by a fungus. If SCN and SDS are both diagnosed in the same field, damage to the soybean crop can be significant. However, recent studies in Wisconsin suggest that the presence of SCN does not always mean SDS will also be found. The primary symptom of SDS is sudden leaf yellowing and browning during early pod development followed by leaf drop. Leaf symptoms of SDS and BSR can be similar, so be sure to cut soybean stems to rule out browning of the internal stem to

confirm SDS. SDS resistance information is available on tech data sheets from seed companies.

For more information about soybean pests and diseases, visit:
http://fyi.uwex.edu/fieldcroppathology/soybean_pests_diseases/

Soybean viruses and insects

Soybean aphids were localized again in 2019; whereas spider mite infestations were isolated to droughty production areas of WI. Those growers that did not manage aphids or spider mites accrued significant yield loss. The bean leaf beetle was observed in low numbers in the southern counties. Soybean growers and agronomic advisors need to carefully monitor early season bean leaf beetle populations again in 2020. The virus situation in fields also needs to be assessed; virus-infected soybean plants commonly produce discolored seed. Late season bean leaf beetle infestation can cause extensive feeding injury to pods, thus combining with *Bean pod mottle virus* to reduce seed yield and quality. Evidence is increasing that soybean varieties differ in the ability to yield in the presence of insects and associated viruses. In 2019, symptoms of *Tobacco streak virus* (TSV) were readily evident in some soybean fields. To a lesser extent symptoms of *Alfalfa mosaic virus* (AMV) were also observed. Symptoms of *Soybean vein necrosis virus* (SVNV) were very limited in Wisconsin in 2019.

What the results mean

The performance of a variety may vary from year to year, even at the same location. Multiple tests over two or more years more accurately predict the variety performance. When selecting varieties, consider maturity, herbicide tolerance, disease resistance, and grain composition in addition to yield.

Small differences in yield may not be significant. The yield of any two entries may differ because of chance factors (such as differences in fertility, moisture availability and diseases) even though the two entries do not have inherently different yielding abilities. As an aid in determining true differences in yield, the Least Significant Difference (LSD) statistic is used. If the difference between varieties is greater than the tabulated LSD value, then the entries are said to be “significantly different.” The probability of a mean difference being greater than the LSD by chance is 1 out of 10 for the 0.10 LSD value. Data that is not significant is indicated by NS.

TABLE LIST

Table 1. General Information on the 2019 Soybean Trials 6

Table 2. 2019 Southern Region Glyphosate Tolerant Soybean Trial..... 7

Table 3. 2019 Central Region Glyphosate Tolerant Soybean Trial..... 11

Table 4. 2019 North Central Region Glyphosate Tolerant Soybean Trial..... 15

Table 5. 2019 Northern Region Glyphosate Tolerant Soybean Trial 18

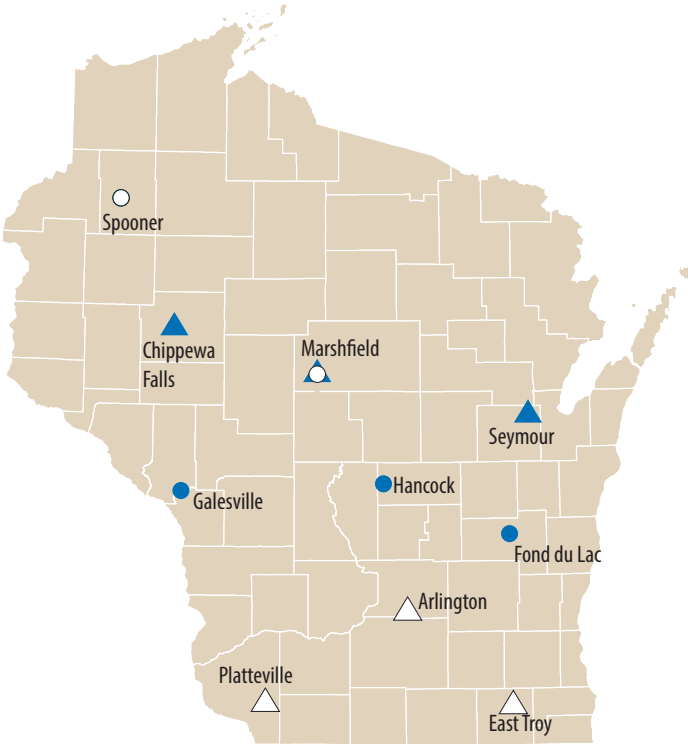
Table 6. 2019 Southern Conventional and Traited Herbicide Soybean Trial 20

Table 7. 2019 North Central Conventional and Traited Herbicide Soybean Trial..... 21

Table 8. 2019 Seed Source for Soybean Entries 22

Table 9. 2019 Temperature and Precipitation Summary..... 23

Table 10. 2019 Characteristics of Soybean Varieties..... 24



2019 Soybean Variety Trial Sites

- Northern Region**
Marshfield
Spooner
- North Central Region**
Chippewa Falls
Marshfield
Seymour
- Central Region**
Fond du Lac
Galesville
Hancock
- Southern Region**
Arlington
East Troy
Platteville

TABLE 1. General Information on the 2019 Soybean Trials

Location: Trial	Cooperators	Row Spacing (in.)	Soil Test Results					Pesticide Applications		Dates		Average Yield (bu/A)		
			Soil Texture	pH	OM (%)	P (ppm)	K (ppm)	Pre-emergent / Pre-plant	Post-emergent	Planting	Harvest	2019	2018	2018-19
Arlington: Glyphosate Tolerant	Mike Bertram	15	Silt Loam	7.1	3.4	58	144	Authority First, Medal II	glyphosate, Select Max, Warrant	13-May	10-Oct	78	84	81
Arlington: Conventional & Traited Herbicide	Mike Bertram	15	Silt Loam	7.1	3.4	58	144	Authority First, Medal II	Pursuit, Select Max	13-May	10-Oct	71	79	75
Chippewa Falls: Glyphosate Tolerant	Rooney Farms, Jerry Clark	15	Sandy Loam	6.4	1.5	50	172	Authority First, Dual II Magnum	glyphosate, Select Max, Warrant	7-May	26-Oct	72	79	76
Chippewa Falls: Conventional & Traited Herbicide	Rooney Farms, Jerry Clark	15	Sandy Loam	6.4	1.5	50	172	Authority First, Dual II Magnum	Pursuit, Select Max	7-May	25-Oct	61	71	66
East Troy: Glyphosate Tolerant	Matt Scurek	15	Silt Loam	6.1	3.5	94	137	Authority First, Dual II Magnum	glyphosate, Select Max, Warrant	8-Jun	25-Nov	63	87	75
Fond du Lac: Glyphosate Tolerant	Ed Montsma	15	Silt Loam	6.7	3.6	16	118	Authority First, Dual II Magnum	glyphosate, Select Max, Warrant	7-Jun	12-Nov	49	71	60
Galesville: Glyphosate Tolerant	Ken Congdon	15	Silt Loam	6.3	3.1	36	189	Authority First, Dual II Magnum	glyphosate, Select Max, Warrant	3-May	17-Oct	70	75	73
Hancock: Glyphosate Tolerant	Paul Sytsma	15	Sand	6.0	0.7	94	101	Dual II Magnum	glyphosate (2), Select Max, Warrant	30-Apr	17-Oct	64	77	71
Marshfield: Glyphosate Tolerant (North Central)	Jason Cavadini	15	Silt Loam	6.7	3.7	31	193	Authority First, Dual II Magnum	glyphosate, Select Max, Warrant	17-May	27-Oct	55	62	59
Marshfield: Glyphosate Tolerant (North)	Jason Cavadini	15	Silt Loam	6.7	3.7	31	193	Authority First, Dual II Magnum	glyphosate, Select Max, Warrant	17-May	27-Oct	43	54	49
Platteville: Glyphosate Tolerant	Schweigert Family Farms	15	Silt Loam	6.5	2.8	26	117	Cloak, Gramoxone, Zidua Pro	glyphosate, Select Max, Warrant	3-Jun	28-Oct	82	78	80
Platteville: Conventional & Traited Herbicide	Schweigert Family Farms	15	Silt Loam	6.5	2.8	26	117	Cloak, Gramoxone, Zidua Pro	Pursuit, Select Max	3-Jun	28-Oct	72	84	78
Seymour: Glyphosate Tolerant	Mike Maass, Kevin Jarek	15	Silt Loam	7.1	2.4	20	128	Authority First, Dual II Magnum	Pursuit, Select Max	15-May	25-Oct	69	62	66
Spooner: Glyphosate Tolerant (Dry Land)	Phil Holman	15	Silt Loam	6.5	2.1	45	126	--	glyphosate (2), Dual II Magnum, Select Max	17-May	25-Oct	46	50	48
Spooner: Glyphosate Tolerant (Irrigated)	Phil Holman	15	Sandy Loam	6.6	1.7	78	115	--	glyphosate, Dual II Magnum, Select Max	17-May	25-Oct	62	62	62

TABLE 2. 2019 Southern Region Glyphosate Tolerant Soybean Trial (1 of 4)

Brand (Entrant)	Entry	Maturity Group	Maturity Date ¹	2019 3-Test Average		2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
				Yield (bu/A)	Lodging (1-5)	Arlington (bu/A)	East Troy (bu/A)	Platteville (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
AgriGold	G1990RX	1.9	20-Sep	*77	1.0	78	*69	84	36.3	17.8	--	--	--	--
AgriGold	G2009RX	2.0	20-Sep	71	1.0	*79	65	69	35.1	18.5	--	--	--	--
AgriGold	G2212RX	2.2	24-Sep	69	1.0	77	57	73	37.0	17.8	--	--	--	--
AgriGold	G2405RX	2.4	29-Sep	*76	1.0	77	61	*90	36.0	18.7	*93	1.5	35.7	19.8
AgriGold	G2505RX	2.5	26-Sep	*76	1.0	*82	57	*88	35.4	17.8	--	--	--	--
AgriGold	G2900RX	2.9	7-Oct	74	1.0	77	62	82	35.2	18.2	86	1.3	36.1	18.8
Asgrow	AG19X0	1.9	20-Sep	*77	1.0	76	66	*88	35.9	18.3	--	--	--	--
Asgrow	AG20X9	2.0	22-Sep	72	1.0	*83	53	80	35.2	18.1	--	--	--	--
Asgrow	AG23X8	2.3	28-Sep	75	1.0	78	65	84	36.7	17.5	--	--	--	--
Asgrow	AG26X0	2.6	29-Sep	69	1.0	71	59	78	36.1	17.4	--	--	--	--
Asgrow	AG26X8	2.6	28-Sep	73	1.0	*80	57	83	35.0	18.9	--	--	--	--
Asgrow	AG27X0	2.7	1-Oct	*77	1.0	74	*68	*90	34.5	18.0	--	--	--	--
Cornelius	CB23X00	2.3	26-Sep	70	1.0	74	60	76	35.0	18.8	*89	1.3	35.0	20.1
Cornelius	CB24X64	2.4	27-Sep	*76	1.0	*81	64	84	36.4	18.5	*94	1.3	36.2	19.7
Cornelius	CB26X78	2.6	7-Oct	*79	1.0	77	*72	*88	35.1	18.4	--	--	--	--
Cornelius	CB27X81	2.7	7-Oct	74	1.0	*79	64	79	35.3	18.2	*88	1.3	36.1	19.0
Credenz	CZ 1850GTLL	1.8	19-Sep	74	1.0	*80	59	84	34.8	18.5	--	--	--	--
Credenz	CZ 1859GTLL	1.8	19-Sep	68	1.0	72	52	79	35.2	18.9	--	--	--	--
Credenz	CZ 2040GTLL	2.0	24-Sep	75	1.0	*82	65	78	35.4	18.8	--	--	--	--
Credenz	CZ 2360GTLL	2.3	24-Sep	75	1.0	*82	63	79	34.7	19.0	--	--	--	--
Credenz	CZ 2550GTLL	2.5	28-Sep	*80	1.0	*80	*70	*91	34.9	18.8	--	--	--	--
Credenz	CZ 2579GTLL	2.5	6-Oct	73	1.0	*81	63	77	35.2	18.7	--	--	--	--
Credenz	CZ 2889GTLL	2.8	7-Oct	71	1.0	75	60	78	34.2	18.6	--	--	--	--

TABLE 2. CONTINUED. 2019 Southern Region Glyphosate Tolerant Soybean Trial (2 of 4)

Brand (Entrant)	Entry	Maturity Group	Maturity Date ¹	2019 3-Test Average		2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
				Yield (bu/A)	Lodging (1-5)	Arlington (bu/A)	East Troy (bu/A)	Platteville (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
DONMARIO	DM 2544E	2.5	26-Sep	*76	1.0	*80	65	83	33.9	19.6	--	--	--	--
DONMARIO	DM 2868E	2.8	29-Sep	*81	1.0	*83	*74	*86	34.1	19.7	--	--	--	--
DONMARIO	DM 28J9X	2.8	7-Oct	74	1.0	*79	65	79	35.0	18.0	--	--	--	--
Dyna-Gro	S21EN70	2.1	22-Sep	*78	1.0	*83	*69	83	36.0	18.3	--	--	--	--
Dyna-Gro	S21XT49	2.1	22-Sep	72	1.0	74	59	83	36.2	17.9	84	1.3	36.0	19.7
Dyna-Gro	S23XT90	2.3	26-Sep	71	1.0	67	65	80	35.5	17.8	--	--	--	--
Dyna-Gro	S27EN89	2.7	29-Sep	*78	1.0	*79	*67	*88	34.1	19.5	--	--	--	--
Dyna-Gro	S28XT58	2.8	3-Oct	*78	1.0	*82	*69	84	35.5	17.8	*88	1.3	36.1	18.7
FS HiSOY	HS 18X70	1.8	20-Sep	*76	1.0	*79	64	*86	36.5	17.8	82	1.2	36.2	19.7
FS HiSOY	HS 19X90	1.9	22-Sep	73	1.0	74	66	78	34.8	18.6	--	--	--	--
FS HiSOY	HS 21X90	2.1	27-Sep	68	1.0	77	47	79	35.0	18.1	--	--	--	--
FS HiSOY	HS 22X90	2.2	25-Sep	71	1.0	70	60	83	35.8	17.6	--	--	--	--
FS HiSOY	HS 23X70	2.3	27-Sep	72	1.0	73	64	77	35.4	18.7	85	1.2	34.9	20.1
FS HiSOY	HS 24X80	2.4	26-Sep	75	1.0	*80	60	*86	36.2	17.4	*88	1.2	34.9	19.4
FS HiSOY	HS 26X90	2.6	7-Oct	72	1.0	74	66	77	35.0	18.7	--	--	--	--
FS HiSOY	HS 27X90	2.7	7-Oct	*77	1.0	*81	63	*85	34.6	19.2	--	--	--	--
FS HiSOY	HS 28X70	2.8	2-Oct	74	1.0	78	65	79	35.1	17.9	*91	1.2	36.0	18.6
Genesis (Legend)	G1940E	1.9	22-Sep	71	1.0	*79	62	74	34.7	19.6	--	--	--	--
Genesis (Renk)	G2840E	2.7	1-Oct	*78	1.0	*81	*68	84	34.7	19.4	--	--	--	--
Golden Harvest	GH1915X Brand	1.9	22-Sep	74	1.0	*79	61	82	34.9	18.9	75	1.2	34.0	20.8
Golden Harvest	GH2041X Brand	2.0	20-Sep	75	1.0	78	62	*85	35.9	18.3	82	1.3	35.3	20.3
Golden Harvest	GH2230X Brand	2.2	21-Sep	*76	1.0	78	62	*87	35.8	18.2	83	1.3	34.8	20.4
Golden Harvest	GH2552X Brand	2.5	28-Sep	74	1.0	69	*73	79	34.7	18.3	--	--	--	--
Golden Harvest	GH2788X Brand	2.7	29-Sep	72	1.0	71	65	80	34.7	18.7	81	1.3	35.0	19.9

TABLE 2. CONTINUED. 2019 Southern Region Glyphosate Tolerant Soybean Trial (3 of 4)

Brand (Entrant)	Entry	Maturity Group	Maturity Date ¹	2019 3-Test Average		2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
				Yield (bu/A)	Lodging (1-5)	Arlington (bu/A)	East Troy (bu/A)	Platteville (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
Legacy Seeds	LS-1838N	1.8	21-Sep	75	1.0	77	62	*86	37.1	17.8	--	--	--	--
Legacy Seeds	LS-2139N	2.1	24-Sep	75	1.0	*80	61	84	36.4	17.8	79	1.2	36.2	19.4
Legend Seeds	LS 20X963N	2.0	20-Sep	*76	1.0	*79	*67	83	36.7	17.6	--	--	--	--
Legend Seeds	LS 21E964N	2.1	25-Sep	*76	1.0	*84	61	83	36.4	17.7	--	--	--	--
Legend Seeds	LS 21X003N	2.1	24-Sep	67	1.0	*79	51	71	34.7	17.9	--	--	--	--
Legend Seeds	LS 23E052N	2.3	28-Sep	*76	1.0	77	65	*86	34.0	18.5	--	--	--	--
Legend Seeds	LS 25X924N	2.5	28-Sep	*76	1.0	75	*67	*86	34.5	18.7	79	1.1	34.9	19.7
Legend Seeds	LS 28X840N	2.8	3-Oct	*76	1.0	76	*67	84	35.1	18.0	*90	1.2	36.0	18.7
LG Seeds	LGS2007RX	2.0	24-Sep	*76	1.0	*79	64	*85	36.4	17.6	82	1.3	36.1	19.9
LG Seeds	C2441R2	2.4	24-Sep	75	1.0	78	58	*87	35.5	18.5	--	--	--	--
LG Seeds	LGS2444RX	2.4	26-Sep	*76	1.0	*81	58	*87	35.9	17.5	80	1.2	35.6	19.3
LG Seeds	C2888RX	2.8	3-Oct	74	1.0	77	*67	79	35.3	18.1	86	1.2	35.8	18.7
NK	S14-U9X Brand	1.4	16-Sep	74	1.0	78	62	83	36.0	18.1	--	--	--	--
NK	S20-J5X Brand	2.0	22-Sep	74	1.0	78	60	84	35.6	18.2	77	1.9	35.5	19.9
NK	S21-W8X Brand	2.1	20-Sep	*79	1.0	78	*68	*90	35.9	18.3	81	1.5	35.3	20.4
NK	S25-V8X Brand	2.5	29-Sep	72	1.0	74	*68	75	34.7	18.5	--	--	--	--
NK	S27-M8X Brand	2.8	28-Sep	66	1.0	71	53	75	35.1	18.5	83	1.2	35.1	19.9
O'Brien	O'SOY2020GT27LL	2.0	20-Sep	73	1.0	78	55	*85	34.5	19.0	--	--	--	--
O'Brien	O'SOY2520GT27LL	2.5	28-Sep	*80	1.0	*84	*70	*87	35.1	18.4	--	--	--	--
P3	2022B	2.2	24-Sep	*76	1.0	75	*71	84	37.2	17.4	--	--	--	--
P3	2023E	2.2	28-Sep	70	1.0	74	57	80	34.4	18.3	--	--	--	--
P3	1924E	2.4	26-Sep	73	1.0	*81	60	78	33.9	19.4	--	--	--	--
P3	2025B	2.5	1-Oct	*77	1.0	*83	66	81	34.9	19.4	--	--	--	--
P3	1928E	2.8	4-Oct	*81	1.0	*83	*73	*87	34.4	19.6	--	--	--	--
P3	2028B	2.8	2-Oct	75	1.0	76	*67	81	34.6	19.4	--	--	--	--

TABLE 2. CONTINUED. 2019 Southern Region Glyphosate Tolerant Soybean Trial (4 of 4)

Brand (Entrant)	Entry	Maturity Group	Maturity Date ¹	2019 3-Test Average		2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
				Yield (bu/A)	Lodging (1-5)	Arlington (bu/A)	East Troy (bu/A)	Platteville (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
Power Plus	25G8	2.5	29-Sep	74	1.0	77	64	81	35.0	17.7	*90	1.0	35.0	19.4
Renk	RS248NX	2.4	26-Sep	*77	1.0	*79	65	*87	35.8	18.6	86	1.2	35.5	20.0
Renk	RS280NX	2.8	7-Oct	*78	1.0	*82	65	*88	33.9	19.1	--	--	--	--
Stine	19EA33	1.9	24-Sep	74	1.0	*81	63	80	36.2	18.3	--	--	--	--
Tracy	1949GTLL	1.9	22-Sep	75	1.0	*81	64	80	35.3	18.8	--	--	--	--
Tracy	2141GTLL	2.1	22-Sep	68	1.0	74	57	74	34.5	18.9	--	--	--	--
Tracy	2649GTLL	2.6	29-Sep	*76	1.0	*79	63	*86	34.4	19.0	--	--	--	--
Tracy	2841GTLL	2.8	1-Oct	75	1.0	78	63	84	34.9	19.2	--	--	--	--
Mean			26-Sep	74	1.0	78	63	82	35.3	18.4	83	1.4	35.2	19.9
LSD (0.10)			--	5	NS	5	7	6	0.6	0.3	7	0.5	0.5	0.3

* Yields preceded by an asterisk are not significantly different (0.10 level) than the highest yielding cultivar.

¹ Maturity date, protein, and oil determined at the Arlington site.

Results that are shaded provide the best estimate of relative variety performance.

TABLE 3. 2019 Central Region Glyphosate Tolerant Soybean Trial (1 of 4)

Brand (Entrant)	Entry	Maturity Group	Maturity Date ¹	2019 3-Test Average		2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
				Yield (bu/A)	Lodging (1-5)	Fond du Lac (bu/A)	Galesville (bu/A)	Hancock (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
AgriGold	G1502RX	1.5	20-Sep	*64	1.0	46	*79	66	34.3	18.9	73	2.3	33.6	20.4
AgriGold	G1710RX	1.7	24-Sep	60	1.0	48	67	66	36.8	19.0	--	--	--	--
AgriGold	G1850RX	1.8	24-Sep	*67	1.0	*59	71	*72	35.5	18.9	*80	1.7	34.0	20.8
AgriGold	G1990RX	1.9	27-Sep	*69	1.0	*57	*78	*71	35.6	18.8	--	--	--	--
AgriGold	G2009RX	2.0	27-Sep	60	1.0	42	73	*67	34.3	19.1	--	--	--	--
AgriGold	G2212RX	2.2	24-Sep	57	1.0	49	65	58	34.3	19.1	--	--	--	--
Asgrow	AG14X0	1.4	20-Sep	59	1.0	49	63	66	34.1	20.1	--	--	--	--
Asgrow	AG19X0	1.9	24-Sep	*63	1.0	52	64	*73	37.0	18.3	--	--	--	--
Asgrow	AG20X9	2.0	24-Sep	61	1.0	*53	69	63	34.5	18.9	73	1.9	31.5	20.8
BioGene	BG6200LLGT27	2.0	24-Sep	59	1.0	49	66	63	34.9	19.1	--	--	--	--
Credenz	CZ 0729GTLL	0.7	17-Sep	56	1.0	50	63	55	35.6	18.1	--	--	--	--
Credenz	CZ 1139GTLL	1.1	20-Sep	57	1.0	39	*74	58	34.4	19.1	--	--	--	--
Credenz	CZ 1549GTLL	1.5	30-Sep	59	1.0	52	63	64	32.5	20.0	--	--	--	--
Credenz	CZ 1859GTLL	1.8	24-Sep	*64	1.0	51	*74	*67	34.2	19.7	--	--	--	--
Credenz	CZ 2579GTLL	2.5	8-Oct	*68	1.0	*58	*81	65	33.7	19.6	--	--	--	--
Dyna-Gro	S18XT38	1.8	27-Sep	*65	1.0	*54	70	*69	35.3	19.2	73	1.5	33.9	20.7
Dyna-Gro	S19EN59	1.9	27-Sep	60	1.0	43	71	*67	34.4	19.8	--	--	--	--
Dyna-Gro	S19XT30	1.9	24-Sep	58	1.0	43	73	60	35.1	19.0	--	--	--	--
Dyna-Gro	S21XT49	2.1	27-Sep	61	1.0	50	68	65	34.9	18.9	*79	1.3	34.2	20.5
Dyna-Gro	S23XT90	2.3	20-Sep	*63	1.0	*54	*74	61	36.2	17.8	--	--	--	--
FS HiSOY	HS 18X70	1.8	24-Sep	60	1.0	48	63	*69	35.6	19.2	77	1.6	34.4	20.5
FS HiSOY	HS 19X90	1.9	24-Sep	61	1.0	45	70	*68	34.6	19.1	--	--	--	--
FS HiSOY	HS 21X90	2.1	30-Sep	56	1.0	41	69	58	33.8	18.9	--	--	--	--

TABLE 3. CONTINUED. 2019 Central Region Glyphosate Tolerant Soybean Trial (2 of 4)

Brand (Entrant)	Entry	Maturity Group	Maturity Date ¹	2019 3-Test Average		2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
				Yield (bu/A)	Lodging (1-5)	Fond du Lac (bu/A)	Galesville (bu/A)	Hancock (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
FS HiSOY	HS 22X90	2.2	27-Sep	62	1.0	49	*76	60	33.4	19.2	--	--	--	--
FS HiSOY	HS 23X70	2.3	30-Sep	*66	1.0	*56	*75	65	33.8	19.8	*78	1.3	32.6	21.3
FS HiSOY	HS 24X80	2.4	27-Sep	58	1.0	43	67	63	35.0	18.1	*82	1.3	32.6	20.7
Genesis (Legend)	G1441E	1.4	20-Sep	57	1.0	42	66	61	34.8	18.6	--	--	--	--
Genesis (Legend)	G1741E	1.7	24-Sep	62	1.0	52	67	*67	35.8	18.4	--	--	--	--
Genesis (Legend)	G2080GL	2.0	24-Sep	61	1.0	47	71	65	34.4	19.3	--	--	--	--
Genesis (Renk)	G2140E	2.1	30-Sep	59	1.0	45	64	*68	35.3	19.5	--	--	--	--
Genesis (Renk)	G2340E	2.3	24-Sep	55	1.0	44	70	50	32.8	19.0	--	--	--	--
Golden Harvest	GH1538X Brand	1.5	20-Sep	62	1.0	45	72	*69	34.0	19.7	--	--	--	--
Golden Harvest	GH1619X Brand	1.6	20-Sep	55	1.0	39	66	61	33.0	20.1	72	2.0	30.2	22.4
Golden Harvest	GH1915X Brand	1.9	24-Sep	58	1.0	47	65	61	33.5	19.8	75	2.0	32.6	21.5
Golden Harvest	GH2041X Brand	2.0	30-Sep	59	1.0	49	65	63	36.1	18.8	*78	1.9	32.9	21.1
Golden Harvest	GH2230X Brand	2.2	30-Sep	60	1.0	48	70	63	32.8	19.6	*79	1.9	31.9	21.4
Golden Harvest	GH2552X Brand	2.5	8-Oct	57	1.0	50	66	55	32.7	19.9	--	--	--	--
Jung	1203R2X	2.0	24-Sep	*68	1.0	*58	73	*72	34.1	19.4	77	1.4	33.2	20.9
Jung	1226R2X	2.2	30-Sep	59	1.0	*54	67	56	34.2	19.9	--	--	--	--
Jung	1243R2X	2.4	8-Oct	57	1.0	50	71	53	32.7	19.9	72	1.7	33.1	20.9
Legacy Seeds	LS-1439N	1.4	20-Sep	58	1.0	46	69	59	33.9	18.8	--	--	--	--
Legacy Seeds	LS-1510N	1.5	24-Sep	61	1.0	44	*79	61	33.3	20.0	--	--	--	--
Legacy Seeds	LS-1810N	1.8	24-Sep	52	1.0	40	64	52	31.9	20.5	--	--	--	--
Legacy Seeds	LS-1820N	1.8	24-Sep	56	1.0	42	67	60	35.0	19.1	--	--	--	--
Legacy Seeds	LS-1838N	1.8	27-Sep	59	1.0	43	69	65	34.3	19.4	76	1.8	33.2	21.0
Legacy Seeds	LS-2139N	2.1	24-Sep	62	1.0	*53	71	64	34.9	19.3	77	1.3	33.2	20.8

TABLE 3. CONTINUED. 2019 Central Region Glyphosate Tolerant Soybean Trial (3 of 4)

Brand (Entrant)	Entry	Maturity Group	Maturity Date ¹	2019 3-Test Average		2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
				Yield (bu/A)	Lodging (1-5)	Fond du Lac (bu/A)	Galesville (bu/A)	Hancock (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
Legend Seeds	LS 18LGT953N	1.8	24-Sep	*67	1.0	*55	*76	*71	34.2	19.6	--	--	--	--
Legend Seeds	LS 18X860N	1.8	24-Sep	*64	1.0	51	*74	*67	35.1	19.1	*84	1.5	34.7	20.5
LG Seeds	C1838RX	1.8	24-Sep	*63	1.0	*58	67	63	35.6	19.1	*84	1.3	34.3	20.7
LG Seeds	LGS2007RX	2.0	27-Sep	*64	1.0	*57	73	64	34.5	19.3	*78	1.7	33.7	20.5
LG Seeds	C2441R2	2.4	27-Sep	*63	1.0	*61	66	63	32.3	20.2	--	--	--	--
LG Seeds	LGS2444RX	2.4	30-Sep	62	1.0	*54	72	60	34.6	18.5	--	--	--	--
NK	S14-U9X Brand	1.4	20-Sep	*67	1.0	*58	*76	*67	35.7	18.5	--	--	--	--
NK	S18-H3X Brand	1.8	24-Sep	*65	1.0	*57	*76	63	35.4	18.9	76	1.8	33.1	21.1
NK	S20-J5X Brand	2.0	30-Sep	60	1.0	49	63	*68	36.0	19.1	73	1.9	33.2	21.1
NK	S21-W8X Brand	2.1	24-Sep	*65	1.0	*53	71	*71	35.7	18.8	76	2.2	32.2	21.4
NK	S25-V8X Brand	2.5	11-Oct	61	1.0	50	73	59	33.4	19.1	--	--	--	--
O'Brien	O'SOY1520GT27LL	1.5	24-Sep	*63	1.0	46	*75	*67	34.2	19.9	--	--	--	--
O'Brien	O'SOY2020GT27LL	2.0	30-Sep	59	1.0	46	66	65	33.1	19.8	--	--	--	--
ProHarvest	2084CR2Y	2.0	20-Sep	*64	1.0	*54	69	*68	35.7	18.9	--	--	--	--
ProHarvest	2152CR2Y	2.1	30-Sep	48	1.0	33	63	47	33.4	19.3	70	1.7	33.5	20.3
Renk	RS200NX	2.0	27-Sep	55	1.0	37	67	60	34.0	18.8	--	--	--	--
Renk	RS219NX	2.1	24-Sep	*67	1.0	*60	*74	*67	35.0	19.2	*81	1.5	34.6	20.2
Renk	RS248NX	2.4	30-Sep	60	1.0	48	68	65	35.1	19.3	*81	1.7	32.9	20.8
Renk	0-26GL	2.6	8-Oct	*65	1.0	*53	*75	*68	34.0	20.1	--	--	--	--
Stine	17GA02	1.7	24-Sep	58	1.0	46	63	65	34.4	19.1	--	--	--	--
Stine	19BA23	1.9	30-Sep	*64	1.0	*54	67	*71	33.9	19.6	*80	1.2	32.9	20.7
Stine	19EA33	1.9	27-Sep	*63	1.0	51	64	*73	35.8	18.7	--	--	--	--
Stine	19GA02	1.9	24-Sep	*64	1.0	*53	70	*69	35.2	19.4	--	--	--	--

TABLE 3. CONTINUED. 2019 Central Region Glyphosate Tolerant Soybean Trial (4 of 4)

Brand (Entrant)	Entry	Maturity Group	Maturity Date ¹	2019 3-Test Average		2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
				Yield (bu/A)	Lodging (1-5)	Fond du Lac (bu/A)	Galesville (bu/A)	Hancock (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
Tracy	1449GTLL	1.4	20-Sep	60	1.0	47	70	63	35.6	18.9	--	--	--	--
Tracy	1641GTLL	1.6	27-Sep	59	1.0	39	*79	59	34.5	19.7	--	--	--	--
Tracy	2141GTLL	2.1	27-Sep	60	1.0	47	70	63	33.2	20.1	--	--	--	--
Mean			25-Sep	61	1.0	49	70	64	34.5	19.2	74	1.8	32.9	21.1
LSD (0.10)			--	6	NS	8	7	6	1.4	0.6	6	0.7	1.0	0.6

* Yields preceded by an asterisk are not significantly different (0.10 level) than the highest yielding cultivar.

¹ Maturity date, protein, and oil determined at the Hancock site.

Results that are shaded provide the best estimate of relative variety performance.

TABLE 4. 2019 North Central Region Glyphosate Tolerant Soybean Trial (1 of 3)

Brand (Entrant)	Entry	Maturity Group	Maturity Date ¹	2019 3-Test Average		2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
				Yield (bu/A)	Lodging (1-5)	Chippewa Falls (bu/A)	Marshfield (bu/A)	Seymour (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
Asgrow	AG11X8	1.1	29-Sep	*69	1.3	74	*67	68	34.3	17.5	68	1.8	35.6	19.2
Asgrow	AG14X0	1.4	29-Sep	66	1.0	65	*63	67	33.8	18.7	--	--	--	--
Asgrow	AG19X0	1.9	29-Sep	63	1.1	66	56	68	34.8	17.8	--	--	--	--
BioGene	BG9130E3	1.3	4-Oct	68	1.1	*77	*63	67	32.2	18.4	--	--	--	--
BioGene	BG6160LLGT27	1.6	8-Oct	62	1.0	*79	44	67	34.2	18.5	--	--	--	--
Credenz	CZ 0729GTLL	0.7	23-Sep	59	1.0	64	52	63	34.0	17.8	--	--	--	--
Credenz	CZ 1139GTLL	1.1	29-Sep	61	1.0	*77	38	65	32.6	18.5	--	--	--	--
Credenz	CZ 1470GTLL	1.4	4-Oct	66	1.1	70	55	*72	33.5	18.5	--	--	--	--
Credenz	CZ 1549GTLL	1.5	8-Oct	66	1.1	69	57	*72	31.6	19.3	--	--	--	--
Credenz	CZ 1660GTLL	1.6	8-Oct	*69	1.0	*78	50	*78	33.9	19.2	--	--	--	--
Credenz	CZ 1859GTLL	1.8	29-Sep	68	1.1	75	58	71	32.7	18.8	--	--	--	--
Dyna-Gro	S13XT89	1.4	29-Sep	*69	1.0	74	58	*74	32.9	17.7	72	1.9	33.7	19.7
Dyna-Gro	S18XT38	1.8	14-Oct	64	1.0	67	55	70	34.1	18.9	--	--	--	--
Federal Hybrids	F0990N R2X	0.9	20-Sep	59	1.3	61	51	65	34.3	17.6	58	2.3	38.1	19.0
Federal Hybrids	F1490N R2X	1.4	29-Sep	62	1.1	68	47	70	33.0	17.9	73	1.7	33.8	19.8
Federal Hybrids	F1690N R2X	1.6	4-Oct	67	1.0	75	55	71	34.3	18.6	70	1.5	34.7	20.4
FS HiSOY	HS 14X90	1.4	29-Sep	67	1.0	72	*61	69	32.7	18.7	--	--	--	--
FS HiSOY	HS 16X80	1.6	4-Oct	61	1.0	71	47	65	34.0	18.9	70	1.4	35.1	20.2
FS HiSOY	HS 18X70	1.8	8-Oct	*69	1.1	72	*61	*72	34.1	18.1	*75	1.5	34.6	20.0
Genesis (Legend)	G1141E	1.1	29-Sep	57	1.1	67	43	61	33.7	17.9	--	--	--	--
Genesis (Legend)	G1441E	1.4	4-Oct	62	1.0	70	50	68	33.8	17.7	--	--	--	--

TABLE 4. CONTINUED. 2019 North Central Region Glyphosate Tolerant Soybean Trial (2 of 3)

Brand (Entrant)	Entry	Maturity Group	Maturity Date ¹	2019 3-Test Average		2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
				Yield (bu/A)	Lodging (1-5)	Chippewa Falls (bu/A)	Marshfield (bu/A)	Seymour (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
Genesis (Renk)	G1340E	1.3	8-Oct	*69	1.2	74	60	*73	32.6	18.4	--	--	--	--
Genesis (Renk)	G1680GL	1.6	8-Oct	68	1.0	75	60	69	34.2	18.6	--	--	--	--
Genesis (Renk)	G1840E	1.8	14-Oct	57	1.0	64	43	64	32.9	18.5	--	--	--	--
Golden Harvest	GH1538X Brand	1.5	29-Sep	65	1.2	69	60	65	34.1	18.4	--	--	--	--
Golden Harvest	GH1619X Brand	1.6	29-Sep	59	1.0	67	44	64	32.0	18.6	--	--	--	--
Golden Harvest	GH1915X Brand	1.9	8-Oct	*71	1.1	*77	*66	71	32.4	18.5	--	--	--	--
Golden Harvest	GH2041X Brand	2.0	8-Oct	*72	1.1	*76	*69	*72	33.7	18.1	--	--	--	--
Jung	1154R2X	1.5	29-Sep	65	1.3	69	60	67	34.3	17.9	69	2.0	34.2	20.1
Jung	1161R2X	1.6	14-Oct	62	1.0	74	39	70	34.2	18.4	--	--	--	--
Jung	1173R2X	1.7	29-Sep	61	1.1	69	47	66	32.4	19.0	70	1.7	30.9	21.1
Jung	1193R2X	1.9	8-Oct	58	1.0	70	33	66	33.3	18.9	--	--	--	--
Legacy Seeds	LS-1439N	1.4	29-Sep	*69	1.4	*76	*63	69	33.1	17.8	69	1.4	33.8	19.8
Legacy Seeds	LS-1510N	1.5	8-Oct	*73	1.0	*84	*65	68	33.6	19.0	--	--	--	--
Legacy Seeds	LS-1810N	1.8	8-Oct	62	1.0	68	56	61	32.3	19.4	--	--	--	--
Legacy Seeds	LS-1820N	1.8	14-Oct	66	1.0	71	57	71	33.0	18.1	--	--	--	--
Legacy Seeds	LS-1838N	1.8	14-Oct	62	1.0	62	59	67	34.9	18.6	71	1.7	34.2	20.1
Legacy Seeds	LS-2139N	2.1	14-Oct	62	1.1	65	53	68	34.7	18.1	*74	1.6	34.7	19.8
LG Seeds	C1414RX	1.4	4-Oct	65	1.1	67	60	67	33.3	18.7	70	1.8	34.3	20.4
LG Seeds	LGS1635RX	1.6	14-Oct	64	1.0	73	44	*73	34.9	18.4	70	1.4	34.7	20.2
LG Seeds	C1838RX	1.8	8-Oct	64	1.0	61	*67	65	34.3	18.0	*79	1.7	34.2	19.9
LG Seeds	C1870R2	1.8	8-Oct	*70	1.1	75	60	*76	32.6	18.7	--	--	--	--
NK	S07-Q4X Brand	0.7	20-Sep	60	1.3	74	48	59	34.4	18.0	--	--	--	--
NK	S09-D4X Brand	0.9	29-Sep	66	1.1	*81	54	61	32.5	18.0	--	--	--	--
NK	S10-H7X Brand	1.0	29-Sep	64	1.3	73	54	66	34.4	17.6	60	1.4	35.0	19.5

TABLE 4. CONTINUED. 2019 North Central Region Glyphosate Tolerant Soybean Trial (3 of 3)

Brand (Entrant)	Entry	Maturity Group	Maturity Date ¹	2019 3-Test Average		2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
				Yield (bu/A)	Lodging (1-5)	Chippewa Falls (bu/A)	Marshfield (bu/A)	Seymour (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
NK	S14-U9X Brand	1.4	29-Sep	*71	1.0	71	*67	*74	34.1	17.9	--	--	--	--
NK	S18-H3X Brand	1.8	4-Oct	*70	1.2	70	*67	*74	33.6	18.1	72	1.5	34.1	20.2
O'Brien	O'SOY1520GT27LL	1.5	8-Oct	*69	1.0	*82	60	68	34.1	18.7	--	--	--	--
ProHarvest	1468GL	1.4	29-Sep	64	1.6	69	52	71	34.8	18.9	--	--	--	--
ProHarvest	1485CR2Y	1.4	4-Oct	59	1.1	75	26	70	33.9	18.6	--	--	--	--
ProHarvest	1638X	1.6	4-Oct	67	1.0	74	59	67	34.7	18.2	66	1.3	34.8	20.2
ProHarvest	2084CR2Y	2.0	8-Oct	*72	1.5	71	*72	*73	33.8	18.5	--	--	--	--
ProHarvest	2138X	2.1	8-Oct	68	1.0	75	60	70	33.8	18.3	--	--	--	--
Renk	RS149NX	1.4	29-Sep	66	1.1	74	57	67	32.9	18.1	69	1.7	34.1	19.6
Renk	RS153NR2	1.5	4-Oct	68	1.2	66	*66	70	33.4	19.0	69	1.8	33.9	20.5
Renk	RS175NR2	1.7	8-Oct	*69	1.0	73	*62	*72	32.9	18.9	--	--	--	--
Renk	0-18GL	1.8	14-Oct	65	1.0	74	53	66	32.4	19.3	--	--	--	--
Stine	15GA02	1.4	4-Oct	62	1.0	75	46	64	33.0	18.4	--	--	--	--
Stine	19BA23	1.9	14-Oct	*77	1.1	*84	*73	*74	33.0	19.1	*81	1.4	32.9	20.8
Stine	19EA33	1.9	14-Oct	66	1.0	71	55	71	34.2	18.5	--	--	--	--
Tracy	0900GT	0.9	29-Sep	63	1.0	73	50	66	35.1	17.7	60	1.7	34.1	20.2
Tracy	1641GTLL	1.6	8-Oct	*70	1.0	*82	56	*72	33.7	18.8	--	--	--	--
Mean			4-Oct	65	1.1	72	55	69	33.6	18.4	68	1.7	34.1	20.2
LSD (0.10)			--	8	NS	8	12	6	0.5	0.5	7	0.5	0.9	0.4

* Yields preceded by an asterisk are not significantly different (0.10 level) than the highest yielding cultivar.

¹ Maturity date, protein, and oil determined at the Marshfield site.

Results that are shaded provide the best estimate of relative variety performance.

TABLE 5. 2019 Northern Region Glyphosate Tolerant Soybean Trial (1 of 2)

Brand (Entrant)	Entry	Maturity Group	2019 3-Test Average			2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
			Maturity Date	Yield (bu/A)	Lodging (1-5)	Marshfield (bu/A)	Spooner Dryland (bu/A)	Spooner Irrigated (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
Asgrow	AG08X0	0.8	22-Sep	47	1.0	35	45	61	32.9	17.6	--	--	--	--
Asgrow	AG10X9	1.0	25-Sep	*56	1.0	55	*47	*66	33.8	17.5	--	--	--	--
Asgrow	AG11X8	1.1	27-Sep	*60	1.0	*61	*52	*68	33.8	17.5	*59	1.0	35.3	19.4
BioGene	BG6080LLGT27	0.8	24-Sep	45	1.0	19	*50	*66	34.8	17.8	--	--	--	--
Federal Hybrids	F0990N R2X	0.9	21-Sep	49	1.0	40	45	61	33.5	18.1	49	1.3	36.8	19.2
Genesis (Legend)	G1041E	1.0	26-Sep	46	1.0	36	44	58	34.7	17.4	--	--	--	--
Jung	1071R2X	0.7	20-Sep	*50	1.0	51	38	60	34.6	18.0	50	1.2	35.4	20.3
Jung	1103R2X	1.0	23-Sep	45	1.0	28	*48	58	34.4	18.1	--	--	--	--
Jung	1122R2X	1.2	25-Sep	*57	1.0	58	*49	64	34.0	18.0	56	1.5	36.1	19.5
Legacy Seeds	LS-0738N	0.7	19-Sep	47	1.0	34	44	61	34.6	17.8	51	1.3	35.8	19.3
Legacy Seeds	LS-1019	1.0	26-Sep	*53	1.0	45	*51	64	32.8	18.3	--	--	--	--
Legacy Seeds	LS-1039N	1.0	23-Sep	*57	1.0	57	45	*70	33.7	18.3	*59	1.1	35.3	20.3
Legacy Seeds	LS-1320N	1.3	29-Sep	*53	1.0	48	*47	*65	33.0	18.3	--	--	--	--
Legacy Seeds	LS-1439N	1.4	28-Sep	*56	1.0	58	*48	62	33.1	17.8	--	--	--	--
LG Seeds	LGS0735RX	0.7	23-Sep	41	1.0	28	36	60	33.0	18.5	--	--	--	--
LG Seeds	C1000RX	1.0	30-Sep	43	1.0	26	43	59	34.6	18.1	56	1.2	34.9	20.1
LG Seeds	LGS1118RX	1.1	27-Sep	40	1.0	27	38	55	32.4	18.3	--	--	--	--
LG Seeds	C1414RX	1.4	30-Sep	*58	1.0	*63	*49	63	33.0	18.8	--	--	--	--
NK	S02-F9X Brand	0.2	14-Sep	41	1.0	25	45	52	32.8	18.6	--	--	--	--
NK	S05-N5X Brand	0.5	17-Sep	49	1.0	55	37	57	33.3	18.3	--	--	--	--
NK	S07-Q4X Brand	0.7	20-Sep	*51	1.0	50	41	62	34.3	18.1	54	1.0	36.8	19.6
NK	S09-D4X Brand	0.9	23-Sep	*56	1.0	52	*49	*68	32.3	18.2	--	--	--	--
NK	S10-H7X Brand	1.0	26-Sep	48	1.0	38	46	60	35.1	17.4	55	1.1	34.9	19.5

TABLE 5. CONTINUED. 2019 Northern Region Glyphosate Tolerant Soybean Trial (2 of 2)

Brand (Entrant)	Entry	Maturity Group	2019 3-Test Average			2019 Yields			2019 Composition ¹		2018 3-Test Average		2018 Composition ¹	
			Maturity Date	Yield (bu/A)	Lodging (1-5)	Marshfield (bu/A)	Spooner Dryland (bu/A)	Spooner Irrigated (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)
ProHarvest	0871CR2Y	0.8	22-Sep	*57	1.0	55	*47	*68	33.7	18.0	--	--	--	--
ProHarvest	0985CR2Y	0.9	20-Sep	*60	1.0	*68	45	*67	34.0	18.1	*60	1.0	34.3	20.3
ProHarvest	1359E	1.3	30-Sep	45	1.0	31	44	58	32.6	18.4	--	--	--	--
ProHarvest	1468GL	1.4	29-Sep	*52	1.0	36	*54	*65	34.2	18.5	--	--	--	--
ProHarvest	1484CR2Y	1.4	20-Sep	*51	1.0	47	*47	60	33.7	18.1	*59	1.2	35.2	20.0
Renk	RS089NX	0.8	22-Sep	47	1.0	39	42	59	34.5	18.0	48	1.3	37.1	19.0
Stine	11GA01	1.1	29-Sep	*50	1.0	39	46	64	34.3	19.0	--	--	--	--
Stine	13EA12	1.3	3-Oct	*51	1.0	43	*49	60	33.8	17.4	--	--	--	--
Mean			24-Sep	50	1.0	43	46	62	33.7	18.1	55	1.2	34.8	19.9
LSD (0.10)			3	10	NS	9	7	5	0.5	0.2	4	NS	0.8	0.4

* Yields preceded by an asterisk are not significantly different (0.10 level) than the highest yielding cultivar.

¹ Protein and oil determined at the Marshfield site.

Results that are shaded provide the best estimate of relative variety performance.

TABLE 6. 2019 Southern Conventional and Traited Herbicide Soybean Trial

Brand (Entrant)	Entry	Herbicide Trait ¹	Maturity Group	Maturity Date ²	2019 2-Test Average		2019 Yields		2019 Composition ²		2018 2-Test Average		2018 Composition ²		
					Yield (bu/A)	Lodging (1-5)	Arlington (bu/A)	Platteville (bu/A)	Protein (%)	Oil (%)	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)	
Legend Seeds	LS 1380 HP	CN	1.3	18-Sep	67	1.1	64	69	38.6	17.6	--	--	--	--	
Legend Seeds	LS 2180 HP	CN	2.1	27-Sep	66	1.3	64	69	39.0	17.1	77	1.8	39.0	18.4	
Legend Seeds	LS 2580N HP	CN	2.5	29-Sep	73	1.1	68	*77	37.5	18.0	83	2.1	37.2	19.5	
Legend Seeds	LS 2880N HP	CN	2.8	6-Oct	62	1.8	61	63	37.2	18.3	75	2.4	37.7	19.0	
LG Seeds	LGS2010	CN	2.0	26-Sep	*78	1.0	*78	*77	34.1	18.8	--	--	--	--	
LG Seeds	C2300	CN	2.3	29-Sep	*78	1.1	*80	*76	35.4	17.1	--	--	--	--	
LG Seeds	LGS2765	CN	2.7	25-Sep	73	1.1	73	74	34.8	18.5	--	--	--	--	
PROSeeds	Candor	CN	1.9	28-Sep	69	1.1	68	71	39.3	17.1	--	--	--	--	
PROSeeds	SVX-4005	CN	1.9	24-Sep	*75	1.0	74	*76	36.8	18.4	--	--	--	--	
PROSeeds	SVX-4006	CN	1.9	28-Sep	70	1.0	66	74	37.2	17.8	--	--	--	--	
PROSeeds	SVX-4009	CN	2.3	4-Oct	70	1.0	69	71	36.1	18.0	--	--	--	--	
Public	MN1410	CN	1.4	16-Sep	65	1.4	63	67	37.1	18.1	70	2.8	37.0	20.2	
Public	Dane	CN	1.5	24-Sep	59	1.0	59	59	37.8	18.4	60	1.5	36.5	21.0	
SB&B	SB90	CN	1.1	14-Sep	67	1.0	67	68	37.2	18.1	--	--	--	--	
SB&B	SB1270	CN	1.2	16-Sep	63	1.3	59	66	38.3	17.3	--	--	--	--	
SB&B	SB19	CN	1.3	20-Sep	68	1.3	68	68	37.0	17.5	--	--	--	--	
SB&B	SB165	CN	1.6	26-Sep	66	1.0	65	67	39.4	17.0	71	1.1	38.5	18.9	
Viking	2018N	CN	2.0	22-Sep	*78	1.0	*79	*76	33.6	18.8	*90	1.6	34.2	20.3	
Viking	0.2155N	CN	2.1	29-Sep	*79	1.5	*78	*79	35.9	16.8	*85	3.0	35.7	18.6	
Viking	2418N	CN	2.4	26-Sep	*79	1.0	*78	*79	35.9	17.0	* Yields preceded by an asterisk are not significantly different (0.10 level) than the highest yielding cultivar.				
Viking	0.2188AT12N	CN	2.5	3-Oct	*77	1.6	*78	*76	35.7	17.8					
Viking	0.2518N	CN	2.5	28-Sep	*75	1.0	*75	*76	37.0	17.8					
Check	11700	RR2X	1.8	22-Sep	*76	1.0	*77	*76	36.7	18.0	--	--	--	--	
Check	11536	RR2X	2.4	28-Sep	*78	1.3	*79	*77	36.0	18.5	--	--	--	--	
Check	11481	GT	2.5	29-Sep	*75	1.0	*76	*75	35.6	17.3	--	--	--	--	
Check	11478	RR2X	2.8	3-Oct	*76	1.0	*78	73	35.1	17.7	--	--	--	--	
1 Herbicide Trait : CN = conventional, GT = glyphosate, RR2X = glyphosate/dicamba				Mean	25-Sep	72	1.1	71	72	36.7	17.8	82	2.0	36.1	19.6
2 Maturity date, protein, and oil determined at the Arlington site. Results that are shaded are the				LSD (0.10)	--	4	NS	5	4	0.6	0.4	8	0.9	0.5	0.4

¹ Herbicide Trait : CN = conventional, GT = glyphosate, RR2X = glyphosate/dicamba ² Maturity date, protein, and oil determined at the Arlington site. **Results that are shaded provide the best estimate of relative variety performance.**

TABLE 7. 2019 North Central Conventional and Traited Herbicide Soybean Trial

Brand (Entrant)	Entry	Herbicide Trait ¹	Maturity Group	2019 Chippewa Falls					2018 Chippewa Falls				
				Maturity Date	Yield (bu/A)	Lodging (1-5)	Protein (%)	Oil (%)	Yield (bu/A)	WM ² (%)	Lodging (1-5)	Protein (%)	Oil (%)
PROSeeds	Genesis	CN	0.9	17-Sep	60	3.0	36.7	18.3	--	--	--	--	--
PROSeeds	Emperor	CN	1.0	23-Sep	*63	1.8	38.6	17.5	--	--	--	--	17.0
PROSeeds	Skyline	CN	1.1	16-Sep	56	1.8	38.8	18.1	--	--	--	--	--
PROSeeds	SVX-4003	CN	1.4	19-Sep	58	4.5	37.1	18.8	--	--	--	--	18.9
PROSeeds	Azalea	CN	1.5	22-Sep	*66	2.8	36.2	18.5	--	--	--	--	--
PROSeeds	Laurentian	CN	1.5	19-Sep	55	1.8	37.2	17.3	--	--	--	--	--
PROSeeds	Candor	CN	1.9	17-Sep	58	2.3	39.1	17.1	--	--	--	--	17.2
PROSeeds	SVX-4005	CN	1.9	29-Sep	*63	2.0	36.8	18.6	--	--	--	--	--
PROSeeds	SVX-4006	CN	1.9	28-Sep	61	2.5	37.4	17.5	--	--	--	--	--
Public	MN1410	CN	1.4	20-Sep	*67	1.5	36.3	18.9	70	3.3	36.7	19.7	--
Public	Dane	CN	1.5	29-Sep	50	1.0	38.8	17.6	53	1.5	37.2	19.9	--
SB&B	SB90	CN	1.1	15-Sep	58	1.3	36.5	18.6	*74	2.3	37.1	19.6	--
SB&B	SB1270	CN	1.2	23-Sep	52	1.8	36.8	17.6	63	5.0	36.3	19.1	--
SB&B	SB19	CN	1.3	23-Sep	61	1.0	35.3	17.9	--	--	--	--	--
SB&B	SB165	CN	1.6	20-Sep	*63	1.3	38.8	17.2	61	2.5	39.3	18.1	--
Viking	1218N	CN	1.2	22-Sep	62	1.0	35.7	18.2	*76	3.3	36.6	18.9	18.4
Viking	0.1202N	CN	1.2	20-Sep	*63	1.8	37.1	17.5	*79	3.0	37.2	18.5	17.4
Viking	0.1518N	CN	1.5	20-Sep	*66	1.3	36.9	17.3	73	4.0	36.8	18.2	--
Check	11463	RR2X	1.1	24-Sep	*63	1.3	35.7	17.7	*77	2.5	36.0	18.9	--
Check	11708	RR2X	1.4	24-Sep	*68	1.0	35.3	17.5	--	--	--	--	--
Check	11700	RR2X	1.8	21-Sep	61	1.8	35.1	18.5	--	--	--	--	--
Check	11524	GT27	1.9	29-Sep	*71	1.0	34.8	18.4	--	--	--	--	--
Mean				21-Sep	61	1.8	36.8	17.9	71	3.2	36.8	19.2	17.9
LSD (0.10)				--	8	0.9	1.3	0.7	8	1.0	0.7	0.4	0.3

* Yields preceded by an asterisk are not significantly different (0.10 level) than the highest yielding cultivar.

¹ Herbicide Trait : CN = conventional, RR2X = glyphosate/dicamba, GT27 = glyphosate/isoxaflutole

Results that are shaded provide the best estimate of relative variety performance.

TABLE 8.
2019 Seed Source for
Soybean Entries

Brand (Entrant)	Company	Phone Number	Website
AgriGold	AgriGold Hybrids	(618) 292-5844	www.agrigold.com
Asgrow	Bayer	(715) 495-7246	www.aganytime.com
BioGene	Van Treeck's Seed Farm	(920) 467-2422	www.biogeneseeds.com
Cornelius	Cornelius Seed	(563) 672-3463	www.corneliusseed.com
Credenz	BASF	(309) 212-5454	agriculture.basf.com
DONMARIO	GDM Seeds, Inc.	(217) 680-6044	www.donmario.com/en/usa/home/
Dyna-Gro	Dyna-Gro Seed	(608) 822-5000	www.dynagroseed.com
Federal Hybrids	Federal Hybrids, Inc.	(712) 830-9742	www.federalhybrids.com
FS HiSOY	GROWMARK, Inc.	(309) 242-3439	www.fsseeds.com
Genesis (Legend)	Legend Seeds Inc.	(608) 577-8132	www.legendseeds.net
Genesis (Renk)	Renk Seed	(608) 837-7351	www.renkseed.com
Golden Harvest	Golden Harvest	(920) 889-5509	www.goldenharvestseeds.com
Jung	Jung Seed Genetics	(800) 242-1855	www.jungseedgenetics.com
Legacy Seeds	Legacy Seeds Inc.	(866) 791-6390	www.legacyseeds.com
Legend Seeds	Legend Seeds Inc.	(608) 577-8132	www.legendseeds.net
LG Seeds	LG Seeds	(800) 544-6310	www.lgseeds.com
NK	Syngenta	(262) 220-3015	www.nksoybeans.com
O'Brien	O'Brien Hybrids	(608) 576-3685	www.obrienhybrids.com
P3	Cornelius Seed	(563) 672-3463	www.corneliusseed.com
Power Plus	Burrus Bros & Associated Growers	(815) 338-1141	burrusseeds.com
ProHarvest	Brunner Seed Inc.	(715) 672-5887	www.brunnerseed.com
PROSeeds	Sevita International	(226) 627-2341	sevita.com
Public	WI Foundation Seeds	(608) 262-9954	www.wisconsinfoundationseeds.wisc.edu
Renk	Renk Seed	(608) 837-7351	www.renkseed.com
SB&B	SB&B Foods Inc.	(715) 928-1623	sb-b.com
Stine	Stine Seed Company	(612) 756-4102	www.stinseed.com
Tracy	Tracy Seeds, LLC	(608) 752-2767	www.tracyseeds.com
Viking	Albert Lea Seed	(800) 352-5247	www.alseed.com

TABLE 9. 2019 Temperature and Precipitation Summary

Trial Location		Average Mean Temperature (° F)					Total Precipitation (inches)				
		May	June	July	August	September	May	June	July	August	September
Arlington		54.0	65.9	73.5	67.5	64.5	7.0	4.1	5.4	4.9	5.4
	Departure	-1.7	0.3	4.1	0.2	5.2	Departure	3.3	-0.6	1.2	1.0
Chippewa Falls*		53.1	64.7	71.9	67.3	64.2	6.9	3.4	5.5	3.4	5.9
(Eau Claire)	Departure	-4.5	-2.2	0.3	-2.0	4.0	Departure	3.4	-0.8	1.6	-1.1
	Irrigation						Irrigation	0.0	0.0	4.0	4.0
East Troy		53.2	64.0	72.8	67.2	64.6	8.1	5.6	4.3	3.5	8.6
(Burlington)	Departure	-2.7	-2.1	2.3	-1.8	3.8	Departure	4.4	1.8	0.9	-0.4
Fond du Lac		51.7	63.8	72.2	67.3	62.8	4.1	4.0	4.0	4.4	5.9
	Departure	-4.6	-2.2	1.8	-1.3	2.1	Departure	1.0	0.0	0.5	0.9
Galesville		55.0	67.6	75.2	69.8	66.2	7.5	4.7	6.6	3.1	6.6
(Trempealeau)	Departure	-4.3	-0.9	2.5	-0.7	4.1	Departure	3.8	0.9	2.2	-1.4
Hancock*		52.4	64.7	71.8	66.1	62.1	5.3	5.0	7.2	2.9	5.2
	Departure	-4.4	-1.8	1.5	-2.2	2.1	Departure	1.5	0.5	2.8	-1.3
	Irrigation						Irrigation	0.0	0.0	4.1	3.0
Marshfield		52.1	63.7	71.7	66.0	61.5	5.6	3.6	7.2	3.4	8.6
	Departure	-4.0	-2.1	1.6	-2.1	2.4	Departure	2.0	-0.9	3.2	-0.9
Platteville		55.2	66.8	73.9	67.5	65.2	5.6	4.7	6.3	3.2	18.6
(Lancaster)	Departure	-2.1	-0.1	3.1	-1.5	4.4	Departure	1.5	-0.6	2.0	-1.0
Seymour		54.3	64.9	73.2	67.9	64.3	4.9	4.7	3.5	5.5	9.4
(Green Bay)	Departure	-1.9	-0.6	3.4	-0.6	4.5	Departure	2.0	0.9	0.0	2.2
Spooner*		51.4	64.9	71.0	65.8	60.8	6.3	2.2	2.9	3.6	7.4
	Departure	-4.3	0.0	1.7	-1.5	2.5	Departure	2.8	-1.8	-1.3	-0.6
	Irrigation						Irrigation	0.0	0.0	2.0	1.0

* Irrigation applied at Chippewa Falls, Hancock and Spooner (irrigated sand trial).

Source: Wisconsin State Climatology Office; Long term normals from 1981 to 2010 used for departure data.

TABLE 10. 2019 Characteristics of Soybean Varieties (1 of 9)

Brand (Entrant)	Entry	Maturity Group	Herbicide Trait ¹	Performance Shown in Table(s):	Seed Treatment(s)	SCN Source ²	PRR Genes ³	Color ⁴			
								Flower	Pubescence	Pod	Hilum
AgriGold	G1502RX	1.5	RR2X	3	AgriShield Max, ILeVO	PI 88788	HRps 1-c	P	LTW	BR	BL
AgriGold	G1710RX	1.7	RR2X	3	AgriShield Max, ILeVO	PI 88788	Rps 1-c	P	LTW	BR	BR
AgriGold	G1850RX	1.8	RR2X	3	AgriShield Max, ILeVO	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
AgriGold	G1990RX	1.9	RR2X	2,3	AgriShield Max, ILeVO	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
AgriGold	G2009RX	2.0	RR2X	2,3	AgriShield Max, ILeVO	PI 88788	--	P	G	T	IB
AgriGold	G2212RX	2.2	RR2X	2,3	AgriShield Max, ILeVO	PI 88788	Rps 1-c	P	LTW	BR	BL
AgriGold	G2405RX	2.4	RR2X	2	AgriShield Max, ILeVO	PI 88788	--	P	LTW	T	BL
AgriGold	G2505RX	2.5	RR2X	2	AgriShield Max, ILeVO	PI 88788	Rps 1-c	P	G	BR	IB
AgriGold	G2900RX	2.9	RR2X	2	AgriShield Max, ILeVO	PI 88788	Rps 1-c	P	G	BR	IB
Asgrow	AG08X0	0.8	RR2X	5	Acceleron F/I, Nemastrike	PI 88788	Rps 1-c	P	LTW	BR	BL
Asgrow	AG10X9	1.0	RR2X	5	Acceleron F/I, Nemastrike	PI 88788	Rps 3-a	P	LTW	T	BR
Asgrow	AG11X8	1.1	RR2X	4,5	Acceleron F/I, Nemastrike	PI 88788	Rps 3-a	P	LTW	T	BR
Asgrow	AG14X0	1.4	RR2X	3,4	Acceleron F/I, Nemastrike	PI 88788	Rps 3-a	P	LTW	BR	BL
Asgrow	AG19X0	1.9	RR2X	2,3,4	Acceleron F/I, Nemastrike	PI 88788	Rps 3-a	P	LTW	T	BR
Asgrow	AG20X9	2.0	RR2X	2,3	Acceleron F/I, Nemastrike	PI 88788	Rps 1-c	P	G	BR	IB
Asgrow	AG23X8	2.3	RR2X	2	Acceleron F/I, Nemastrike	PI 88788	Rps 1-c	P	G	BR	IB
Asgrow	AG26X0	2.6	RR2X	2	Acceleron F/I, Nemastrike	PI 88788	Rps 1-c	P	G	BR	IB
Asgrow	AG26X8	2.6	RR2X	2	Acceleron F/I, Nemastrike	PI 88788	Rps 1-c	P	G	BR	IB
Asgrow	AG27X0	2.7	RR2X	2	Acceleron F/I, Nemastrike	PI 88788	Rps 1-c	P	G	BR	IB
BioGene	BG6080LLGT27	0.8	LLGT27	5	Arma	PI 88788	Rps 3-a	P	LTW	BR	BR
BioGene	BG9130E3	1.3	E3	4	Arma	PI 88788	Rps 1-c	P	G	T	IB
BioGene	BG6160LLGT27	1.6	LLGT27	4	Arma	PI 88788	Rps 1-k	P	LTW	T	BR
BioGene	BG6200LLGT27	2.0	LLGT27	3	Arma	PI 88788	--	W	LTW	BR	BR
Cornelius	CB23X00	2.3	RR2X	2	Profit Guard Plus	PI 88788	Rps 1-c	--	--	--	--
Cornelius	CB24X64	2.4	RR2X	2	Profit Guard Plus	PI 88788	--	--	--	--	--

All characteristic information is provided by the originator.

¹ Herbicide Trait : CN = conventional, GT or RR2Y = glyphosate, RR2X = glyphosate/dicamba, E3 = glufosinate/glyphosate/2,4-D, GT27 = glyphosate/isoxaflutole, LLGT27 = glufosinate/glyphosate/isoxaflutole

² Source of SCN Resistance; S = Susceptible.

³ PRR = Phytophthora Root Rot Resistance: PRR Genes listed designate resistance to PRR Races.

⁴ BL = Black, BF = Buff, BR = Brown, G = Gray, IB = Imperfect Black, IY = Imperfect Yellow, LTW = Light Tawny, M = Mixed, P = Purple, T = Tan, TW = Tawny, W = White, Y = Yellow.

TABLE 10. CONTINUED. 2019 Characteristics of Soybean Varieties (2 of 9)

Brand (Entrant)	Entry	Maturity Group	Herbicide Trait ¹	Performance Shown in Table(s):	Seed Treatment(s)	SCN Source ²	PRR Genes ³	Color ⁴			
								Flower	Pubescence	Pod	Hilum
Cornelius	CB26X78	2.6	RR2X	2	Profit Guard Plus	Peking	Rps 1-c	--	--	--	--
Cornelius	CB27X81	2.7	RR2X	2	Profit Guard Plus	PI 88788	Rps 1-c	--	--	--	--
Credenz	CZ 0729GTLL	0.7	LLGT27	3,4	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	Rps 3-a	P	LTW	T	BR
Credenz	CZ 1139GTLL	1.1	LLGT27	3,4	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	--	P	LTW	T	BR
Credenz	CZ 1470GTLL	1.4	LLGT27	4	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	Rps 1-k	P	G	T	IB
Credenz	CZ 1549GTLL	1.5	LLGT27	3,4	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	Rps 1-k	P	LTW	T	BL
Credenz	CZ 1660GTLL	1.6	LLGT27	4	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	Rps 1-k	P	LTW	T	BR
Credenz	CZ 1850GTLL	1.8	LLGT27	2	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	Rps 1-k	P	LTW	BR	BR
Credenz	CZ 1859GTLL	1.8	LLGT27	2,3,4	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	Rps 1-k	P	LTW	T	BL
Credenz	CZ 2040GTLL	2.0	LLGT27	2	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	Rps 1-a	W	LTW	BR	BR
Credenz	CZ 2360GTLL	2.3	LLGT27	2	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	Rps 1-a	P	LTW	T	BL
Credenz	CZ 2550GTLL	2.5	LLGT27	2	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	Rps 1-a	P	LTW	BR	BL
Credenz	CZ 2579GTLL	2.5	LLGT27	2,3	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	Rps 1-k	W	LTW	T	BL
Credenz	CZ 2889GTLL	2.8	LLGT27	2	Poncho/Votivo, ILeVO, Allegiance, Redigo	PI 88788	Rps 1-a	P	LTW	BR	BR
DONMARIO	DM 2544E	2.5	E3	2	EverGol Energy, Gaucho, ILeVO, Lumisena	PI 88788	Rps 1-k	P	G	T	BR
DONMARIO	DM 2868E	2.8	E3	2	EverGol Energy, Gaucho, ILeVO, Lumisena	PI 88788	Rps 1-k	W	G	T	BR
DONMARIO	DM 28J9X	2.8	RR2X	2	EverGol Energy, Gaucho, ILeVO, Lumisena	PI 88788	Rps 1-c	P	G	BR	IB
Dyna-Gro	S13XT89	1.4	RR2X	4	Equity VIP, Clariva	PI 88788	HRps 1-c	P	LTW	BR	BL
Dyna-Gro	S18XT38	1.8	RR2X	3,4	Equity VIP, Clariva	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
Dyna-Gro	S19EN59	1.9	E3	3	Equity VIP, Clariva	PI 88788	Rps 1-c	P	G	T	IB
Dyna-Gro	S19XT30	1.9	RR2X	3	Equity VIP, Clariva	PI 88788	--	P	G	T	IB
Dyna-Gro	S21EN70	2.1	E3	2	Equity VIP, Clariva	PI 88788	Rps 1-c, 3-a	P	G	BR	BF
Dyna-Gro	S21XT49	2.1	RR2X	2,3	Equity VIP, Clariva	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
Dyna-Gro	S23XT90	2.3	RR2X	2,3	Equity VIP, Clariva	PI 88788	Rps 1-c	P	G	T	IB

All characteristic information is provided by the originator.

¹ Herbicide Trait : CN = conventional, GT or RR2Y = glyphosate, RR2X = glyphosate/dicamba, E3 = glufosinate/glyphosate/2,4-D, GT27 = glyphosate/isoxaflutole, LLGT27 = glufosinate/glyphosate/isoxaflutole

² Source of SCN Resistance; S =Susceptible.

³ PRR= Phytophthora Root Rot Resistance: PRR Genes listed designate resistance to PRR Races.

⁴ BL= Black, BF = Buff, BR= Brown, G= Gray, IB= Imperfect Black, IY= Imperfect Yellow, LTW= Light Tawny, M= Mixed, P= Purple, T= Tan, TW= Tawny, W=White, Y= Yellow.

TABLE 10. CONTINUED. 2019 Characteristics of Soybean Varieties (3 of 9)

Brand (Entrant)	Entry	Maturity Group	Herbicide Trait ¹	Performance Shown in Table(s):	Seed Treatment(s)	SCN Source ²	PRR Genes ³	Color ⁴			
								Flower	Pubescence	Pod	Hilum
Dyna-Gro	S27EN89	2.7	E3	2	Equity VIP, Clariva	PI 88788	Rps 1-k	W	G	T	BF
Dyna-Gro	S28XT58	2.8	RR2X	2	Equity VIP, Clariva	PI 88788	Rps 1-c	P	G	BR	IB
Federal Hybrids	F0990N R2X	0.9	RR2X	4,5	Maximum ArmourGuard	PI 88788	Rps 3-a	P	LTW	T	BR
Federal Hybrids	F1490N R2X	1.4	RR2X	4	Maximum ArmourGuard	PI 88788	HRps 1-c	P	LTW	BR	BL
Federal Hybrids	F1690N R2X	1.6	RR2X	4	Maximum ArmourGuard	PI 88788	Rps 1-c	P	LTW	BR	BR
FS HiSOY	HS 14X90	1.4	RR2X	4	Acceleron, Cue, IleVO	PI 88788	Rps 1-c	P	G	BR	IB
FS HiSOY	HS 16X80	1.6	RR2X	4	Acceleron, Cue, IleVO	PI 88788	Rps 1-c	P	LTW	BR	BR
FS HiSOY	HS 18X70	1.8	RR2X	2,3,4	Acceleron, Cue, IleVO	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
FS HiSOY	HS 19X90	1.9	RR2X	2,3	Clariva Complete, Mertect	PI 88788	--	P	G	T	IB
FS HiSOY	HS 21X90	2.1	RR2X	2,3	Acceleron, Cue, IleVO	PI 88788	Rps 1-c	P	LTW	T	BL
FS HiSOY	HS 22X90	2.2	RR2X	2,3	Clariva Complete, Mertect	PI 88788	Rps 1-c	P	G	T	IB
FS HiSOY	HS 23X70	2.3	RR2X	2,3	Acceleron, Cue, IleVO	Peking	Rps 1-c	P	G	BR	IB
FS HiSOY	HS 24X80	2.4	RR2X	2,3	Acceleron, Cue, IleVO	PI 88788	Rps 1-c	P	G	BR	IB
FS HiSOY	HS 26X90	2.6	RR2X	2	Acceleron, Cue, IleVO	Peking	Rps 1-c	P	G	T	IB
FS HiSOY	HS 27X90	2.7	RR2X	2	Acceleron, Cue, IleVO	PI 88788	Rps 1-k	P	G	T	IB
FS HiSOY	HS 28X70	2.8	RR2X	2	Acceleron, Cue, IleVO	PI 88788	Rps 1-c	P	G	BR	IB
Genesis (Legend)	G1041E	1.0	E3	5	YP Pro, Preside, Quickroots	PI 88788	--	P	G	T	IB
Genesis (Legend)	G1141E	1.1	E3	4	YP Pro, Preside, Quickroots	PI 88788	Rps 1-k	P	G	T	BF
Genesis (Legend)	G1441E	1.4	E3	3,4	YP Pro, Preside, Quickroots	PI 88788	--	P	G	T	IB
Genesis (Legend)	G1741E	1.7	E3	3	YP Pro, Preside, Quickroots	PI 88788	--	P	G	BR	IB
Genesis (Legend)	G1940E	1.9	E3	2	YP Pro, Preside, Quickroots	PI 88788	Rps 1-c	P	G	T	IB
Genesis (Legend)	G2080GL	2.0	LLGT27	3	YP Pro, Preside, Quickroots	PI 88788	--	W	LTW	BR	BR
Genesis (Renk)	G1340E	1.3	E3	4	ApronMaxx, IleVO	PI 88788	Rps 1-c	P	G	T	IB
Genesis (Renk)	G1680GL	1.6	LLGT27	4	ApronMaxx, IleVO	PI 88788	Rps 1-k	P	LTW	T	BR

All characteristic information is provided by the originator.

¹ Herbicide Trait : CN = conventional, GT or RR2Y = glyphosate, RR2X = glyphosate/dicamba, E3 = glufosinate/glyphosate/2,4-D, GT27 = glyphosate/isoxaflutole, LLGT27 = glufosinate/glyphosate/isoxaflutole

² Source of SCN Resistance; S =Susceptible.

³ PRR= Phytophthora Root Rot Resistance: PRR Genes listed designate resistance to PRR Races.

⁴ BL= Black, BF = Buff, BR= Brown, G= Gray, IB= Imperfect Black, IY= Imperfect Yellow, LTW= Light Tawny, M= Mixed, P= Purple, T= Tan, TW= Tawny, W=White, Y= Yellow.

TABLE 10. CONTINUED. 2019 Characteristics of Soybean Varieties (4 of 9)

Brand (Entrant)	Entry	Maturity Group	Herbicide Trait ¹	Performance Shown in Table(s):	Seed Treatment(s)	SCN Source ²	PRR Genes ³	Color ⁴			
								Flower	Pubescence	Pod	Hilum
Genesis (Renk)	G1840E	1.8	E3	4	ApronMaxx, ILeVO	PI 88788	--	W	LTW	BR	BL
Genesis (Renk)	G2140E	2.1	E3	3	ApronMaxx, ILeVO	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
Genesis (Renk)	G2340E	2.3	E3	3	ApronMaxx, ILeVO	PI 88788	--	W	LTW	T	BL
Genesis (Renk)	G2840E	2.7	E3	2	ApronMaxx, ILeVO	PI 88788	Rps 1-k	W	G	T	BF
Golden Harvest	GH1538X Brand	1.5	RR2X	3,4	Clariva Complete, Mertect	PI 88788	Rps 3-a, 1-k	P	LTW	T	BL
Golden Harvest	GH1619X Brand	1.6	RR2X	3,4	Clariva Complete, Mertect	PI 88788	S	W	LTW	T	BR
Golden Harvest	GH1915X Brand	1.9	RR2X	2,3,4	Clariva Complete, Mertect	PI 88788	Rps 1-c	W	LTW	BR	BL
Golden Harvest	GH2041X Brand	2.0	RR2X	2,3,4	Clariva Complete, Mertect	PI 88788	Rps 1-c	W	LTW	BR	BL
Golden Harvest	GH2230X Brand	2.2	RR2X	2,3	Clariva Complete, Mertect	PI 88788	Rps 1-c	W	LTW	BR	BL
Golden Harvest	GH2552X Brand	2.5	RR2X	2,3	Clariva Complete, Mertect	PI 88788	Rps 1-c	W	LTW	BR	BL
Golden Harvest	GH2788X Brand	2.7	RR2X	2	Clariva Complete, Mertect	PI 88788	Rps 1-c	P	G	BR	IB
Jung	1071R2X	0.7	RR2X	5	Acceleron F/I, Nemastrike	PI 88788	Seg. Rps 1-c, 3-a	P	G	BR	IB
Jung	1103R2X	1.0	RR2X	5	Acceleron F/I, Nemastrike	PI 88788	Rps 3-a	P	TW	BR	BR
Jung	1122R2X	1.2	RR2X	5	Acceleron F/I, Nemastrike	PI 88788	Rps 3-a	P	LTW	T	BR
Jung	1154R2X	1.5	RR2X	4	Acceleron F/I, Nemastrike	PI 88788	Rps 1-c	P	LTW	BR	BL
Jung	1161R2X	1.6	RR2X	4	Acceleron F/I, Nemastrike	PI 88788	Seg. Rps 1-c, 1-k	P	G	TN	IB
Jung	1173R2X	1.7	RR2X	4	Acceleron F/I, Nemastrike	PI 88788	Rps 1-c	P	G	BR	IB
Jung	1193R2X	1.9	RR2X	4	Acceleron F/I, Nemastrike	PI 88788	Rps 1-c	P	G	BR	IB
Jung	1203R2X	2.0	RR2X	3	Acceleron F/I, Nemastrike	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
Jung	1226R2X	2.2	RR2X	3	Acceleron F/I, Nemastrike	PI 88788	Rps 1-c	P	G	BR	IB
Jung	1243R2X	2.4	RR2X	3	Acceleron F/I, Nemastrike	PI 88788	Rps 1-c	P	G	BR	IB
Legacy Seeds	LS-0738N	0.7	RR2X	5	L-Coat Total, Marauder	PI 88788	Rps 3-a	P	LTW	T	BR
Legacy Seeds	LS-1019	1.0	LLGT27	5	L-Coat Total, Marauder	S	--	P	LTW	T	BR
Legacy Seeds	LS-1039N	1.0	RR2Y	5	L-Coat Total, Marauder	Peking	Rps 3-a, 1-k	P	G	BR	BF

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¹ Herbicide Trait : CN = conventional, GT or RR2Y = glyphosate, RR2X = glyphosate/dicamba, E3 = glufosinate/glyphosate/2,4-D, GT27 = glyphosate/isoxaflutole, LLGT27 = glufosinate/glyphosate/isoxaflutole

² Source of SCN Resistance; S =Susceptible.

³ PRR= Phytophthora Root Rot Resistance: PRR Genes listed designate resistance to PRR Races.

⁴ BL= Black, BF = Buff, BR= Brown, G= Gray, IB= Imperfect Black, IY= Imperfect Yellow, LTW= Light Tawny, M= Mixed, P= Purple, T= Tan, TW= Tawny, W=White, Y= Yellow.

TABLE 10. CONTINUED. 2019 Characteristics of Soybean Varieties (5 of 9)

Brand (Entrant)	Entry	Maturity Group	Herbicide Trait ¹	Performance Shown in Table(s):	Seed Treatment(s)	SCN Source ²	PRR Genes ³	Color ⁴			
								Flower	Pubescence	Pod	Hilum
Legacy Seeds	LS-1320N	1.3	E3	5	L-Coat Total, Marauder	PI 88788	Rps 1-c	P	G	T	IB
Legacy Seeds	LS-1439N	1.4	RR2X	3,4,5	L-Coat Total, Marauder	PI 88788	Rps 1-c	P	LTW	BR	BL
Legacy Seeds	LS-1510N	1.5	LLGT27	3,4	L-Coat Total, Marauder	PI 88788	Rps 1-k	P	LTW	T	BR
Legacy Seeds	LS-1810N	1.8	LLGT27	3,4	L-Coat Total, Marauder	PI 88788	--	P	LTW	T	BL
Legacy Seeds	LS-1820N	1.8	E3	3,4	L-Coat Total, Marauder	PI 88788	--	W	LTW	T	BL
Legacy Seeds	LS-1838N	1.8	RR2X	2,3,4	L-Coat Total, Marauder	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
Legacy Seeds	LS-2139N	2.1	RR2X	2,3,4	L-Coat Total, Marauder	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
Legend Seeds	LS 1380 HP	1.3	CN	6	None	S	--	--	--	--	Y
Legend Seeds	LS 18LGT953N	1.8	LLGT27	3	YP Pro, Preside, Quickroots	PI 88788	Rps 1-c	P	LTW	T	BL
Legend Seeds	LS 18X860N	1.8	RR2X	3	YP Pro, Preside, Quickroots	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
Legend Seeds	LS 20X963N	2.0	RR2X	2	YP Pro, Preside, Quickroots	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
Legend Seeds	LS 2180 HP	2.1	CN	6	None	S	--	--	--	--	Y
Legend Seeds	LS 21E964N	2.1	E3	2	YP Pro, Preside, Quickroots	PI 88788	Rps 1-c, 3-a	P	G	BR	BF
Legend Seeds	LS 21X003N	2.1	LLGT27	2	YP Pro, Preside, Quickroots	PI 88788	Rps 1-c	P	G	T	IB
Legend Seeds	LS 23E052N	2.3	E3	2	YP Pro, Preside, Quickroots	PI 88788	--	W	LTW	T	BL
Legend Seeds	LS 2580N HP	2.5	CN	6	YP Pro, Preside, Quickroots	PI 88788	--	--	--	--	Y
Legend Seeds	LS 25X924N	2.5	RR2X	2	YP Pro, Preside, Quickroots	PI 88788	Rps 1-c	P	LTW	BR	BL
Legend Seeds	LS 2880N HP	2.8	CN	6	None	PI 88788	--	--	--	--	Y
Legend Seeds	LS 28X840N	2.8	RR2X	2	YP Pro, Preside, Quickroots	PI 88788	Rps 1-c	--	--	--	--
LG Seeds	LGS0735RX	0.7	RR2X	5	AgriShield Max, ILeVO	PI 88788	Rps 1-c	P	G	T	IB
LG Seeds	C1000RX	1.0	RR2X	5	AgriShield Max, ILeVO	PI 88788	Rps 3-a	P	LTW	BR	BL
LG Seeds	LGS1118RX	1.1	RR2X	5	AgriShield Max, ILeVO	PI 88788	Rps 1-c	P	LTW	BR	BR
LG Seeds	C1414RX	1.4	RR2X	4,5	AgriShield Max, ILeVO	PI 88788	Rps 3-a, 1-k	P	LTW	T	BL
LG Seeds	LGS1635RX	1.6	RR2X	4	AgriShield Max, ILeVO	PI 88788	Rps 1-c	P	LTW	BR	BR
LG Seeds	C1838RX	1.8	RR2X	3,4	AgriShield Max, ILeVO	PI 88788	Rps 1-a, 3-a	P	LTW	BR	BF

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¹ Herbicide Trait : CN = conventional, GT or RR2Y = glyphosate, RR2X = glyphosate/dicamba, E3 = glufosinate/glyphosate/2,4-D, GT27 = glyphosate/isoxaflutole, LLGT27 = glufosinate/glyphosate/isoxaflutole

² Source of SCN Resistance; S = Susceptible.

³ PRR = Phytophthora Root Rot Resistance; PRR Genes listed designate resistance to PRR Races.

⁴ BL = Black, BF = Buff, BR = Brown, G = Gray, IB = Imperfect Black, IY = Imperfect Yellow, LTW = Light Tawny, M = Mixed, P = Purple, T = Tan, TW = Tawny, W = White, Y = Yellow.

TABLE 10. CONTINUED. 2019 Characteristics of Soybean Varieties (6 of 9)

Brand (Entrant)	Entry	Maturity Group	Herbicide Trait ¹	Performance Shown in Table(s):	Seed Treatment(s)	SCN Source ²	PRR Genes ³	Color ⁴			
								Flower	Pubescence	Pod	Hilum
LG Seeds	C1870R2	1.8	RR2Y	4	AgriShield Max, ILeVO	PI 88788	Rps 1-c	P	G	T	IB
LG Seeds	LGS2007RX	2.0	RR2X	2,3	AgriShield Max, ILeVO	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
LG Seeds	LGS2010	2.0	CN	6	AgriShield Max, ILeVO	PI 88788	Rps 1-a	P	LTW	BR	BL
LG Seeds	C2300	2.3	CN	6	AgriShield Max, ILeVO	PI 88788	Rps 1-a	M	LTW	T	BR
LG Seeds	C2441R2	2.4	RR2Y	2,3	AgriShield Max, ILeVO	PI 88788	Rps 1-c	P	TW	T	BL
LG Seeds	LGS2444RX	2.4	RR2X	2,3	AgriShield Max, ILeVO	PI 88788	Rps 1-c	P	G	BR	IB
LG Seeds	LGS2765	2.7	CN	6	AgriShield Max, ILeVO	PI 88788	--	W	LTW	T	BL
LG Seeds	C2888RX	2.8	RR2X	2	AgriShield Max, ILeVO	PI 88788	Rps 1-c	P	G	BR	BR
NK	S02-F9X Brand	0.2	RR2X	5	Clariva Complete, Mertect	S	Rps 1-c	P	G	T	BF
NK	S05-N5X Brand	0.5	RR2X	5	Clariva Complete, Mertect	S	Rps 1-c, 3-a	P	LTW	T	BR
NK	S07-Q4X Brand	0.7	RR2X	4,5	Clariva Complete, Mertect	PI 88788	Rps 1-c	P	LTW	T	BL
NK	S09-D4X Brand	0.9	RR2X	4,5	Clariva Complete, Mertect	PI 88788	Rps 1-c, 3-a	P	LTW	T	BR
NK	S10-H7X Brand	1.0	RR2X	4,5	Clariva Complete, Mertect	PI 88788	Rps 1-c	P	LTW	T	BL
NK	S14-U9X Brand	1.4	RR2X	2,3,4	Clariva Complete, Mertect	PI 88788	Rps 1-c	P	LTW	BR	BR
NK	S18-H3X Brand	1.8	RR2X	3,4	Clariva Complete, Mertect	PI 88788	S	P	LTW	BR	BL
NK	S20-J5X Brand	2.0	RR2X	2,3	Clariva Complete, Mertect	PI 88788	Rps 1-c	W	LTW	BR	BL
NK	S21-W8X Brand	2.1	RR2X	2,3	Clariva Complete, Mertect	PI 88788	Rps 1-c	W	LTW	BR	BL
NK	S25-V8X Brand	2.5	RR2X	2,3	Clariva Complete, Mertect	PI 88788	Rps 1-c	W	LTW	BR	BL
NK	S27-M8X Brand	2.8	RR2X	2	Clariva Complete, Mertect	PI 88788	Rps 1-c	P	G	BR	IB
O'Brien	O'SOY1520GT27LL	1.5	LLGT27	3,4	Quadrant	PI 88788	Rps 1-k	P	LTW	T	BR
O'Brien	O'SOY2020GT27LL	2.0	LLGT27	2,3	Quadrant	PI 88788	--	P	LTW	T	BL
O'Brien	O'SOY2520GT27LL	2.5	LLGT27	2	Quadrant	PI 88788	--	P	LTW	BR	BL
P3	2022B	2.2	LLGT27	2	Profit Guard Plus	PI 88788	--	--	--	--	--
P3	2023E	2.2	E3	2	Profit Guard Plus	PI 88788	--	--	--	--	--
P3	1924E	2.4	E3	2	Profit Guard Plus	PI 88788	Rps 1-k	--	--	--	--

All characteristic information is provided by the originator.

¹ Herbicide Trait : CN = conventional, GT or RR2Y = glyphosate, RR2X = glyphosate/dicamba, E3 = glufosinate/glyphosate/2,4-D, GT27 = glyphosate/isoxaflutole, LLGT27 = glufosinate/glyphosate/isoxaflutole

² Source of SCN Resistance; S = Susceptible.

³ PRR = Phytophthora Root Rot Resistance; PRR Genes listed designate resistance to PRR Races.

⁴ BL = Black, BF = Buff, BR = Brown, G = Gray, IB = Imperfect Black, IY = Imperfect Yellow, LTW = Light Tawny, M = Mixed, P = Purple, T = Tan, TW = Tawny, W = White, Y = Yellow.

TABLE 10. CONTINUED. 2019 Characteristics of Soybean Varieties (7 of 9)

Brand (Entrant)	Entry	Maturity Group	Herbicide Trait ¹	Performance Shown in Table(s):	Seed Treatment(s)	SCN Source ²	PRR Genes ³	Color ⁴			
								Flower	Pubescence	Pod	Hilum
P3	2025B	2.5	LLGT27	2	Profit Guard Plus	PI 88788	--	--	--	--	--
P3	1928E	2.8	E3	2	Profit Guard Plus	PI 88788	Rps 1-k	--	--	--	--
P3	2028B	2.8	LLGT27	2	Profit Guard Plus	PI 88788	--	--	--	--	--
Power Plus	25G8	2.5	GT	2	ILeVO, PowerShield	PI 88788	Rps 1-k	P	LTW	BR	BR
ProHarvest	0871CR2Y	0.8	RR2Y	5	CruiserMaxx, Vibrance	PI 88788	Rps 1-c	P	LTW	BR	BR
ProHarvest	0985CR2Y	0.9	RR2Y	5	CruiserMaxx, Vibrance	Peking	Rps 3-a, 1-k	P	G	BR	BF
ProHarvest	1359E	1.3	E3	5	CruiserMaxx, Vibrance	PI 88788	Rps 1-c	P	G	T	IB
ProHarvest	1468GL	1.4	LLGT27	4,5	CruiserMaxx, Vibrance	PI 88788	--	P	LTW	T	BL
ProHarvest	1484CR2Y	1.4	RR2Y	5	CruiserMaxx, Vibrance	PI 88788	Rps 1-k	P	LTW	BR	BR
ProHarvest	1485CR2Y	1.4	RR2Y	4	CruiserMaxx, Vibrance	PI 88788	Rps 1-k	P	LTW	T	BR
ProHarvest	1638X	1.6	RR2X	4	CruiserMaxx, Vibrance	PI 88788	HRps 1-c, 1-k	P	G	BR	IB
ProHarvest	2084CR2Y	2.0	RR2Y	3,4	CruiserMaxx, Vibrance	PI 88788	Rps 1-c	P	LTW	BR	BR
ProHarvest	2138X	2.1	RR2X	4	CruiserMaxx, Vibrance	PI 88788	--	W	LTW	T	BL
ProHarvest	2152CR2Y	2.1	RR2Y	3	CruiserMaxx, Vibrance	PI 88788	Rps 1-c	P	LTW	T	BR
PROSeeds	Genesis	0.9	CN	7	VibranceMaxx	--	--	P	G	--	Y
PROSeeds	Emperor	1.0	CN	7	VibranceMaxx	--	--	P	TW	--	IY
PROSeeds	Skyline	1.1	CN	7	VibranceMaxx	PI 88788	--	P	G	--	Y
PROSeeds	SVX-4003	1.4	CN	7	VibranceMaxx	--	--	P	TW	--	IY
PROSeeds	Azalea	1.5	CN	7	VibranceMaxx	--	--	P	TW	--	IY
PROSeeds	Laurentian	1.5	CN	7	VibranceMaxx	PI 88788	--	P	G	--	Y
PROSeeds	Candor	1.9	CN	6,7	None	--	--	P	G	--	Y
PROSeeds	SVX-4005	1.9	CN	6,7	VibranceMaxx	PI 88788	--	W	LTW	--	IY
PROSeeds	SVX-4006	1.9	CN	6,7	VibranceMaxx	PI 88788	--	W	LTW	--	BR
PROSeeds	SVX-4009	2.3	CN	6	VibranceMaxx	PI 88788	--	W	LTW	--	BR

All characteristic information is provided by the originator.

¹ Herbicide Trait : CN = conventional, GT or RR2Y = glyphosate, RR2X = glyphosate/dicamba, E3 = glufosinate/glyphosate/2,4-D, GT27 = glyphosate/isoxaflutole, LLGT27 = glufosinate/glyphosate/isoxaflutole

² Source of SCN Resistance; S =Susceptible.

³ PRR= Phytophthora Root Rot Resistance: PRR Genes listed designate resistance to PRR Races.

⁴ BL= Black, BF = Buff, BR= Brown, G= Gray, IB= Imperfect Black, IY= Imperfect Yellow, LTW= Light Tawny, M= Mixed, P= Purple, T= Tan, TW= Tawny, W=White, Y= Yellow.

TABLE 10. CONTINUED. 2019 Characteristics of Soybean Varieties (8 of 9)

Brand (Entrant)	Entry	Maturity Group	Herbicide Trait ¹	Performance Shown in Table(s):	Seed Treatment(s)	SCN Source ²	PRR Genes ³	Color ⁴			
								Flower	Pubescence	Pod	Hilum
Public	MN1410	1.4	CN	6,7	Vibrance	--	--	W	G	BR	BF
Public	Dane	1.5	CN	6,7	Vibrance	--	--	W	G	T	Y
Renk	RS089NX	0.8	RR2X	5	ApronMaxx, ILeVO	PI 88788	Rps 3-a	P	LTW	BR	BR
Renk	RS149NX	1.4	RR2X	4	ApronMaxx, ILeVO	PI 88788	Rps 1-c	P	LTW	BR	BL
Renk	RS153NR2	1.5	RR2Y	4	ApronMaxx, ILeVO	PI 88788	Rps 1-c	P	LTW	BR	BL
Renk	RS175NR2	1.7	RR2Y	4	ApronMaxx, ILeVO	PI 88788	Rps 1-k	P	G	T	IB
Renk	0-18GL	1.8	LLGT27	4	ApronMaxx, ILeVO	PI 88788	--	P	LTW	T	BL
Renk	RS200NX	2.0	RR2X	3	ApronMaxx, ILeVO	PI 88788	Rps 1-c	P	G	T	BL
Renk	RS219NX	2.1	RR2X	3	ApronMaxx, ILeVO	PI 88788	Rps 1-a, 3-a	P	G	BR	BF
Renk	RS248NX	2.4	RR2X	2,3	ApronMaxx, ILeVO	PI 88788	--	P	LTW	T	BL
Renk	0-26GL	2.6	LLGT27	3	ApronMaxx, ILeVO	PI 88788	--	P	LTW	BR	BL
Renk	RS280NX	2.8	RR2X	2	ApronMaxx, ILeVO	PI 88788	Rps 1-k	P	G	T	IB
SB&B	SB90	1.1	CN	6,7	CruiserMaxx	--	--	P	G	T	Y
SB&B	SB1270	1.2	CN	6,7	CruiserMaxx	--	--	P	G	T	Y
SB&B	SB19	1.3	CN	6,7	CruiserMaxx	--	--	P	G	T	Y
SB&B	SB165	1.6	CN	6,7	CruiserMaxx	PI 88788	Rps 1-c	P	G	T	Y
Stine	11GA01	1.1	LLGT27	5	EclipseUS Trio IM, N-Force, N-Hibit	--	--	P	LTW	--	BR
Stine	13EA12	1.3	E3	5	ApronMaxx, Vibrance	PI 88788	--	P	G	--	IB
Stine	15GA02	1.4	LLGT27	4	EclipseUS Trio IM, N-Force, N-Hibit	PI 88788	Rps 1-k	P	LTW	--	BR
Stine	17GA02	1.7	LLGT27	3	EclipseUS Trio IM, N-Force, N-Hibit	PI 88788	--	P	LTW	--	BL
Stine	19BA23	1.9	GT27	3,4	EclipseUS Trio IM, N-Force, N-Hibit	PI 88788	Rps 1-c	W	LTW	--	BL
Stine	19EA33	1.9	E3	2,3,4	EclipseUS Trio IM, N-Force, N-Hibit	PI 88788	Rps 1-c, 3-a	P	G	--	BF
Stine	19GA02	1.9	LLGT27	3	EclipseUS Trio IM, N-Force, N-Hibit	PI 88788	--	W	LTW	--	BR
Tracy	0900GT	0.9	GT	4	Intego Suite, N-Force	--	--	W	LTW	BR	BR
Tracy	1449GTLL	1.4	LLGT27	3	Intego Suite, N-Force	PI 88788	--	P	LTW	T	BL

All characteristic information is provided by the originator.

¹ Herbicide Trait : CN = conventional, GT or RR2Y = glyphosate, RR2X = glyphosate/dicamba, E3 = glufosinate/glyphosate/2,4-D, GT27 = glyphosate/isoxaflutole, LLGT27 = glufosinate/glyphosate/isoxaflutole

² Source of SCN Resistance; S = Susceptible.

³ PRR = Phytophthora Root Rot Resistance; PRR Genes listed designate resistance to PRR Races.

⁴ BL = Black, BF = Buff, BR = Brown, G = Gray, IB = Imperfect Black, IY = Imperfect Yellow, LTW = Light Tawny, M = Mixed, P = Purple, T = Tan, TW = Tawny, W = White, Y = Yellow.

TABLE 10. CONTINUED. 2019 Characteristics of Soybean Varieties (9 of 9)

Brand (Entrant)	Entry	Maturity Group	Herbicide Trait ¹	Performance Shown in Table(s):	Seed Treatment(s)	SCN Source ²	PRR Genes ³	Color ⁴			
								Flower	Pubescence	Pod	Hilum
Tracy	1641GTLL	1.6	LLGT27	3,4	Intego Suite, N-Force	PI 88788	Rps 1-k	P	LTW	T	BR
Tracy	1949GTLL	1.9	LLGT27	2	Intego Suite, N-Force	PI 88788	--	W	LTW	BR	BR
Tracy	2141GTLL	2.1	LLGT27	2,3	Intego Suite, N-Force	PI 88788	--	P	LTW	T	BL
Tracy	2649GTLL	2.6	LLGT27	2	Intego Suite, N-Force	PI 88788	--	P	LTW	BR	BL
Tracy	2841GTLL	2.8	LLGT27	2	Intego Suite, N-Force	PI 88788	--	P	LTW	T	BL
Viking	1218N	1.2	CN	7	None	PI 88788	Rps 3-a	P	G	BR	BL
Viking	0.1202N	1.2	CN	7	None	PI 88788	Rps 1-k	P	TW	BR	BR
Viking	0.1518N	1.5	CN	7	CruiserMaxx	PI 88788	--	P	LTW	BR	BL
Viking	2018N	2.0	CN	6	CruiserMaxx	--	Rps 3-a	P	G	BR	BL
Viking	0.2155N	2.1	CN	6	CruiserMaxx	PI 88788	Rps 1-a	M	LTW	T	BR
Viking	2418N	2.4	CN	6	CruiserMaxx	PI 88788	Rps 1-c	--	--	--	--
Viking	0.2188AT12N	2.5	CN	6	None	PI 88788	--	W	G	T	Y
Viking	0.2518N	2.5	CN	6	None	PI 88788	--	P	LTW	BR	BL

see previous page for table footnotes



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