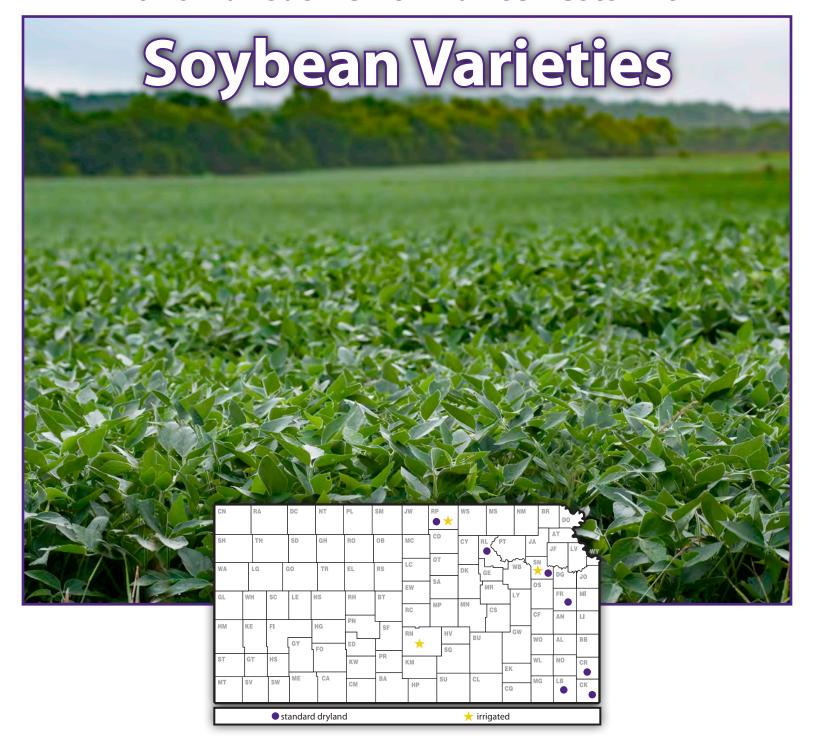
# 2020 Kansas Performance Tests with



**Report of Progress 1160** 



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# 2020 KANSAS SOYBEAN PERFORMANCE TESTS

#### STATEWIDE GROWING CONDITIONS

The 2020 soybean season had an overall favorable weather pattern for the state. Planting progress was normal for soybeans, promoting good conditions for early-season uniformity of the crop. Even stands can set the crop to a successful growing season.

During the growing season, planting condition was normal, but some stress level (lack of precipitation) was observed for central and north central parts of the state closer to the seed filling period, August. Yield impact of drought conditions varied with the planting time, soil conditions (water storage capacity), and productivity. Impact of drought around seed filling can reduce 30-40% of yields under severe stress due to the affect on pod abortion, seed number, and size.

Hail was also a problem across the state. There were 572 reports of large hail through September 30. Of those events, 201 were reported in May. Hail has a larger impact when occurring during flowering or grain filling later in the season when the plant depends on the leaves. Hail during this period will potentially affect seed set (both seed number and weight).

As related to the precipitation conditions, most divisions averaged above normal for the period of April 1 through October 31. The driest area was in the Northwest, where the divisional average was 11.51 inches or 66% of normal. The Northeast division came closest to normal, with a divisional average of 23.42 inches, 89% of normal. The Southeast division faced the challenge of a rapid switch from extremely wet to extremely dry conditions.

For soybeans, temperatures were not as much of a factor. The warmest readings were seen in mid-July, with the highest reading of 108°F reported on July 1 at Ashland, Clark County, and July 19 at Healy, Lane County.

The first autumn freezes were near average, with Colby dropping to 32°F on October 18, and Columbus reaching 30°F on October 27.

Harvesting conditions for many regions were ideal, with a large progress achieved by mid-October. In November, the USDA forecasted a soybean yield of 42 bushels per acre for the state of Kansas for the 2020 season, up 0.5 compared to the final yield recorded for the 2019 growing season (Ignacio A. Ciampitti and Mary Knapp, Department of Agronomy).

### **DISEASES**

In 2020, soybean disease reports were lower than in previous years. In general, very little frogeye leaf spot was reported. In northeast Kansas, sudden death syndrome was observed, but overall prevalence was low.

Charcoal rot was severe in some locations, particularly in the central part of the state and was likely due to unseasonable dry weather during critical reproductive stages in August and September.

Phytophthora root rot was present in eastern Kansas. This disease has been increasing in importance in recent years, particularly in soils with high clay content and poor drainage.

Stem canker, pod and stem blight, and Septoria brown spot were occasionally present, but rarely at yield limiting levels. (Rodrigo Borba Onofre, Department of Plant Pathology)

#### **INSECTS**

Soybean pest problems were much reduced in 2020, compared to previous years. There were a few defoliators, as always, but no one species seemed to dominate, as some have in the past.

There were reports of green cloverworms, thistle caterpillars, bean leaf beetles, grasshoppers, and webworms, but no real "outbreaks" of any one pest.

Bean leaf beetle and soybean podworm feeding on pods and beans within the pods seemed to also be much reduced and therefore had very little impact on yield. (Jeff Whitworth, Department of Entomology)

### TEST OBJECTIVES AND PROCEDURES

Soybean performance tests are conducted each year to provide information on the relative performance of new and established varieties and brands at several locations in Kansas.

Seeds for tests are from private seed companies, certified growers, and agricultural experiment stations (Table 1). Seed quality, including factors such as purity and germination, can be important in determining the performance of a variety. Soybean seed used for private and public entries in the Kansas Crop Performance Tests is prepared professionally and usually meets or exceeds Kansas Crop Improvement Certification standards. Relative performance of a given variety comparable to that obtained in these tests is best assured under similar environmental conditions and cultural practices and

with the use of certified or professionally prepared seed. All companies known to be developing and marketing soybean varieties or brands are invited to submit test seed; interested companies enter on a voluntary, fee-entry basis.

Entries were planted in four-row plots with rows 30 inches apart and were replicated three or four times each. Seeding rate ranged from 7 to 12 seeds per foot of row. The center two rows of each plot were harvested for yield. Harvested row lengths ranged from 11 to 33 feet, depending on location. Cultural practices and rainfall for each test location are presented with each table. Results from this year's tests are presented in Tables 2 through 15. Relative yields of each entry from all locations are shown in Table 16.

### **DATA INTERPRETATION**

Yields are recorded as bushels per acre (60 lb/bushel) adjusted to 13% moisture content, when moisture data are available. Seed yield is also expressed as a percentage of the test average to assist in identifying entries that consistently produce better than the average yield.

**Maturity** is the date on which 95% of the pods have ripened (browned). Delayed leaf drop and green stems are not considered when assigning maturity. About 1 week of good drying weather after maturing is needed before soybeans are ready to harvest.

**Lodging** is rated at maturity by the following scores:

- 1. Almost all plants erect
- 2. All plants slightly leaning or a few plants down
- 3. All plants leaning moderately (45%) or 25 to 50% of plants down
- 4. All plants leaning considerably or 50 to 80% plants down
- 5. Almost all plants down

**Height** is the average length from the soil surface to the top of the main stem of mature plants.

#### **VARIETY OR BRAND SELECTION**

Performance of soybean varieties or brands varies from year to year and from location to location, depending on factors such as weather, management practices, and variety adaptation. When selecting varieties or brands, producers should carefully analyze variety performance for two or more years across locations. Performance averaged over several environments will provide a better estimate of genetic potential and stability than performance based on a few environments.

Small differences in yield between any two varieties or brands should not be overemphasized. Within maturity groups at each location, a LSD (least significant difference) was calculated. The significance level used to calculate the LSD was 10%. Unless two varieties differ in yield by more than the LSD, genetic yield potential of one entry cannot be considered superior to that of another.

The coefficient of variability (CV) represents an estimate of the precision in the replicated yield trials. A CV of less than 10% indicates a good test with a high level of reliability. CVs ranging from 10 to 15% are usually acceptable for performance comparisons. CVs greater than 15% generally lack sufficient precision to provide any more than a rough guide to cultivar performance. For tests in which the precision was insufficient to statistically compare performance among the entries, the LSD value has been replaced with the designation NS, indicating that seed yields were not significantly different.

Test results also can be found online at: http://www.agronomy.k-state.edu/services/cropperformance-tests/soybean

**Table 1. Entrants in the 2020 Kansas Soybean Performance Tests** 

Kansas Ag. Exp. Stn. (AES) Manhattan, KS 785-532-7243 University of Arkansas Fayetteville, AR	GDM Seeds, Inc DonMario, Virtue Gibson City, IL 217-784-8475	Monsanto St. Louis, MO 800-768-6387 aganytime.com/asgrow *maturity checks
479-575-6807  Biomineral Systems LLC South Bend, IN 574-222-1332	Midland Sylvester Seed Farm Ottawa, KS 800-819-7333 midlandgenetics.com	Nutrien Dyna-Gro Goddard, KS 316-794-2231
Corteva AgriSciences Johnston, IA 800-233-7333 pioneer.com * maturity checks	University of Missouri Portageville, MO 573-379-5431	Stratton Seed Stuttgart, AR 800-264-4433 strattonseed.com

## Dave Regher Farm, Riley, Riley County; Bill Schapaugh, agronomist

Planting conditions were no-till, with good soil moisture that allowed excellent closing of the furrow. Growing conditions were favorable throughout the year with the exception of July, which was a abnormally wet. There was fairly good grain fill. Harvest was dry with the exception of the plants being tough to thresh.

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 1.8
 3.0
 2.8
 9.6
 2.6
 1.5
 21.7

Planted 5/18/2020 at 155,000 seeds/ft; harvested 10/22/2020; 12 ft. by 4-row plot; pesticides: Pre- May 3, 0.5 lb/a 2-4D LV ester + 4 oz/a dicamba + 1 lb/a glyphosate in water treated with AMS. Post plant- May 20, 5 oz/a Authority XL + 3.2 oz/a Zidua SC + .375 lb/a Tri Cor [75% Mietribuzin]

Table 2. Riley, Riley County Dryland Soybean Performance Test, 2018-2020

			P	CRE YII	ELD, BU	SHELS			D AS %			2020	
BRAND	NAME	TRAIT	2020	2019	2018	2-Yr. AVG.	3-Yr. AVG.	TEST 2020	2019	AGE 2018	Mat	Lodge score	Ht (in)
ASGROW	AG35x9	RR2X	61.7	66.4		64.0		106	108		9/27	1.0	43
ASGROW	AG41x8	RR2X	58.6	64.4		61.5		101	105		10/3	1.0	49
BIOMINERAL	BIOMINERAL-SO	С	53.2					91			9/22	1.3	43
BIOMINERAL	BIOMINERAL-SY	С	55.7					96			9/21	1.3	43
CHECK	20MG3.1	RR	63.8					110			9/29	1.0	47
CHECK	20MG3.9	RR	57.9	55.5		56.7		99	91		10/3	1.0	45
CHECK	20MG4.8	RR	31.2					54			10/14	1.0	37
KANSAS AES	K16-1208	С	56.8					98			10/1	1.8	46
KANSAS AES	K16-1222	С	55.2					95			10/1	1.0	45
KANSAS AES	K16-1229	С	59.1					102			9/29	1.5	45
KANSAS AES	K16-1729	С	55.3					95			9/29	1.0	43
KANSAS AES	KS4117NS	C, STS	62.0	62.0	35.4	62.0	53.1	107	101	104	9/29	1.0	35
KANSAS AES	KS4120NSGT	RR1, STS	62.3	57.4		59.8		107	94		10/1	1.0	38
KANSAS AES	KS4520NS	C, STS	55.7	58.4		57.1		96	95		10/1	1.0	38
MIDLAND	3930NXS	RR2X	66.2	67.4		66.8		114	110		10/2	1.0	45
MIDLAND	3999E3	E3	64.8					111			10/1	1.0	43
MIDLAND	4140NXS	RR2X	60.0					103			10/4	1.0	50
MIDLAND	4251X	E3, STS	63.3					109			10/5	1.0	48
MIDLAND	4260E3S	RR2X, STS	63.5					109			10/2	1.0	42
	AVERAGES		58.2	61.3	34.1								
	CV (%)		6.9	5.7	8.2								
	LSD (0.10)		4.6	3.9	3.3								

# J.D. Hanna, Erma Harden Farm, Kiro, Shawnee County; Eric Adee, agronomist

Cold temperatures in May resulted in slow emergence. It was very dry in June, and very wet in July. Fairly good grain fill conditions in August.

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 2.9
 4.2
 4.4
 8.6
 1.0
 2.7
 24.2

Planted 5/18/2020 at 100,000 seeds/ft; harvested 10/12/2020; 10 ft. by 4-row plot; pesticides: Pre -May 20 applied Authority Maxx 5 oz/a + Cinch 1.5 pt/a + Liberty 32 oz/a + AMS; Post- June 22 applied Warrant Ultra 3 pt/a + Pursuit 4 oz/a + Zidua 2.7 oz/a + First Rate 0.3 oz/a

Table 3. Kiro, Shawnee County Dryland Soybean Performance Test, 2018-2020

			Α	CRE YII	ELD, BU	SHELS			D AS %			2020	
BRAND	NAME	TRAIT	2020	2019	2018	2-Yr. AVG.	3-Yr. AVG.	2020	2019	AGE 2018	Mat	Lodge score	Ht (in)
ASGROW	AG35x9	RR2X	68.7	82.9		75.8		96	100		9/23	2.5	43
ASGROW	AG41x8	RR2X	69.0	83.7		76.3		97	101		10/2	2.8	49
ASGROW	AG48x9	RR2X	72.1					101			10/9	2.5	48
BIOMINERAL	BIOMINERAL-SO	С	72.6					102			9/21	2.8	38
BIOMINERAL	BIOMINERAL-SY	С	68.0					95			9/23	2.8	42
CHECK	20MG3.1	RR	71.8	73.9		72.9		101	89		9/27	2.0	49
CHECK	20MG3.9	RR	68.1	66.1		67.1		95	80		10/1	1.5	45
CHECK	20MG4.8	RR	68.0					95			10/3	5.0	36
DONMARIO	DM 44X11	RR2X	71.0					99			10/7	3.8	49
DONMARIO	DM 49X13	RR2X	75.5					106			10/7	3.0	47
KANSAS AES	KS4117NS	C, STS	77.6	86.7	58.2	82.1	74.2	109	104	103	9/27	2.3	39
KANSAS AES	KS4120NSGT	RR1, STS	74.0	87.6		8.08		104	106		9/27	2.5	39
KANSAS AES	KS4520NS	C, STS	72.4	93.2		82.8		101	112		9/29	2.8	40
MIDLAND	3930NXS	RR2X	71.1	89.5		80.3		100	108		9/27	1.3	46
MIDLAND	3999E3	E3	72.5					102			9/29	2.3	42
MIDLAND	4140NXS	RR2X	67.5	91.8		79.6		94	111		10/3	3.0	49
MIDLAND	4251X	E3, STS	75.3					105			10/3	2.5	46
MIDLAND	4260E3S	RR2X, STS	79.1					111			10/3	2.5	42
MISSOURI	S15-10879C	С	55.8					78			9/29	4.5	43
VIRTUE SEEDS	V 3720S	С	70.5					99			9/24	1.3	40
VIRTUE SEEDS	V 4520S	С	68.6					96			10/9	1.8	48
VIRTUE SEEDS	V 4921S	С	76.6					107			10/7	3.0	42
	AVERAGES		71.4	83.0	57.7								
	CV (%)		6.0	6.0	11.3								
	LSD (0.10)		6.0	5.8	7.7								

## Kansas River Valley Experiment Field, Topeka, Shawnee County; Eric Adee, agronomist

Cold temperatures in May resulted in slow emergence. It was very dry in June, and very wet in July. Fairly good grain fill conditions in August. Irrigated 4 times in August, 2.1 inches.

 April Rainfall:
 May 3une 3.5
 July 4ug. 4ug. 5ept. 7otal
 Sept. 7otal

 Rainfall:
 3.5
 4.4
 3.0
 10.2
 1.0
 1.9
 24.6

 Irrigation:
 2.15
 2.15

Planted 5/18/2020 at 140,000 seeds/ft; harvested 10/12/2020; 10 ft. by 4-row plot; pesticides: Pre -May 19 applied Authority Maxx 5 oz/a + Cinch 1.5 pt/a + Liberty 32 oz/a + AMS; Post- June 22 applied Warrant Ultra 3 pt/a + Pursuit 4 oz/a + Zidua 2.7 oz/a + First Rate 0.3 oz/a

Table 4. Topeka, Shawnee County Irrigated Soybean Performance Test, 2018-2020

Table II Topolia	, Snawnee Count	y migatou v		CRE YII					D AS %	OF		2020	
					,	2-Yr.	3-Yr.		AVER/			Lodge	Ht
BRAND	NAME	TRAIT	2020	2019	2018	AVG.	AVG.	2020	2019	2018	Mat	score	(in)
ASGROW	AG35x9	RR2X	68.8	64.8		66.8		117	104		9/27	1.5	38
ASGROW	AG41x8	RR2X	55.4	59.1		57.2		94	95		9/29	1.8	44
ASGROW	AG48x9	RR2X	78.5					134			10/6	2.3	41
CHECK	20MG3.1	RR	54.4	63.4		58.9		93	102		9/27	2.0	42
CHECK	20MG3.9	RR	64.9	59.4		62.1		111	95		10/1	1.3	38
CHECK	20MG4.8	RR	56.5					96			10/7	1.8	35
DONMARIO	DM 44X11	RR2X	54.1					92			10/3	2.0	47
DONMARIO	DM 49X13	RR2X	50.7					86			10/5	2.5	42
KANSAS AES	KS4117NS	C, STS	58.0	65.1		61.5		99	104		9/26	1.3	33
KANSAS AES	KS4120NSGT	RR1, STS	60.1	62.2		61.1		102	100		9/26	1.5	32
KANSAS AES	KS4520NS	C, STS	62.8	66.9		64.8		107	107		9/28	2.3	36
MIDLAND	3711XS	RR2X, STS	66.9					114			9/27	1.3	46
MIDLAND	3930NXS	RR2X	64.8	74.6		69.7		111	119		9/29	1.3	41
MIDLAND	3999E3	E3	75.9					129			9/28	1.3	35
MIDLAND	4140NXS	RR2X	71.7	62.3		67.0		122	100		10/3	2.3	41
MIDLAND	4251X	E3, STS	70.7					120			10/4	1.5	42
MIDLAND	4260E3S	RR2X, STS	63.6					108			10/2	1.8	37
STRATTON	AGS GS42X19S	Xtend/STS	45.1					77			9/26	2.0	39
STRATTON	AGS GS49X21	Xtend	68.9					117			10/7	2.3	49
STRATTON	AGS GS52X19S	Xtend/STS	34.4					59			10/2	1.8	39
STRATTON	Go Soy 38E21S	Enlist/STS	57.9					99			9/29	1.3	31
STRATTON	Go Soy 43C17S	STS	55.5					95			9/27	1.0	34
STRATTON	Go Soy 463E20S	Enlist/STS	51.1					87			10/2	2.0	43
STRATTON	Go Soy 48C17S	STS	44.6					76			10/6	2.3	40
STRATTON	Go Soy 491E19S	Enlist/STS	44.5					76			10/9	1.8	49
STRATTON	Go Soy 49G16	RR	74.2					126			10/5	4.0	44
STRATTON	Go Soy 51E21	Enlist/STS	58.8					100			10/5	2.8	42
STRATTON	Go Soy 5214GTS	RR1	67.5					115			10/11	4.8	51
STRATTON	Go Soy GT Ireane	RR1	45.6					78			10/7	1.0	35
VIRTUE SEEDS	V 3720S	С	57.4					98			9/24	1.8	35
VIRTUE SEEDS	V 4520S	С	61.5					105			10/1	1.3	39
VIRTUE SEEDS	V 4921S	С	47.9					82			10/1	1.8	40
	AVERAGES		58.7	62.5	56.3								
	CV (%)		9.5	8.2	8.7								
	LSD (0.10)		7.8	6.0	5.7								

## East Central Kansas Experiment Field, Ottawa, Franklin County; Eric Adee, Dylan Walta, agronomists; Jim Kimball, technician

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 1.8
 4.2
 2.9
 4.2
 1.2
 1.5
 17.1

Planting conditions were good, with saturation after planting creating "damping off" resulting in some entries having stand reduction. The trial had adequate moisture up to August and then droughty conditions persisted through maturity with some intermittent rain in late August through September that allowed for pod-fill. Harvest conditions were excellent.

Planted 5/20/2020 at 140,000 seeds/ft; harvested 10/5/2020; 26 ft. by 4-row plot; pesticides: Pre- 7 oz/a Authority Maxx, 1.5 pt/a Dual II Mag (May 21st); Post- 12.5 oz/acCobra, 1 pt/a Dual II Magnum, 10 oz/a Select, 1 pt/a COC (July 6th)

Table 5. Ottawa, Franklin County Dryland Soybean Performance Test, Maturity Groups III-IV, 2018-2020

	·		ACRE YIELD, BUSHELS					YIELI	D AS %	OF		2020	
						2-Yr.	3-Yr.	TEST	AVER	AGE		Lodge	Ht
BRAND	NAME	TRAIT	2020	2019	2018	AVG.	AVG.	2020	2019	2018	Mat	score	(in)
ASGROW	AG35x9	RR2X	54.5	76.0		65.3		113	104		9/16	1.0	32
ASGROW	AG48x9	RR2X	45.0	71.9		58.5		94	98		10/1	1.0	40
CHECK	20MG3.1	RR	57.3	72.5		64.9		119	99		9/16	1.5	39
CHECK	20MG3.9	RR	51.3	72.4		61.8		107	99		9/24	1.0	34
DONMARIO	DM 44X11	RR2X	51.0					106			9/26	1.5	40
KANSAS AES	KS4117NS	C, STS	47.3	74.9	52.2	61.1	58.1	99	103	116	9/19	1.0	30
KANSAS AES	KS4120NSGT	RR1, STS	50.7	75.1		62.9		105	103		9/20	1.0	31
KANSAS AES	KS4520NS	C, STS	44.4	71.3		57.9		92	98		9/22	1.0	35
MISSOURI	S15-10879C	С	43.0					89			9/23	1.0	36
STRATTON	AGS GS42X19S	Xtend/STS	43.8					91			9/26	1.0	34
STRATTON	Go Soy 38E21S	Enlist/STS	56.9					118			9/16	1.0	30
STRATTON	Go Soy 43C17S	STS	47.3		49.4			98		110	9/21	1.0	32
STRATTON	Go Soy 463E20S	Enlist/STS	41.4					86			9/26	1.3	41
VIRTUE SEEDS	V 3720S	С	46.0					96			9/14	1.5	31
VIRTUE SEEDS	V 4520S	С	52.0					108			9/26	1.3	37
	AVERAGES		48.0	73.0	45.0								
	CV (%)		6.8	5.5	11.9								
	LSD (0.10)		4.6	4.6	6.2								

### East Central Kansas Experiment Field. Ottawa. Franklin County: Eric Adee. Dylan Walta agronomists: Jim Kimball. technician

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 1.8
 4.2
 2.9
 4.2
 1.2
 1.5
 17.1

Planting conditions were good, with saturation after planting creating "damping off" resulting in some entries having stand reduction. The trial had adequate moisture up to August and then droughty conditions persisted through maturity with some intermittent rain in late August through September that allowed for pod-fill. Harvest conditions were excellent.

Planted 5/20/2020 at 140,000 seeds/ft; harvested 10/12/2020; 26 ft. by 4-row plot; pesticides: Pre- 7 oz/a Authority Maxx, 1.5 pt/a Dual II Magnum (May 21st); Post- 12.5 oz/a Cobra, 1 pt/a Dual II Magnum, 10 oz/a Select, 1 pt/a COC (July 6th)

Table 6. Ottawa, Franklin County Dryland Soybean Performance Test, Maturity Groups IV-V, 2018-2020

			A	CRE YII	ELD, BU	SHELS		YIELI	D AS %	OF		2020	
						2-Yr.	3-Yr.	TEST	AVER	AGE		Lodge	Ht
BRAND	NAME	TRAIT	2020	2019	2018	AVG.	AVG.	2020	2019	2018	Mat	score	(in)
CHECK	20MG4.8	RR	54.6	72.0		63.3		112	104		10/8	1.0	34
DONMARIO	DM 49X13	RR2X	48.7					100			9/29	1.5	39
KANSAS AES	K15-1809	C, STS	58.8	75.4	61.2	67.1	65.1	121	109	110	10/8	1.0	34
KANSAS AES	K15-1874	C, STS	50.1	67.0	54.3	58.6	57.1	103	97	98	9/29	1.0	36
KANSAS AES	KS4919N	С	46.3	64.6	57.9	55.4	56.3	95	94	104	9/29	2.0	39
KANSAS AES	KS5004N	С	43.7	60.8	51.0	52.2	51.8	90	88	92	9/29	2.0	42
KANSAS AES	KS5120NS	C, STS	53.1	70.0	67.4	61.5	63.5	109	101	121	10/8	1.0	36
STRATTON	AGS GS49X21	Xtend	49.4					102			10/5	2.0	43
STRATTON	AGS GS52X19S	Xtend/STS	47.2					97			10/10	1.0	42
STRATTON	Go Soy 48C17S	STS	44.4					91			9/30	1.5	41
STRATTON	Go Soy 491E19S	Enlist/STS	47.7					98			10/3	1.0	48
STRATTON	Go Soy 49G16	RR	47.3		53.2			97		96	9/28	2.3	43
STRATTON	Go Soy 51E21	Enlist/STS	50.3					103			9/29	2.0	39
STRATTON	Go Soy 5214GTS	RR1	46.3					95			10/3	2.3	50
STRATTON	Go Soy GT Ireane	RR1	48.0					99			10/5	1.0	38
VIRTUE SEEDS	V 4921S	С	45.0					92			9/29	1.3	38
	AVERAGES		48.6	69.1	55.6								
	CV (%)		7.0	4.4	9.3								
	LSD (0.10)		4.1	3.6	6.1								

# Southeast Agricultural Research Center, Parsons, Labette County; Gretchen Sassenrath, agronomist; Lonnie Mengarelli, technician

Warm and great moisture at planting. Full season had an established root system and was able to come throught the dry summer very well. High humidity in the fall slowed down the drying process but harvest went very well.

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 3.7
 13.7
 1.0
 4.9
 1.5
 4.1
 33.2

Planted 6/9/2020 at 100,000 seeds/ft; harvested 11/5/2020; 14 ft. by 4-row plot; pesticides: 1.5 qt/a glyphosate, 2 pt/a Dual II Magnum, .5 lb/a metrobuzen, 6 oz/a Authority XL

Table 7. Parsons, Labette County Dryland Soybean Performance Test, Maturity Groups III-IV, 2018-2020

			A	CRE YII	ELD, BU	SHELS			D AS %			2020	
		·				2-Yr.	3-Yr.		AVER			Lodge	Ht
BRAND	NAME	TRAIT	2020	2019	2018	AVG.	AVG.	2020	2019	2018	Mat	score	(in)
ARKANSAS	R16-259	С	51.4					94			9/28	1.0	36
ASGROW	AG35x9	RR2X	49.6	55.5		52.5		91	108		9/22	1.0	31
CHECK	20MG3.1	RR	48.9	48.4		48.6		90	94		9/22	1.0	35
CHECK	20MG3.9	RR	53.6	48.1		50.9		98	93		10/1	1.0	35
DONMARIO	DM 44X11	RR2X	55.1					101			9/27	1.0	37
DYNA-GRO	DG S43XS70		62.8					115			10/3	1.0	36
DYNA-GRO	DG S44EN40		61.9					114			10/1	1.0	30
DYNA-GRO	DG S45ES10		56.9					104			9/30	1.0	34
DYNA-GRO	DG S46ES91		50.5					93			10/3	1.0	37
DYNA-GRO	DG S46XS60		62.9					115			10/1	1.0	33
KANSAS AES	KS4117NS	C, STS	52.4	49.9		51.2		96	97		9/24	1.0	25
KANSAS AES	KS4120NSGT	RR1, STS	50.8	51.2		51.0		93	99		9/24	1.0	25
KANSAS AES	KS4520NS	C, STS	51.2					94			9/21	1.0	29
MIDLAND	4488NXS	RR2X/STS	56.5		67.5			104		133	10/8	1.0	37
MIDLAND	4677NXS	RR2X/STS	60.6			53.3	55.1	111	89	115	10/7	1.0	42
MISSOURI	S15-10879C	С	44.7					82			9/20	1.0	32
STRATTON	AGS GS42X19S	Xtend/STS	57.9					106			9/17	1.0	34
STRATTON	Go Soy 38E21S	Enlist/STS	54.5					100			9/23	1.0	27
STRATTON	Go Soy 43C17S	STS	56.2	50.7	47.3	53.4	51.4	103	98	93	9/22	1.0	26
STRATTON	Go Soy 463E20S	Enlist/STS	51.5					95			10/5	1.0	38
VIRTUE SEEDS	V 3720S	С	55.2					101			9/20	1.0	30
VIRTUE SEEDS	V 4520S	С	59.0					108			9/27	1.0	32
	AVERAGES		54.5	51.6	50.9								
	CV (%)		5.9	6.7	9.6								
	LSD (0.10)		4.4	4.1	5.8								

# Southeast Agricultural Research Center, Parsons, Labette County; Gretchen Sassenrath, agronomist; Lonnie Mengarelli, technician

Warm and great moisture at planting. Full season had an established root system and was able to come throught the dry summer very well. High humidity in the fall slowed down the drying process but harvest went very well.

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 3.7
 13.7
 1.0
 4.9
 1.5
 4.1
 33.2

Planted 6/9/2020 at 100,000 seeds/ft; harvested 11/5/2020; 14 ft. by 4-row plot; pesticides: 1.5 qt/a glyphosate, 2 pt/a Dual II Magnum, .5 lb/a metrobuzen, 6 oz/a Authority XL

Table 8. Parsons, Labette County Dryland Soybean Performance Test, Maturity Groups IV-V, 2018-2020

	s, Labette County	•		CRE YII			•	YIELI	D AS %	OF		2020	
		•				2-Yr.	3-Yr.		AVER			Lodge	Ht
BRAND	NAME	TRAIT	2020	2019	2018	AVG.	AVG.	2020	2019	2018	Mat	score	(in)
ARKANSAS	R15-2422	С	58.3					99			10/6	1.0	38
ASGROW	AG48x9	RR2X	59.7	53.1		56.4		102	103		10/6	1.0	35
CHECK	20MG4.8	RR	59.8	51.9		55.9		102	101		10/10	1.0	30
DONMARIO	DM 49X13	RR2X	64.2					109			10/6	1.0	35
DYNA-GRO	DG S48XT90		63.5					108			10/6	1.0	35
DYNA-GRO	DG S49EN79		62.6					107			10/8	1.0	33
KANSAS AES	K15-1809	C, STS	62.2	53.3	55.0	57.7	56.8	106	104	102	10/12	1.0	28
KANSAS AES	K15-1874	C, STS	59.0	51.4	50.6	55.2	53.7	100	100	94	10/7	1.0	31
KANSAS AES	KS4919N	С	51.4	49.9	58.1	50.7	53.1	88	97	108	10/7	1.0	36
KANSAS AES	KS5004N	С	60.6	45.9	53.2	53.2	53.2	103	89	98	10/6	1.0	34
KANSAS AES	KS5120NS	C, STS	59.1	52.5	61.0	55.8	57.5	101	102	113	10/8	1.0	33
MIDLAND	4850X	RR2X, STS	61.4					104			10/6	1.0	35
MIDLAND	4880E3S	RR2X	59.5					101			10/7	1.0	43
MIDLAND	4991NXS	RR2X, STS	60.3					103			10/7	1.0	39
MISSOURI	S16-11644C	С	58.3					99			10/7	1.0	43
MISSOURI	S16-11651C	С	56.6					96			10/8	1.0	40
MISSOURI	S16-3747RY	R2Y	53.2					91			10/8	1.0	39
MISSOURI	S16-7922C	С	56.8					97			10/12	1.0	45
STRATTON	AGS GS49X21	Xtend	62.4					106			10/8	1.0	40
STRATTON	AGS GS52X19S	Xtend/STS	58.8					100			10/13	1.0	39
STRATTON	Go Soy 471E19S	Enlist, STS	56.2	50.2		53.2		96	98		9/28	1.0	29
STRATTON	Go Soy 48C17S	STS	53.2					91			10/6	1.0	37
STRATTON	Go Soy 491E19S	Enlist/STS	64.6					110			10/6	1.0	43
STRATTON	Go Soy 49G16	RR	53.7		59.6		56.7	91		110	10/5	1.0	41
STRATTON	Go Soy 51E21	Enlist/STS	59.1					101			10/8	1.0	35
STRATTON	Go Soy 5214GTS	RR1	52.4					89			10/9	1.0	47
STRATTON	Go Soy GT Ireane	RR1	60.5					103			10/12	1.0	38
VIRTUE SEEDS	V 4921S	С	57.6					98			10/6	1.0	32
	AVERAGES		58.8	51.3	54.0								
	CV (%)		4.9	6.6	10.7								
	LSD (0.10)		3.4	4.0	6.8								

# Southeast Agricultural Research Center, Parsons, Labette County; Gretchen Sassenrath, agronomist: Lonnie Mengarelli, technician

Test was practically dusted in. Moisture low, and it took a rainfall event to bring up the whold field. Not a lot of moisture during the first 3 months of growth. Abundant weed pressure due to lack of cannopy coverage, and chemical activation. Harvest went very well.

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 3.7
 13.7
 1.0
 4.9
 1.5
 4.1
 33.2

Planted 6/23/2020 at 100,000 seeds/ft; harvested 11/6/2020; 10 ft. by 4-row plot; pesticides: 1.5 qt/a glyphosate, 2 pt/a Dual II Magnum, .5 lb/a metrobuzen, 6 oz/a Authority XL

Table 9. Parsons, Labette County Double-Cropped Soybean Performance Test, Maturity Groups III-IV, 2020

			A	CRE YIE	ELD, BU	SHELS			D AS %			2020	
		•				2-Yr.	3-Yr.		AVER			Lodge	Ht
BRAND	NAME	TRAIT	2020	2019	2018	AVG.	AVG.	2020	2019	2018	Mat	score	(in)
ARKANSAS	R16-259	С	28.0					88			10/7	1.0	22
ASGROW	AG35x9	RR2X	25.8					81			10/2	1.0	21
CHECK	20MG3.1	RR	28.8					90			10/1	1.0	21
CHECK	20MG3.9	RR	34.6					108			10/7	1.0	21
DONMARIO	DM 44X11	RR2X	30.1					94			10/6	1.0	25
DYNA-GRO	DG S43XS70		38.6					121			10/8	1.0	27
DYNA-GRO	DG S44EN40		35.3					110			10/6	1.0	20
DYNA-GRO	DG S45ES10		30.4					95			10/9	1.0	21
DYNA-GRO	DG S46ES91		39.3					123			10/8	1.0	28
DYNA-GRO	DG S46XS60		41.1					128			10/11	1.0	24
KANSAS AES	KS4117NS	C, STS	29.1					91			10/4	1.0	19
KANSAS AES	KS4120NSGT	RR1, STS	33.0					103			10/3	1.0	17
KANSAS AES	KS4520NS	C, STS	28.2					88			10/4	1.0	21
MIDLAND	4488NXS	RR2X/STS	32.7					102			10/6	1.0	29
MIDLAND	4677NXS	RR2X/STS	29.5					92			10/11	1.0	25
MISSOURI	S15-10879C	С	30.5					95			10/8	1.0	23
STRATTON	AGS GS42X19S	Xtend/STS	36.3					114			10/4	1.0	22
STRATTON	Go Soy 38E21S	Enlist/STS	33.4					104			10/5	1.0	20
STRATTON	Go Soy 43C17S	STS	25.6					80			10/5	1.0	21
STRATTON	Go Soy 463E20S	Enlist/STS	35.8					112			10/13	1.0	26
VIRTUE SEEDS	V 3720S	С	29.1					91			10/3	1.0	21
VIRTUE SEEDS	V 4520S	С	32.9					103			10/6	1.0	23
	AVERAGES		32.0										
	CV (%)		12.5										
	LSD (0.10)		5.6										

# Southeast Agricultural Research Center, Parsons, Labette County; Gretchen Sassenrath, agronomist: Lonnie Mengarelli, technician

Test was practically dusted in. Moisturewas low, and it took a rainfall event to get plants to emerge. Not a lot of moisture during the first 3 months of growth. Abundant weed pressure due to lack of cannopy coverage, and chemical activation. Harvest went very well.

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 3.7
 13.7
 1.0
 4.9
 1.5
 4.1
 33.2

Planted 6/23/2020 at 100,000 seeds/ft; harvested 11/6/2020; 10 ft. by 4-row plot; pesticides: 1.5 qt/a glyphosate, 2 pt/a Dual II Magnum, .5 lb/a metrobuzen, 6 oz/a Authority XL

Table 10. Parsons, Labette County Double-Cropped Soybean Performance Test, Maturity Groups IV-V, 2020

			Α	CRE YII	ELD, BU	SHELS			O AS %			2020	
			0000	2042	0040	2-Yr.	3-Yr.		AVERA		N4-4	Lodge	Ht
BRAND	NAME	TRAIT	2020	2019	2018	AVG.	AVG.	2020	2019	2018	Mat	score	(in)
ARKANSAS	R15-2422	С	40.3					100			10/10	1.0	34
CHECK	20MG4.8	RR	37.2					92			10/16	1.0	23
DONMARIO	DM 49X13	RR2X	43.7					108			10/10	1.0	30
DYNA-GRO	DG S48XT90		43.5					107			10/10	1.0	27
DYNA-GRO	DG S49EN79		41.8					103			10/13	1.0	26
KANSAS AES	K15-1809	C, STS	43.8					108			10/15	1.0	24
KANSAS AES	K15-1874	C, STS	40.6					100			10/11	1.0	27
KANSAS AES	KS4919N	С	41.1					101			10/9	1.0	31
KANSAS AES	KS5004N	С	32.9					81			10/13	1.0	31
KANSAS AES	KS5120NS	C, STS	42.2					104			10/15	1.0	28
MIDLAND	4850X	RR2X, STS	43.4					107			10/11	1.0	28
MIDLAND	4880E3S	RR2X	42.1					104			10/15	1.0	36
MIDLAND	4991NXS	RR2X, STS	44.3					110			10/11	1.0	33
MISSOURI	S16-11644C	С	40.2					99			10/13	1.0	30
MISSOURI	S16-11651C	С	40.6					100			10/13	1.0	32
MISSOURI	S16-3747RY	R2Y	43.1					106			10/14	1.0	34
MISSOURI	S16-7922C	С	41.6					103			10/10	1.0	38
STRATTON	AGS GS49X21	Xtend	33.8					83			10/15	1.0	33
STRATTON	AGS GS52X19S	Xtend/STS	42.7					105			10/16	1.0	32
STRATTON	Go Soy 48C17S	STS	39.2					97			10/14	1.0	30
STRATTON	Go Soy 491E19S	Enlist/STS	41.0					101			10/12	1.0	33
STRATTON	Go Soy 49G16	RR	43.6					108			10/12	1.0	32
STRATTON	Go Soy 51E21	Enlist/STS	42.6					105			10/13	1.0	28
STRATTON	Go Soy 5214GTS	RR1	37.2					92			10/12	1.0	43
STRATTON	Go Soy GT Ireane	RR1	38.9					96			10/15	1.0	27
VIRTUE SEEDS	V 4921S	С	43.3					107			10/10	1.0	27
	AVERAGES	j	40.5								ĺ		
	CV (%)		8.6								ĺ		
	LSD (0.10)	į	4.8								ĺ		

# Vernon Egbert Farm, McCune, Crawford County; Bill Schapaugh, agronomist

It was a wet spring. Planting conditons were not the greatest; the field was cloddy, which made for uneven planting depth. Throughout the grain fill period there was good soil moisture.

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 5.4
 9.2
 0.3
 1.6
 2.5
 3.1
 26.5

Planted 7/1/2020 at 100,000 seeds/ft; harvested 11/7/2020; 12 ft. by 4-row plot; pesticides: no pre-emerge pesticide used

Table 11. McCune, Crawford County Dryland Soybean Performance Test, 2018-2020

	ne, Crawford Cou			CRE YIE					O AS % (	OF		2020	
		•				2-Yr.	3-Yr.	TEST	AVERA	GE		Lodge	Ht
BRAND	NAME	TRAIT	2020	2019	2018	AVG.	AVG.	2020	2019	2018	Mat	score	(in)
ARKANSAS	R15-2422	С	38.7					94			10/21	1.0	30
ARKANSAS	R16-259	С	38.7					94			10/18	1.0	28
ASGROW	AG35x9	RR2X	36.7					89			10/10	1.0	26
CHECK	20MG3.1	RR	40.1					97			10/10	1.0	25
CHECK	20MG3.9	RR	41.7					101			10/17	1.0	26
CHECK	20MG4.8	RR	43.8					106			10/28	1.0	29
DONMARIO	DM 44X11	RR2X	42.6					103			10/20	1.0	29
DONMARIO	DM 49X13	RR2X	44.7					109			10/23	1.0	27
KANSAS AES	K15-1809	C, STS	46.1		65.2		55.7	112		105	10/31	1.0	28
KANSAS AES	K15-1874	C, STS	43.9		62.6		53.5	107		100	10/24	1.0	29
KANSAS AES	KS4117NS	C, STS	34.0		61.3		47.7	82		98	10/14	1.0	19
KANSAS AES	KS4120NSGT	RR1, STS	35.8					87			10/14	1.0	20
KANSAS AES	KS4520NS	C, STS	36.4					88			0/15	1.0	23
KANSAS AES	KS4919N	С	46.1		63.8		55.0	112		102	10/24	1.0	33
KANSAS AES	KS5004N	С	40.4		54.5		47.5	98		87	10/21	1.8	33
KANSAS AES	KS5120NS	C, STS	44.6		63.3		54.1	108		102	10/28	1.0	28
MISSOURI	S15-10879C	С	40.1					97			10/14	1.0	22
MISSOURI	S16-11644C	С	45.0					109			10/25	1.8	28
MISSOURI	S16-11651C	С	38.1					93			11/2	2.0	35
MISSOURI	S16-3747RY	R2Y	40.7					99			10/29	1.8	36
MISSOURI	S16-7922C	С	40.6					99			11/3	3.3	34
STRATTON	AGS GS42X19S	Xtend/STS	43.9					107			10/15	1.0	25
STRATTON	AGS GS49X21	Xtend	45.1					109			10/28	1.0	34
STRATTON	AGS GS52X19S	Xtend/STS	37.8					92			11/2	1.0	31
STRATTON	Go Soy 38E21S	Enlist/STS	43.6					106			10/15	1.0	22
STRATTON	Go Soy 43C17S	STS	39.8		61.3		50.6	97		98	10/14	1.0	21
STRATTON	Go Soy 463E20S	Enlist/STS	42.3					103			10/21	1.0	26
STRATTON	Go Soy 48C17S	STS	38.5		57.9		48.2	93		93	10/25	1.0	30
STRATTON	Go Soy 491E19S	Enlist/STS	43.4					105			10/24	1.0	36
STRATTON	Go Soy 49G16	RR	42.8		62.4		52.6	104		100	10/25	2.5	33
STRATTON	Go Soy 51E21	Enlist/STS	44.7					109			10/25	1.0	27
STRATTON	Go Soy 5214GTS	RR1	40.6					99			10/31	3.0	37
STRATTON	Go Soy GT Ireane	RR1	39.4					96			11/2	1.0	32
VIRTUE SEEDS	V 3720S	С	38.8					94			10/14	1.0	24
VIRTUE SEEDS	V 4520S	С	44.0					107			10/17	1.0	26
VIRTUE SEEDS	V 4921S	С	43.4					105			10/21	1.0	26
	AVERAGES		41.2		62.3								
	CV (%)		6.2		5.5								
	LSD (0.10)		2.9		4.0								

# Dale Roberds Farm, Pittsburg, Cherokee County; Bill Schapaugh, agronomist

It was a wet spring. June had dry planting conditions, while July was wet. The growing conditions were good and had fair moisture throughout the grain fill period. 1.5 tons of turkey litter applied in Fall of 2019.

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 5.4
 9.2
 0.3
 1.6
 2.5
 3.1
 26.5

Planted 6/18/2020 at 155,000 seeds/ft; harvested 11/7/2020; 24 ft. by 4-row plot; pesticides: Pre- June 18 applied Trivents 4 oz/ a + germoxon 1.5 pt/a + Expond 3.8 oz/a

Table 12. Pittsburg, Cherokee County Dryland Soybean Performance Test, 2020

		_	Δ	CRE YII	ELD, BU	SHELS			D AS %		2020		
						2-Yr.	3-Yr.		AVERA			Lodge	Ht
BRAND	NAME	TRAIT	2020	2019	2018	AVG.	AVG.	2020	2019	2018	Mat	score	(in)
ARKANSAS	R15-2422	С	42.0					83			10/10	3.0	40
ARKANSAS	R16-259	С	51.7					102			10/9	1.0	41
ASGROW	AG35x9	RR2X	54.5					107			10/1	1.5	39
ASGROW	AG48x9	RR2X	56.0					110			10/11	1.0	42
CHECK	20MG3.1	RR	52.0					102			9/30	1.5	39
CHECK	20MG3.9	RR	53.4					105			10/7	1.0	36
CHECK	20MG4.8	RR	48.2					95			10/15	2.8	33
DONMARIO	DM 44X11	RR2X	48.0					94			10/11	2.5	36
DONMARIO	DM 49X13	RR2X	51.6					101			10/9	1.5	34
KANSAS AES	K15-1809	C, STS	54.3					107			10/21	2.8	37
KANSAS AES	K15-1874	C, STS	54.7					107			10/14	2.5	39
KANSAS AES	KS4919N	С	57.6					113			10/14	2.8	40
KANSAS AES	KS5004N	С	48.3					95			10/12	3.3	46
KANSAS AES	KS5120NS	C, STS	59.8					117			10/21	2.8	43
MIDLAND	4488NXS	RR2X/STS	62.5					123			10/12	1.5	41
MIDLAND	4677NXS	RR2X/STS	55.9					110			10/16	1.3	49
MIDLAND	4850X	RR2X, STS	52.7					103			10/11	1.8	35
MIDLAND	4880E3S	RR2X	44.5					87			10/12	1.5	52
MIDLAND	4991NXS	RR2X, STS	58.5					115			10/14	1.8	44
STRATTON	AGS GS42X19S	Xtend/STS	50.2					99			10/3	1.8	37
STRATTON	AGS GS49X21	Xtend	52.8					104			10/18	1.8	45
STRATTON	AGS GS52X19S	Xtend/STS	37.9					74			10/18	1.0	35
STRATTON	Go Soy 38E21S	Enlist/STS	57.2					112			9/29	1.0	36
STRATTON	Go Soy 43C17S	STS	48.6					95			9/27	1.0	29
STRATTON	Go Soy 463E20S	Enlist/STS	49.7					98			10/9	1.5	37
STRATTON	Go Soy 48C17S	STS	38.6					76			10/14	2.8	47
STRATTON	Go Soy 491E19S	Enlist/STS	44.8					88			10/13	2.3	49
STRATTON	Go Soy 49G16	RR	55.2					108			10/14	3.5	45
STRATTON	Go Soy 51E21	Enlist/STS	53.2					104			10/14	2.3	42
STRATTON	Go Soy 5214GTS	RR1	49.8					98			10/18	3.0	51
STRATTON	Go Soy GT Ireane	RR1	46.1					90			10/19	1.8	42
VIRTUE SEEDS	V 4520S	С	53.5					105			10/6	1.3	39
VIRTUE SEEDS	V 4921S	С	47.8					94			10/7	1.0	34
	AVERAGES	j	50.9										
	CV (%)	j	6.9										
	LSD (0.10)	ĺ	4.1										

## North Central Experiment Field, Scandia, Republic County; Scott Dooley, agronomist

July Aug. Sept. Total

1.4 17.6

2.0

0.6

2.0

<u>April</u>

0.4

Rainfall:

Irrigation:

May June

4.0

8.3

2.8

Some plots suffered Dicamba damage in mid-July. Due to staff reorganization, its hard to say when the damage occurred. Most plants recovered or were partially stunted. Plentiful rain through July. Dry conditions in August may have slightly reduced pod filling. Irrigation was utilized in order to sustain pod filling. Mild temperatures for most of the growing season. No significant disease or insect pressure.

Planted 5/19/2020 at 167,000 seeds/ft; harvested 10/14/2020; 26 ft. by 2-row plot; pesticides: 6/23/20: 2 qt/a Makaze, 16 oz/a Intensity One

Table 13. Scandia, Republic County Irrigated Soybean Performance Test, 2018-2020

			A	CRE YI	ELD, BU	SHELS		YIELI	D AS %	OF	2020			
		•				2-Yr.	3-Yr.	TEST	AVER	AGE		Lodge	Ht	
BRAND	NAME	TRAIT	2020	2019	2018	AVG.	AVG.	2020	2019	2018	Mat	score	(in)	
ASGROW	AG35x9	RR2X	59.7	66.1		62.9		99	104	-			43	
ASGROW	AG41x8	RR2X	60.4	59.9		60.1		100	94				46	
ASGROW	AG48x9	RR2X	60.1					100					47	
CHECK	20MG3.1	RR	73.3	61.7		67.5		122	97			1.0	50	
CHECK	20MG3.9	RR	57.7	62.4		60.1		96	98			1.0	45	
KANSAS AES	KS4117NS	C, STS	66.0	64.0	51.3	65.0	60.4	110	101	104		1.0	38	
KANSAS AES	KS4120NSGT	RR1, STS	55.3	61.4		58.3		92	97			1.0	33	
KANSAS AES	KS4520NS	C, STS	49.7	64.4		57.1		83	101			1.0	37	
MIDLAND	3537NX	RR2X	65.7	67.7	51.3	66.7	61.6	109	107	104		1.0	45	
MIDLAND	3711XS	RR2X, STS	66.7					111				1.0	53	
MIDLAND	3930NXS	RR2X	69.5	64.7		67.1		115	102				48	
MIDLAND	3999E3	E3	64.9					108				1.0	37	
VIRTUE SEEDS	V 3720S	С	49.8					83				1.0	37	
	AVERAGES	ĺ	60.3	63.5	49.5									
	CV (%)	ĺ	10.6	4.7	12.4									
	LSD (0.10)	ĺ	9.0	4.1	8.4									

# North Central Kansas Experiment Field, Belleville, Republic County; Scott Dooley, agronomist

Some plots suffered Dicamba damage in mid-July. Due to staff reorganization, its hard to say when the damage occurred. Most plants recovered or were partially stunted. Plentiful rain through July. Dry conditions in August may have slightly reduced pod filling. Mild temperatures for most of the growing season. No significant disease or insect pressure.

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 0.5
 2.5
 2.5
 6.3
 0.4
 1.6
 13.7

Planted 5/15/2020 at 142,000 seeds/ft; harvested 10/15/2020; 23 ft. by 4-row plot; pesticides: 3/30/20: 1.5 qt/a Makaze, 8 oz/a Rifle, 1.5 pt/a Salvo; 6/22/20: 2 qt/a Makaze, 16 oz/a Intensity One, 0.6 oz/a First Rate

Table 14. Belleville, Republic County Dryland Soybean Performance Test, 2018-2020

-			A	CRE YI	ELD, BU	SHELS		YIELI	D AS %	OF	2020			
		•				2-Yr.	3-Yr.		AVER		Lodge		Ht	
BRAND	NAME	TRAIT	2020	2019	2018	AVG.	AVG.	2020	2019	2018	Mat	score	(in)	
ASGROW	AG35x9	RR2X	78.5					126					35	
ASGROW	AG41x8	RR2X	69.5					111					43	
ASGROW	AG48x9	RR2X	58.8					94					41	
CHECK	20MG3.1	RR	72.4					116					42	
CHECK	20MG3.9	RR	73.1					117					43	
KANSAS AES	KS4117NS	C, STS	52.7		61.7			84		106			33	
KANSAS AES	KS4120NSGT	RR1, STS	63.6					102					31	
KANSAS AES	KS4520NS	C, STS	45.5					73					33	
MIDLAND	3930NXS	RR2X	65.7					105					40	
MIDLAND	3999E3	E3	67.6					108					31	
MIDLAND	4140NXS	RR2X	71.9					115					40	
MIDLAND	4260E3S	RR2X, STS	50.1					80					32	
VIRTUE SEEDS	V 3720S	С	57.1					91					31	
	AVERAGES		62.5		58.1									
	CV (%)		10.4		5.8									
	LSD (0.10)		9.0		4.6									

# Clayton Short Farm, Assaria, Saline County; Bill Schapaugh, agronomist

Planting conditions were not the best: the ground was cloddy, which made it difficult to keep a consistent planting depth and resulted in inadequate furrow closure. Fairly good seed fill conditions.

 April
 May
 June
 July
 Aug.
 Sept.
 Total

 Rainfall:
 2.0
 5.1
 1.3
 8.7
 1.3
 2.1
 20.6

Planted 6/2/2020 at 155,000 seeds/ft; harvested 10/19/2020; 12 ft. by 4-row plot; pesticides: Pre- 8 oz/a Authority Supreme, which was incorpated into the soil before planting.

Table 15. Assaria, Saline County Dryland Soybean Performance Test, 2018-2020

				CRE YI	ELD, BU	SHELS		YIELI	D AS %	OF	2020			
BRAND	NAME	TRAIT	2020	2019	2018	2-Yr. AVG.	3-Yr. AVG.		TEST AVERAGE 2020 2019 2018		Mat	Lodge	Ht (in)	
DRAND	INAIVIE	IKAII	2020	2019	2010	AVG.	AVG.	2020	2019	2010	iviat	score	(in)	
ASGROW	AG35x9	RR2X	57.6	66.0		61.8		97	113		9/28	1.0	40	
ASGROW	AG41x8	RR2X	49.4	63.7		56.5		83	109		10/7	1.0	38	
CHECK	20MG3.1	RR	59.9	52.3		56.1		101	89		9/30	1.0	44	
CHECK	20MG3.9	RR	59.8	63.2		61.5		101	108		10/5	1.0	43	
DONMARIO	DM 44X11	RR2X	62.1					105			10/10	1.0	42	
DONMARIO	DM 49X13	RR2X	55.0					93			10/9	1.0	47	
VIRTUE SEEDS	V 3720S	С	60.8					103			10/13	1.0	43	
VIRTUE SEEDS	V 4520S	С	63.6					107			9/28	1.0	31	
VIRTUE SEEDS	V 4921S	С	61.4					103			10/6	1.0	40	
	<b>AVERAGES</b>		59.3	58.7	50.8									
	CV (%)		5.6	4.8	8.4									
	LSD (0.10)		3.9	3.3	5.0									

Table 16. Yield as a Percentage of Test Average from 2020Soybean Tests

BRAND/NAME	Riley	Topeka dryland	Topeka irrigated	Ot MG4	tawa 1 MG5	Parso MG4		Parsor MG 4	s DC MG 5	McCune	Pittburg		Belle- ville	Assaria	AVG
ADIZANICAC															
ARKANSAS R15-2422							99		100	94	83				94
R16-259						94		88		94	102				93
ASGROW															
AG35x9	106	96	117	113		91		81		89	107	99	126	97	102
AG41x8	101	97	94									100	111	83	98
AG48x9		101	134	94			102				110	100	94		105
BIOMINERAL BIOMINERAL-SO	91	102													96
BIOMINERAL-SY	96	95													95
CHECK															
20MG3.1	110	101	93	119		90		90		97	102	122	116	101	104
20MG3.9	99	95	111	107		98		108		101	105	96	117	101	103
20MG4.8	54	95	96		112		102		92	106	95				94
DONMARIO DM 44X11		99	92	106		101		94		103	94			105	99
DM 49X13		106	86		100		109		108	109	101			93	101
DYNA-GRO															
DG S43XS70						115		121							118
DG S44EN40						114		110							112
DG S45ES10						104		95							100
DG S46ES91						93		123							108
DG S46XS60						115		128							122
DG S48XT90							108		107						108
DG S49EN79							107		103						105
<b>KANSAS AES</b> K15-1809					121		106		108	112	107				111
K15-1874					103		100		100	107	107				104
K16-1208	98														98
K16-1222	95														95
K16-1229	102														102
K16-1729	95														95
KS4117NS	107	109	99	99		96		91		82		110	84		97
KS4120NSGT	107	104	102	105		93		103		87		92	102		99
KS4520NS	96	101	107	92		94		88		88		83	73	3	9
KS4919N					95		88		101	112	113				102
KS5004N					90		103		81	98	95				93
KS5120NS					109		101		104	108	117				108

Table 16 continued. Yield as a Percentage of Test Average from 2020Soybean Tests

BRAND/NAME	Riley		Topeka irrigated	Ot MG4	tawa 4 MG5	Parso MG4		Parson MG 4	s DC MG 5	McCune	Pittburg	Scandia	Belle- ville	Assaria	AVG
MIDLAND															
3537NX												109			109
3711XS			114									111			112
3930NXS	114	100	111									115	105	5	109
3999E3	111	102	129									108	108	3	112
4140NXS	103	94	122										115	5	109
4251X	109	105	120												112
4260E3S	109	111	108										80	)	102
4488NXS						104		102			123				110
4677NXS						111		92			110				104
4850X							104		107		103				105
4880E3S							101		104		87				98
4991NXS							103		110		115				109
MISSOURI S15-10879C		78		89		82		95		97					88
S16-11644C							99		99	109					103
S16-11651C							96		100	93			-		96
S16-3747RY							91		106	99					99
S16-7922C							97		103	99					99
STRATTON															
AGS GS42X19S			77	91		106		114		107	99				99
AGS GS49X21			117		102		106		83	109	104				104
AGS GS52X19S			59		97		100		105	92	74				88
Go Soy 38E21S			99	118		100		104		106	112				106
Go Soy 43C17S			95	98		103		80		97	95				95
Go Soy 463E209	S		87	86		95		112		103	98				97
Go Soy 471E199	S						96								96
Go Soy 48C17S			76		91		91		97	93	76				87
Go Soy 491E198	S		76		98		110		101	105	88				96
Go Soy 49G16			126		97		91		108	104	108				106
Go Soy 51E21			100		103		101		105	109	104				104
Go Soy 5214GT	S		115		95		89		92	99	98				98
Go Soy GT Irear	ne		78		99		103		96	96	90				94
/IRTUE SEEDS															
V 3720S		99	98	96		101		91		94		83	91		95
V 4520S		96	105	108		108		103		107	105				105
V 4921S		107	82		92		98		107	105	94			103	99

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Table 17. Description of Entries in 2020 Soybean Performance Tests

			Maturity	Flower	Hilum		S	CNI	Resista	ance	Phy	tophthora
BRAND N	NAME	TRAIT	Group	color	color	R1	R3	R4	R14	Source	RR	Tolerance
ARKANSAS R	15-2422	С	4.7	Р			-	-	-			
ARKANSAS R	16-253	С	4.6	W								
ARKANSAS R	16-259	С	4.6	Р								-
ASGROW A	.G35x9	RR2X	3.4			-		-	-		-	
ASGROW A	.G41x8	RR2X	4.2									
ASGROW A	.G48x9	RR2X	5.1									-
BIOMINERAL B	IOMINERAL-SO	С	3.0				_	-		-		
BIOMINERAL B	IOMINERAL-SY	С	3.0									-
CHECK 20	0MG3.1	RR	3.0				_	-				
CHECK 20	0MG3.9	RR	4.0									
CHECK 20	0MG4.8	RR	5.0									
DONMARIO D	M 44X11	RR2X	4.0									
	M 49X13	RR2X	4.9									
DYNA-GRO D	G S43XS70		4.3					_				
DYNA-GRO D	G S44EN40		4.4									
DYNA-GRO D	G S45ES10		4.5									
DYNA-GRO D	G S46ES91		4.6									
DYNA-GRO D	G S46XS60		4.6									
DYNA-GRO D	G S48XT90		4.8									
DYNA-GRO D	G S49EN79		4.9									-
KANSAS AES K	15-1809	C, STS	5.0	Р	Bf				-			
KANSAS AES K	15-1874	C, STS	4.0	W	Br							
KANSAS AES K	16-1208	С	4.0									
KANSAS AES K	16-1222	С	4.0									
KANSAS AES K	16-1229	С	4.0									-
KANSAS AES K	16-1729	С	4.0									-
KANSAS AES K	S4117NS	C, STS	4.0	Р	Bl		R		MR			
KANSAS AES K	S4120NSGT	RR1, ST	4.1									-
KANSAS AES K	S4520NS	C, STS	4.0									-
KANSAS AES K	S4919N	С	5.0	W	ВІ							
KANSAS AES K	S5004N	С	5.0				R		MR			
KANSAS AES K	S5120NS	C, STS	5.0	W	Br							
KANSAS AES K	S5518	С	5.0	w	Bf							
MIDLAND 3	537NX	RR2X	3.5				R	-	MR	PI88788		2.0
MIDLAND 3	711XS	RR2X, S	3.7							PI88788		-
MIDLAND 39	930NXS	RR2X	3.9							PI88788		-
MIDLAND 39	999E3	E3	3.9							PI88788		
MIDLAND 4	140NXS	RR2X	4.1							PI88788		3.0
MIDLAND 42	251X	E3, STS	4.2				-			PI88788		
MIDLAND 42	260E3S	RR2X, S	4.2							PI88788		
MIDLAND 4	488NXS	RR2X/S	4.4				R		R	PI88788		2.0
MIDLAND 40	677NXS	RR2X/S	4.6				R		MR	PI88788		2.0

Table 17 continued. Description of Entries in 2020 Soybean Performance Tests

			Maturity	Flower	Hilum		S	CN F	Resist	ance	Phy	rtophthora	
BRAND	NAME	TRAIT	Group	color	color	R1	R3	R4	R14	Source	RR	Tolerance	
MIDLAND	4850X	RR2X, S	4.8			-			-	-	-		
MIDLAND	4880E3S	RR2X	4.8									-	
MIDLAND	4991NXS	RR2X, S	4.9							PI88788			
MISSOURI	S15-10879C	С	4.1	W	Bf	R				-			
MISSOURI	S16-11644C	С	4.9	W	Br		MR					1.0	
MISSOURI	S16-11651C	С	5.3	W	BI		MR				1a		
MISSOURI	S16-3747RY	R2Y	5.0	W		MR	MR						
MISSOURI	S16-7922C	С	4.9	W	lb	S	MR						
STRATTON	AGS GS42X19S	Xtend/S	4.2	Р	lb		R	-	R	PI88788		-	
STRATTON	AGS GS49X21	Xtend	4.9	Р	BI		R		R	PI88788		-	
STRATTON	AGS GS52X19S	Xtend/S	5.2	W	Bf		R		R	PI88788		-	
STRATTON	Go Soy 38E21S	Enlist/S	3.8	W	Br		R		R	PI88788		-	
STRATTON	Go Soy 43C17S	C/STS	4.3	Р	BI							-	
STRATTON	Go Soy 463E20S	Enlist/S	4.6	Р	lb		R		R	PI88788		-	
STRATTON	Go Soy 471E19S	Enlist, S	4.7	W	lb							-	
STRATTON	Go Soy 48C17S	STS	4.1	Р	BI		R		R	PI88788		2.0	
STRATTON	Go Soy 491E19S	Enlist/S	4.9	W	Bf		R		R	PI88788		_	
STRATTON	Go Soy 49G16	RR	4.9	Р	BI	R	R		R	Hartwig		2.0	
STRATTON	Go Soy 51E21	Enlist/S	5.1	W	Bf		R		R	PI88788		-	
STRATTON	Go Soy 5214GTS	RR1	5.2	Р	BI	R	R	R	R	Hartwig			
STRATTON	Go Soy GT Ireane	RR1	4.9	W	Bf		R			Peking			
VIRTUE SEEDS	V 3720S	С	3.7				-	-		-			
VIRTUE SEEDS	V 4520S	С	4.5										
VIRTUE SEEDS	V 4921S	С	4.9										

To access crop performance testing information electronically, visit our website. The information contained in this publication, plus more, is available for viewing or downloading at:

## www.agronomy.k-state.edu/services/crop-performance-tests/index.html

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Permission is hereby given to Kansas State University (KSU) to test varieties and/or hybrids designated on the attached entry forms in the manner indicated in the test announcements. I certify that seed submitted for testing is a true sample of the seed being offered for sale.

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