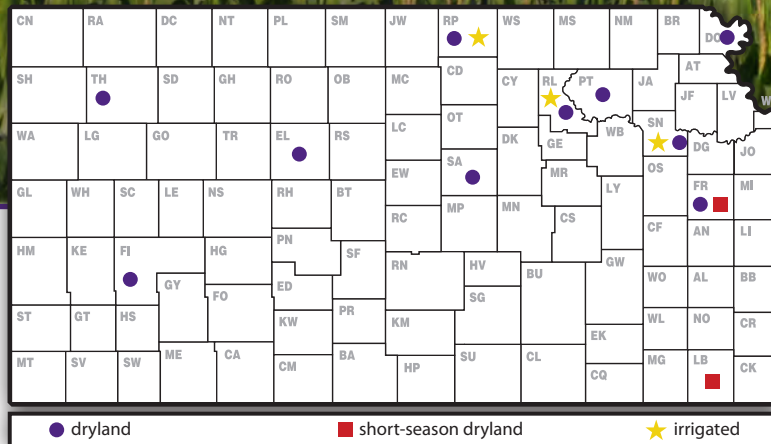
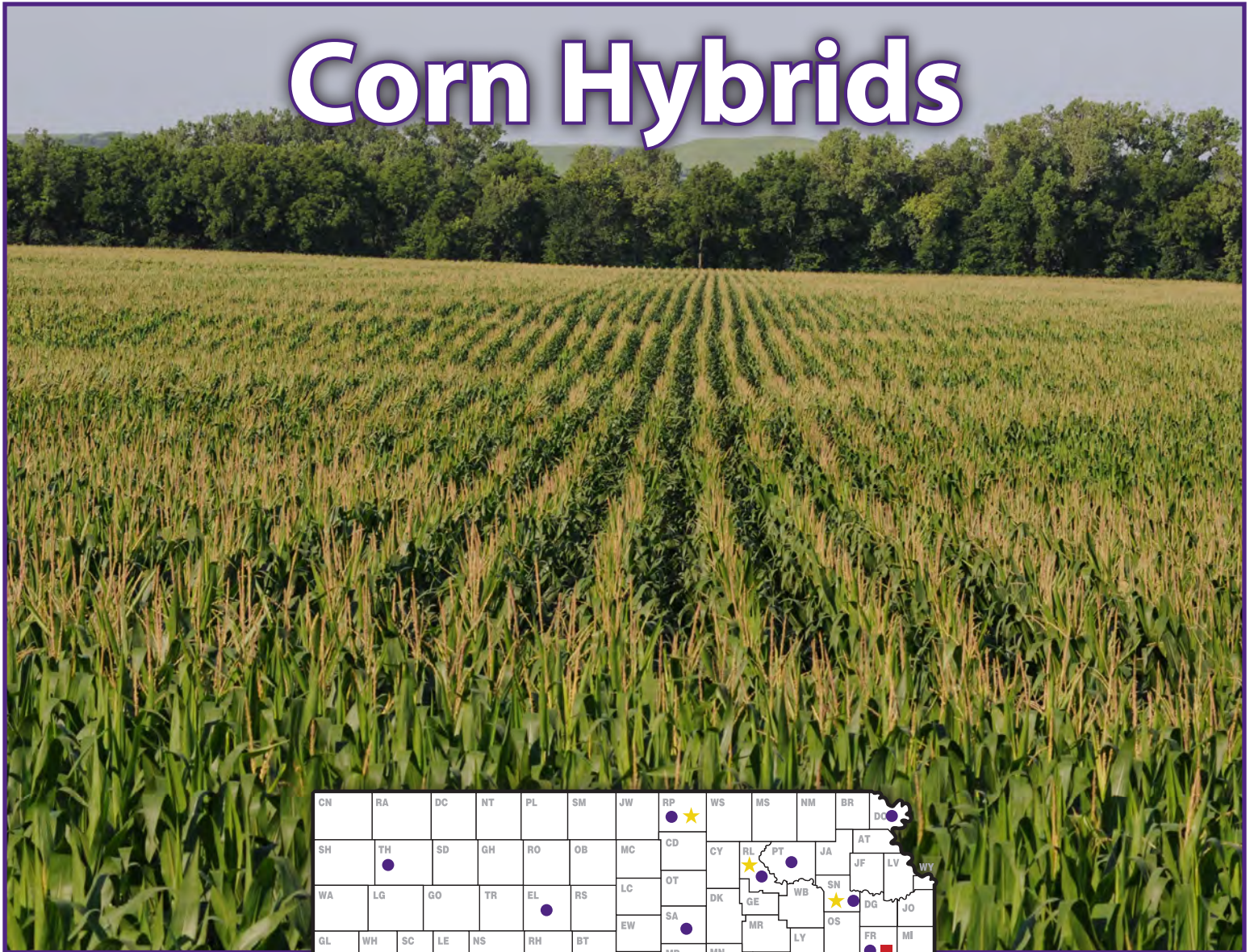


2019 Kansas Performance Tests with

Corn Hybrids



Report of Progress 1152



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2019 CORN CROP REVIEW

Statewide Growing Conditions

The 2019 corn season had a very distinct weather pattern with different effects on the east, central, and western parts of the state. Wet conditions in the spring delayed planting across the state. In addition, many fields presented early-season problems with lack of uniformity that affected early growth and progress of the crop. Uneven corn stands can cause yield losses.

Overall, for the early-planted corn, pollination was under adequate temperature and moisture conditions, but this varied across the state. Grain fill period was more favorable for corn yields for most areas of the state. Late-planted corn reached pollination later in the season with potential better weather environments, but in some situations increasing the probability of freezing before the end of the season.

Environments with adequate timing and quantity of precipitation during the growing season expressed high yield potential, with the opposite occurring when precipitation was erratic during the most critical corn growth stages (e.g., late-vegetative, flowering, or grain filling periods). For the western region, the planted corn faced more favorable weather conditions and expressed close to maximum yields for each environment.

Hail was a problem across the state. There were 712 reports of large hail through August 31. Of those events, 299 were reported in May. Hail has a larger impact when it occurs around flowering time or during the grain filling, when the plant depends on the leaves, potentially affecting grain number and seed 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 the Southwest, where the divisional average was 15.37 inches, or 95% of normal. The Southeast division faced the greatest excess, with an average of 47.98 inches, or 158% of normal. At the Parsons station, rainfall jumped above normal in early April and continued above normal for the rest of the season. Tribune, in the West Central Division, had the most favorable moisture distribution, with near normal conditions throughout the season.

Temperatures weren't as much of a factor, although some late planted fields reached critical growth stages during the warmest part of the summer. The warmest readings were seen in mid-July, with the highest read of 108°F reported on July 20th at Webster Dam, Rush County and August 1 at Lakin, Kearny County.

The first autumn freezes were near average, with Colby dropping to 32°F on October 10, and Columbus reaching 27°F on October 31.

Table 1. 2019 temperatures by crop production district

Division	Extreme Tmax (°F)	Date	Avg Tmax (°F)	Avg Tmin (°F)	Avg Tmean (°F)	Extreme Tmin (°F)	Date
Northwest	107	18-Jul	78.2	49.9	64.1	3	31-Oct
North Central	108	20-Jul	78.4	54.0	66.2	10	31-Oct
Northeast	102	18-Jul	77.5	56.1	66.8	16	31-Oct
West Central	107	21-Jul	79.4	50.3	64.8	2	31-Oct
Central	107	1-Aug	79.5	54.7	67.1	10	29-Oct
East Central	102	21-Jul	78.0	57.1	67.5	15	31-Oct
Southwest	108	1-Aug	82.0	52.9	67.5	4	31-Oct
South Central	106	1-Aug	80.2	56.27	68.245	11	31-Oct
Southeast	100	12-Aug	79.2	58.6	68.9	13	31-Oct

Unfortunately, the below-freezing temperatures did affect some of the corn that was planted late, impacting the final grain weight. Corn is affected when temperatures are below or at 32°F. The colder below 32°F, the less exposure time it takes to damage the corn. However, corn is not affected once the black layer (physiologically mature) is formed.

In some areas of the state, wet conditions during the late reproductive stage (close to harvest time) favored diseases in corn ears such as Diplodia ear and stalk rot. Diplodia ear rot, producing white moldy growth, affected cornfields across the state and impacted the final weight and overall grain quality. In addition to the disease issue, late-season rainy conditions delayed harvest in many areas across the state, challenging the harvest progress.

Despite the previously mentioned challenges, the USDA National Agricultural Statistics Service reported (11/08/2019) an overall corn yield of 133 bushels per acre for the state of Kansas for the 2019 growing season (4 bushels above from the 2018 average), and with a final production estimate of 798 million of bushels, 153 million up from the 2018 average (Ignacio A Ciampitti, Kansas State University Cropping Systems Specialist, and Mary Knapp, Kansas State University Climatologist).

Diseases

Total yield loss from corn diseases was below the long-term average. Gray leaf spot got off to a slow start but was near normal levels by seasons end. Southern rust had its earliest arrival ever, being first reported on July 13. Hot, dry weather stalled its initial development, but August rains contributed to late season increases.

Many growers had decisions to make regarding late season fungicide applications. An unusually high amount of Physoderma leaf blight was present in northeast and north central Kansas in 2019. High incidences of the disease were also reported in Nebraska and Iowa. Research is underway evaluating the effectiveness of fungicides as a management tool.

Ear rots were present at a lower incidence than in recent seasons with very little Aspergillus ear rot (aflatoxin) being reported. Fusarium ear rot was the most common, however, there have been few reports of high fumonisin levels in the grain. Diplodia ear rot was present, but at lower levels than the past three years.

Due to optimal conditions favorable for development, Fusarium stalk rot was prevalent in many fields. In a few fields that experienced mid-season drought, charcoal rot was present. Diplodia stalk rot was

observed in some southwest Kansas fields that received unusually high amounts of rainfall. Bacterial leaf streak was identified in several new counties in 2019. Its effect on yield is still being researched.

Other diseases observed in 2019 included crazy top downy mildew, common smut, common rust, and northern corn leaf blight. (Doug Jardine, Kansas State University Department of Plant Pathology)

Insects

The 2019 growing season was relatively pest free. Not completely pest free-but there were not too many problems reported and good growing conditions helped to mitigate many of those before they really had much of a negative impact. There were once again some spider mite problems in southwestern Kansas, however, even those were not as problematic as in past years.

One insect pest that does seem to be increasing in Kansas is the Japanese beetle. The adults can be voracious feeders on silks but the larvae, which are white grubs, feed on the roots. These insects have been a problem for many years in states east of Kansas, mainly in Iowa, Indiana, and Illinois. However, they have been causing concern in the northeastern quadrant of Kansas for a few years but seem to be increasing in numbers within that quadrant. They are also migrating farther through the eastern half of the state.

Also had a few reports of insecticide applications for adult western corn rootworm control in southwest Kansas, which worked well. Otherwise, it seemed to be a relatively quiet year for corn pests throughout Kansas. (Jeff Whitworth, Kansas State University Department of Entomology)

2019 PERFORMANCE TESTS

Objectives and Procedures

Corn performance tests, conducted annually by the Kansas Agricultural Experiment Station, provide farmers, extension workers, and seed industry personnel with unbiased agronomic information on many of the corn hybrids marketed in the state. Entry fees from private seed companies finance the tests. Because entry selection and location are voluntary, not all hybrids grown in the state are included in tests, and the same group of hybrids is not grown uniformly at all test locations. Most companies submit seed treated with systemic insecticides, which can affect yield in some situations. A column listing insecticide seed treatments for each hybrid is included in Table 9 to help interpret yield results.

Three to four plots (replications) of each hybrid were grown at each location in a randomized complete-block design. Each harvested plot consisted of two rows trimmed to a specific length, ranging from 20 to 30 feet at the different locations.

Explanatory information is given in summaries preceding data for each test. Tables 2 through contain results from the individual performance tests. Hybrids are listed together by company name. A summary of growing season precipitation data is given for individual test discussions. General trends in precipitation relative to normal are readily observed in the graphs.

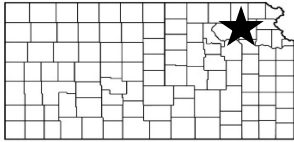
Test results are not reported if the data is deemed inconclusive and or affected more by environmental conditions than by genetic differences. The test at Erie in Neosho County was lost to flooding early in the season. The test at Macksville in Stafford County was affected by heavy rains prior to emergence. The irrigated tests at Colby in Thomas County, Tribune in Greeley County, and Garden City in Finney County were afflicted with strong winds that caused significant ear drop prior to harvest.

Grain yields are reported as bushels per acre of shelled grain (56 lb/bu) adjusted to a moisture content of 15.5%. Yields also are presented as percentage of test average to speed recognition of highest-yielding hybrids. Hybrids yielding more than 100% of the test average year after year merit consideration. Adaptation to individual farms for appropriate maturity, stalk strength, and other factors also must be considered.

Small differences in yield should not be overemphasized. Relative ranking and large differences are better indicators of performance. Least significant differences (LSD) are shown at the bottom of each table. Unless two hybrids differ by at least the LSD shown, little confidence can be placed in one being superior to the other. Yield values in the top LSD group in each test are displayed in bold. The coefficient of variability (CV) can be used in combination with the LSD to estimate the degree of confidence one can have in published data from replicated tests.

Table 2. Companies entering hybrids in the 2019 Kansas Corn Performance Tests

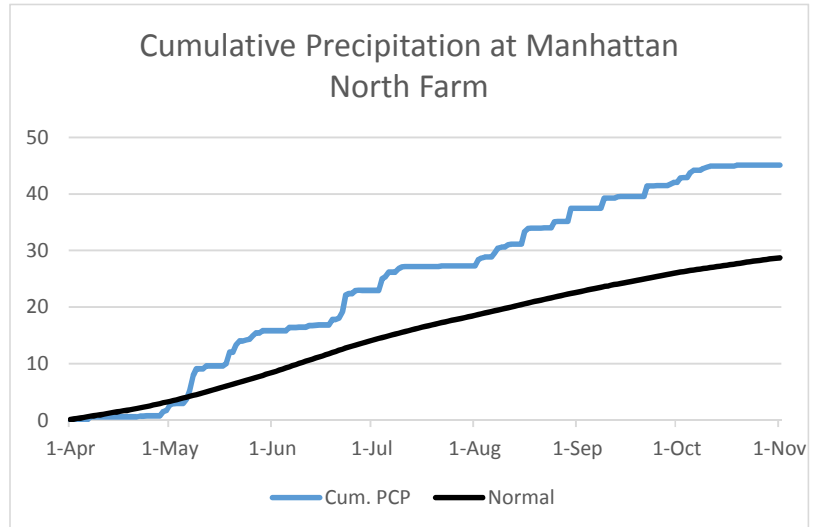
Corteva AgriSciences Johnston, IA 800-233-7333 pioneer.com *Maturity checks	Heine Seeds Vermillion, SD 605-677-8263	Monsanto (Dekalb) St. Louis, MO 314-694-1000 monsanto.com *Maturity checks	Phillips Seed Farms, Inc. Hope, KS 785-949-2204 phillipsseed.com
Golden Harvest Brand Seed Downers Grove, IL 800-652-7333 goldenharvestseeds.com	Midland Genetics Ottawa, KS 800-819-7333 midlandgenetics.com	NK Seeds Greensboro, NC 800-652-7333 syngentaseeds.com	Renk Seed Co Sun Prairie, WI 800-289-7365 renkseed.com



NORTHEAST KANSAS DRYLAND CORN TESTS

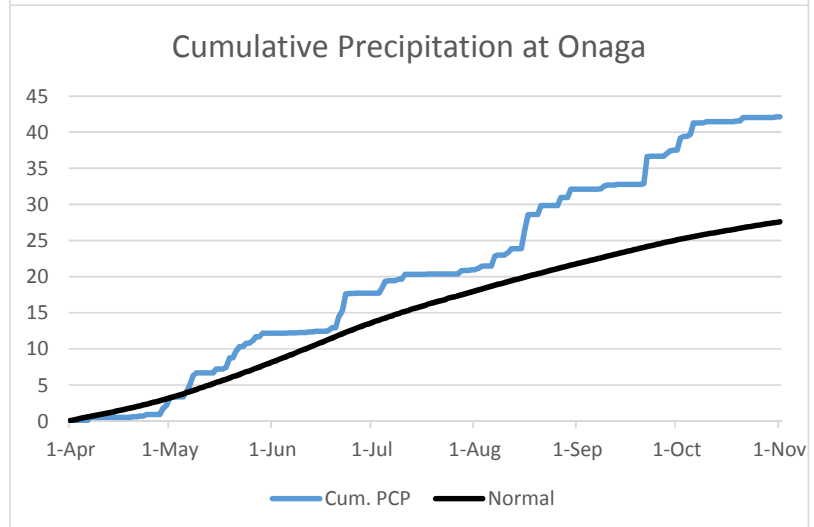
Manhattan, Riley County

Agronomy North Farm
 Planted: 4/16/2019
 Harvested: 10/22/2019
 180-0-0 lb/a N, P, K
 Reading silt loam
 Previous crop: wheat



Onaga, Pottawatomie County

Rezac Land and Livestock, Inc.
 Planted: 4/20/2019
 Harvested: 10/15/2019
 185-0-0 lb/a N, P, K
 Kipson silty clay loam
 Previous crop: soybean



Severance, Doniphan County

Fuhrman Farms, Inc.
 Planted: 4/17/2019
 Harvested: 10/16/2019
 180-0-0 lb/a N, P, K
 Ulysses silt loam
 Previous crop: soybean

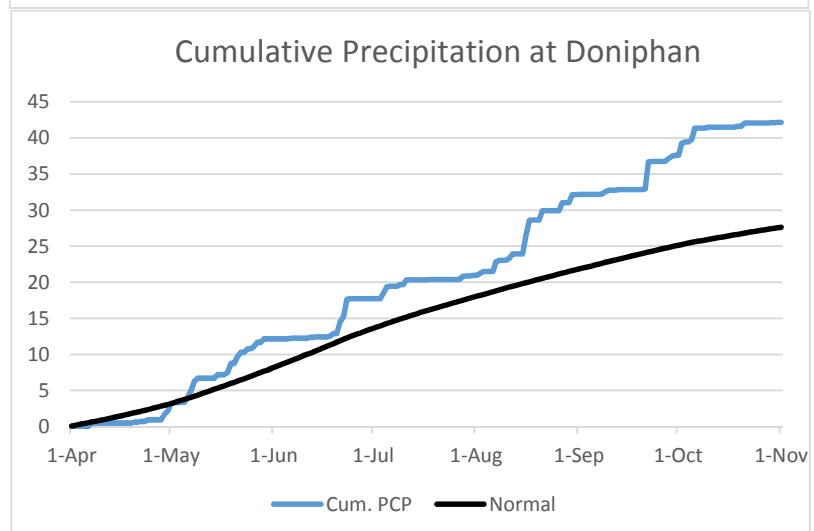
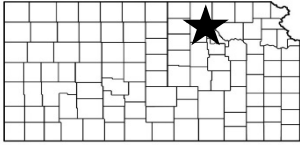


TABLE 3. NORTHEAST KANSAS DRYLAND CORN PERFORMANCE TEST, 2019

BRAND	NAME	SEVERANCE, Doniphan County				Onaga, Pottawatomie County				MANHATTAN, Riley County			
		YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)
DEKALB	DKC50-64RIB	173	74	61	14	157	87	59	15	189	98	58	11
DEKALB	DKC60-88 RIB	241	103	62	15	186	103	60	16	190	98	58	11
DEKALB	DKC65-95 RIB	242	103	62	15	202	112	60	17	206	106	60	13
GOLDEN HARVEST	G08R52	241	103	60	15	166	92	57	15	196	101	59	12
GOLDEN HARVEST	G10K03-3220	234	100	61	15	191	106	56	16	213	110	58	12
GOLDEN HARVEST	G11B63-3010A	252	107	61	15	174	96	58	15	183	94	57	11
GOLDEN HARVEST	G13H15-3120	218	93	61	15	174	97	58	16	156	80	58	12
GOLDEN HARVEST	G14N11-5222	--	--	--	--	191	106	57	16	--	--	--	--
GOLDEN HARVEST	G14R38	243	104	61	15	172	95	57	17	184	95	59	13
GOLDEN HARVEST	G15L32-3330	240	102	61	15	--	--	--	--	184	95	56	11
GOLDEN HARVEST	G16K01	250	107	61	15	187	104	56	17	222	114	58	13
GOLDEN HARVEST	GX90926-3120	223	95	61	15	180	100	58	16	203	104	57	11
GOLDEN HARVEST	GX91088-3220	266	113	61	15	177	98	58	16	228	117	58	12
GOLDEN HARVEST	GX91212-3010	229	98	62	15	--	--	--	--	--	--	--	--
GOLDEN HARVEST	GX91214-3120	254	108	61	15	--	--	--	--	--	--	--	--
GOLDEN HARVEST	GX91406-3010	228	97	60	15	--	--	--	--	--	--	--	--
GOLDEN HARVEST	GX91489-3120	239	102	61	16	175	97	57	16	225	116	59	11
GOLDEN HARVEST	GX91590-3120	263	112	61	15	--	--	--	--	--	--	--	--
GOLDEN HARVEST	GX91591-3220	244	104	61	16	179	99	58	16	193	99	58	11
GOLDEN HARVEST	GX91798-3120	235	100	61	16	195	108	58	17	205	105	58	12
GOLDEN HARVEST	GX91899-3110	232	99	61	16	169	94	58	18	179	92	58	12
MATURITY CHECK	EARLY	208	89	62	15	177	98	60	16	201	104	60	12
MATURITY CHECK	LATE	249	106	62	16	184	102	60	17	202	104	58	12
MATURITY CHECK	MED	254	108	62	15	161	89	59	16	195	100	57	11
MIDLAND	349PR	--	--	--	--	171	95	59	15	168	86	56	11
MIDLAND	429PR	239	102	61	15	174	96	59	16	186	96	58	12
MIDLAND	430PR	240	102	62	15	192	107	60	16	206	106	60	13
MIDLAND	570PR	244	104	62	15	191	106	60	16	210	108	58	12
MIDLAND	594PR DG	227	97	60	15	--	--	--	--	--	--	--	--
MIDLAND	656PR	--	--	--	--	186	103	60	17	188	97	58	12
MIDLAND	669PR	--	--	--	--	191	106	60	17	--	--	--	--
MIDLAND	735PR	239	102	61	16	--	--	--	--	--	--	--	--
MIDLAND	770PR DG	244	104	62	15	187	104	59	17	206	106	57	12
NK	NK1082-3330A	247	105	61	15	194	108	58	16	--	--	--	--
NK	NK1205-3120	238	101	61	15	180	100	58	16	--	--	--	--
NK	NK1433-3120	232	99	60	16	170	94	56	16	--	--	--	--
NK	NK1573-3330	237	101	60	16	171	95	56	16	--	--	--	--
PHILLIPS	PS0897 V32	219	93	60	15	--	--	--	--	210	108	58	11
PHILLIPS	PS1295 A31	205	87	62	15	--	--	--	--	155	80	58	11
PHILLIPS	PSF082 VPR	209	89	62	14	--	--	--	--	190	98	57	11
PHILLIPS	PSF098 VPR	231	98	60	15	--	--	--	--	182	93	57	11
PHILLIPS	PSF1091 V32	210	89	62	15	--	--	--	--	180	93	58	12
PHILLIPS	PSF133 DGR	229	98	61	15	--	--	--	--	189	97	57	11
	Average	235	100	61	15	180	100	58	16	194	100	58	12
	CV (%)	6	6	--	--	10	10	--	--	10	10	2	7
	LSD (0.5)**	18	8	--	--	24	13	--	--	26	13	2	1

*Seed treatment and hybrid traits are listed in Table 9.

**Yields must differ by more than the LSD value to be considered statistically different.



NORTHEAST KANSAS IRRIGATED CORN TESTS

Manhattan, Riley County

Ashland Bottoms Research Center

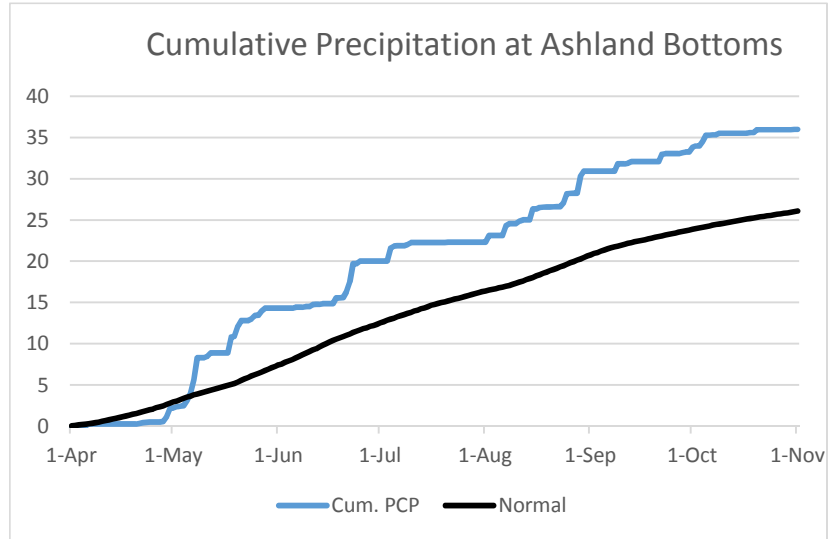
Planted: 4/16/2019

Harvested: 10/23/2019

300-30-0 lb/a N, P, K

Sandy loam

Previous crop: soybean



Scandia, Republic County

North Central Experiment Field

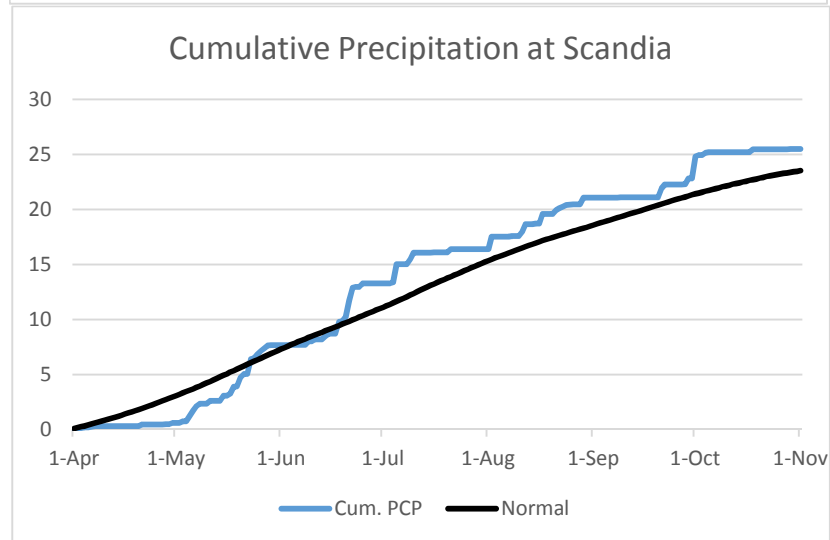
Planted: 5/17/2019

Harvested: 11/5/2019

200-0-0 lb/a N, P, K

Crete silt loam

Previous crop: soybean



Rossville, Shawnee County

Kansas River Valley Experiment Field

Planted: 4/24/2019

Harvested: 9/18/2019

191-56-43-10 lb/a N, P, K, S

Eudora silt loam

Previous crop: soybean

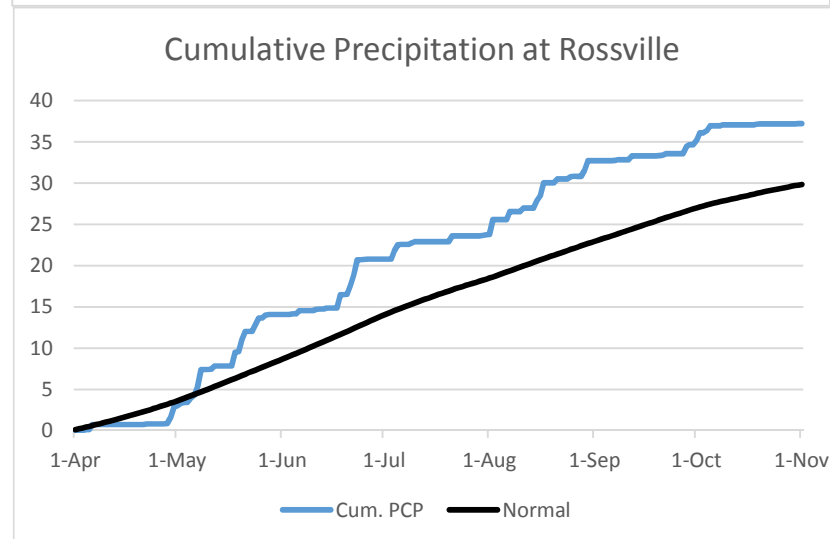
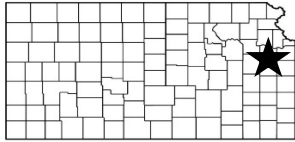


TABLE 4. NORTHEAST KANSAS IRRIGATED CORN PERFORMANCE TEST, 2019

BRAND	NAME	MANHATTAN, Riley County				SCANDIA, Republic County				TOPEKA, Shawnee County				DAYS (silk)	PLANTS per acre
		YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)		
DEKALB	DKC50-64RIB	154	82	57	10	157	92	58	14	221	95	58	18	74	27
DEKALB	DKC60-88 RIB	179	95	58	11	149	87	59	14	229	99	58	18	74	27
DEKALB	DKC65-95 RIB	181	96	59	11	175	103	61	15	249	108	59	18	74	28
GOLDEN HARVEST	G08R52	178	95	57	11	--	--	--	--	226	98	59	18	75	28
GOLDEN HARVEST	G10K03-3220	138	73	56	10	--	--	--	--	209	90	58	18	75	27
GOLDEN HARVEST	G11B63-3010A	196	104	58	11	--	--	--	--	224	97	58	17	75	27
GOLDEN HARVEST	G13H15-3120	178	95	58	11	--	--	--	--	231	100	58	19	75	27
GOLDEN HARVEST	G14R38	165	88	58	11	--	--	--	--	235	102	58	18	74	28
GOLDEN HARVEST	G15L32-3330	201	107	58	11	--	--	--	--	221	96	58	19	75	28
GOLDEN HARVEST	G16K01	215	115	58	11	--	--	--	--	230	100	58	18	76	26
GOLDEN HARVEST	GX90926-3120	193	103	57	11	--	--	--	--	220	95	58	17	75	27
GOLDEN HARVEST	GX91088-3220	213	113	58	11	--	--	--	--	222	96	57	18	75	28
GOLDEN HARVEST	GX91212-3010	--	--	--	--	--	--	--	--	207	90	60	18	75	25
GOLDEN HARVEST	GX91214-3120	187	99	58	11	--	--	--	--	244	106	59	18	75	29
GOLDEN HARVEST	GX91406-3010	--	--	--	--	--	--	--	--	234	101	59	17	75	28
GOLDEN HARVEST	GX91489-3120	155	82	57	11	--	--	--	--	225	97	58	18	75	28
GOLDEN HARVEST	GX91590-3120	190	101	58	11	--	--	--	--	246	106	58	18	75	27
GOLDEN HARVEST	GX91591-3220	221	118	59	12	--	--	--	--	233	101	58	18	75	27
GOLDEN HARVEST	GX91798-3120	160	85	58	11	--	--	--	--	233	101	58	18	75	27
GOLDEN HARVEST	GX91899-3110	192	102	58	12	--	--	--	--	212	92	58	18	75	28
MATURITY CHECK	EARLY	194	103	59	12	190	111	59	14	219	95	59	17	75	27
MATURITY CHECK	LATE	218	116	60	12	199	117	61	16	236	102	59	19	74	27
MATURITY CHECK	MED	175	93	57	11	197	116	59	14	230	99	58	17	74	27
MIDLAND	429PR	231	123	59	12	132	77	60	14	236	102	59	18	74	27
MIDLAND	430PR	--	--	--	--	187	109	60	14	237	103	58	18	74	28
MIDLAND	570PR	202	108	60	12	176	103	60	14	242	105	59	19	74	27
MIDLAND	594PR DG	193	102	57	11	--	--	--	--	--	--	--	--	--	--
MIDLAND	656PR	210	112	61	12	187	109	61	15	--	--	--	--	--	--
MIDLAND	669PR	--	--	--	--	--	--	--	--	264	114	59	19	74	26
MIDLAND	735PR	--	--	--	--	--	--	--	--	249	108	58	19	75	26
MIDLAND	770PR DG	186	99	59	12	179	105	60	15	237	102	58	19	74	26
NK	NK1082-3330A	--	--	--	--	--	--	--	--	227	98	59	18	75	26
NK	NK1205-3120	--	--	--	--	--	--	--	--	229	99	58	18	76	27
NK	NK1433-3120	--	--	--	--	--	--	--	--	248	107	58	18	74	27
NK	NK1573-3330	--	--	--	--	--	--	--	--	236	102	59	18	75	28
PHILLIPS	PS0897 V32	196	104	57	10	--	--	--	--	236	102	59	17	74	26
PHILLIPS	PS1295 A31	184	98	59	12	--	--	--	--	220	95	58	18	76	26
PHILLIPS	PS1652 VPR	191	102	59	12	--	--	--	--	233	101	58	19	74	27
PHILLIPS	PSF082 VPR	192	102	57	11	--	--	--	--	215	93	58	17	74	28
PHILLIPS	PSF098 VPR	180	96	57	11	--	--	--	--	238	103	58	18	74	27
PHILLIPS	PSF1091 V32	195	104	59	12	--	--	--	--	233	101	59	18	74	28
PHILLIPS	PSF133 DGR	169	90	57	11	--	--	--	--	214	92	57	18	75	25
PHILLIPS	PSF148 VPR	178	95	59	11	--	--	--	--	245	106	59	18	74	26
RENK	RK10DGV2P	--	--	--	--	140	82	58	14	--	--	--	--	--	--
RENK	RK779SSTX	--	--	--	--	152	89	61	14	--	--	--	--	--	--
RENK	RK807SSTX	--	--	--	--	188	110	60	14	--	--	--	--	--	--
RENK	RK842SSTX	--	--	--	--	147	86	60	15	--	--	--	--	--	--
RENK	RK937VT2P	--	--	--	--	162	95	59	14	--	--	--	--	--	--
RENK	RK945DGV2P	--	--	--	--	184	108	60	15	--	--	--	--	--	--
RENK	RK961VT2P	--	--	--	--	190	111	58	14	--	--	--	--	--	--
RENK	RK965VT2P	--	--	--	--	150	88	60	15	--	--	--	--	--	--
	AVERAGE	188	188	58	11	170	170	60	14	231	231	58	18	75	27
	CV (%)	7	7	2	3	5	5	1	2	9	9	2	7	1	3
	LSD (0.05)**	18	9	1	1	14	8	1	0	30	13	2	2	1	1

*Seed treatment and hybrid traits are listed in Table 9.

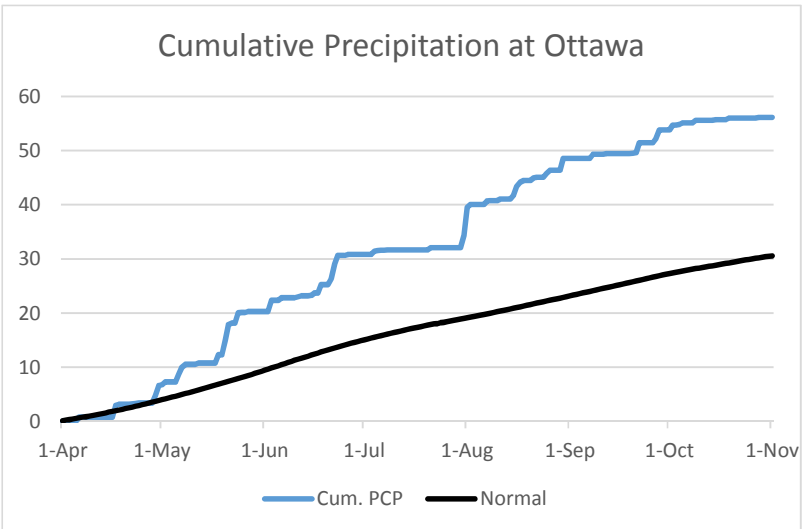
**Yields must differ by more than the LSD value to be considered statistically different.



EASTERN KANSAS DRYLAND CORN TESTS

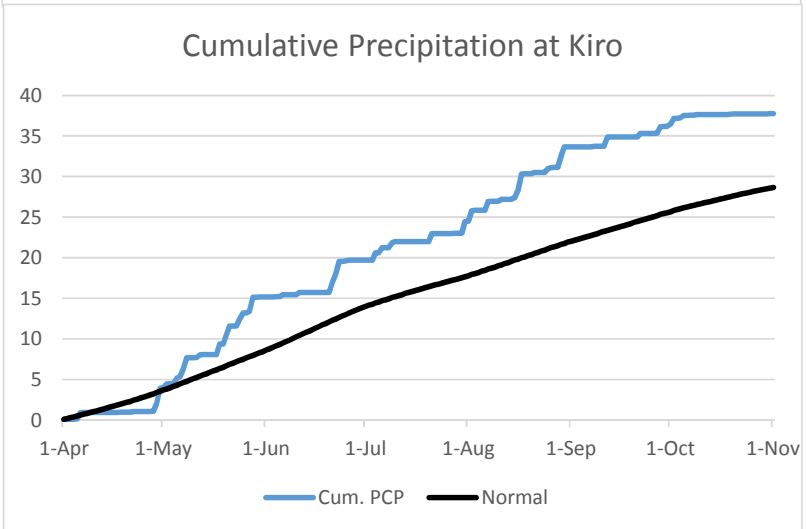
Ottawa, Franklin County

East Central Experiment Field
 Planted: 4/26/2019
 Harvested: 9/18/2019
 140-40-15 lb/a N, P, K
 Woodson silt loam
 Previous crop: soybean



Kiro, Shawnee County

Private farmer's field
 Planted: 4/24/2019
 Harvested: 9/20/2019
 180-0-0 lb/a N, P, K
 Silty clay loam
 Previous crop: soybean



Erie, Neosho County

Private farmer's field
 Abandoned: flooding early
 in the growing season.

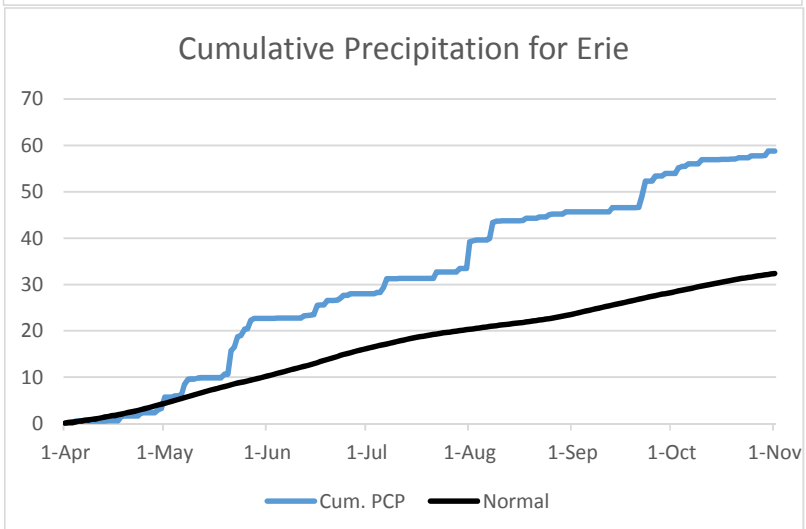
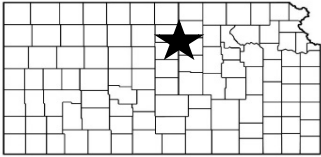


TABLE 5. EASTERN KANSAS DRYLAND CORN PERFORMANCE TEST, 2019

BRAND	NAME	OTTAWA, Franklin County						KIRO, Shawnee County					
		YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	DAYS (silk)	PLANTS	YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	DAYS (silk)	PLANTS
DEKALB	DKC50-64RIB	136	88	57	16	74	12875	178	81	60	15	74	22500
DEKALB	DKC60-88 RIB	140	90	58	15	76	17625	232	105	60	17	73	22000
DEKALB	DKC65-95 RIB	164	106	59	16	76	19375	237	107	60	19	74	22250
GOLDEN HARVEST	G08R52	153	99	56	15	78	11625	213	97	59	16	74	23000
GOLDEN HARVEST	G08R52-3220	160	104	55	16	76	16625	217	99	58	16	74	22250
GOLDEN HARVEST	G11B63-3010A	149	96	57	15	77	17625	244	111	60	17	74	23250
GOLDEN HARVEST	G13H15-3120	132	85	57	17	78	13250	195	88	59	18	74	21750
GOLDEN HARVEST	G14R38	170	110	56	16	76	16125	195	88	58	19	75	22500
GOLDEN HARVEST	G16K01	172	111	57	16	76	18750	229	104	58	18	74	22750
GOLDEN HARVEST	GX90926-3120	146	94	57	16	78	17125	210	95	59	17	74	22250
GOLDEN HARVEST	GX91088-3220	161	104	57	16	78	19500	224	102	59	18	75	22250
GOLDEN HARVEST	GX91212-3010	153	99	58	16	75	21375	211	96	60	17	74	22250
GOLDEN HARVEST	GX91406-3010	155	100	57	16	75	18375	228	103	58	18	74	22750
GOLDEN HARVEST	GX91489-3120	145	94	57	16	76	18000	231	105	57	18	74	23000
GOLDEN HARVEST	GX91591-3220	166	107	57	16	77	14875	207	94	58	18	74	22500
GOLDEN HARVEST	GX91798-3120	153	99	57	17	76	15250	239	109	59	18	72	23250
GOLDEN HARVEST	GX91899-3110	111	72	58	17	77	18875	221	100	59	18	74	22250
MATURITY CHECK	EARLY	128	83	58	15	77	15125	187	85	61	16	74	22750
MATURITY CHECK	LATE	148	95	59	17	79	18375	215	97	60	18	74	22500
MATURITY CHECK	MED	157	101	58	15	76	18000	229	104	60	17	72	23000
MIDLAND	429PR	129	83	58	16	77	15000	233	106	60	18	74	22750
MIDLAND	430PR	--	--	--	--	--	--	243	110	60	17	74	24500
MIDLAND	570PR	187	121	59	16	78	13375	230	104	60	18	73	21500
MIDLAND	656PR	152	98	59	16	75	16625	236	107	60	19	74	22500
MIDLAND	669PR	153	99	58	16	74	16500	240	109	60	18	73	22250
MIDLAND	770PR DG	159	103	58	16	75	20500	194	88	59	18	74	21500
NK	NK0821-3120	182	118	57	15	78	17375	--	--	--	--	--	--
NK	NK1082-3330A	197	127	58	16	78	12375	228	103	58	18	74	21750
NK	NK1205-3120	196	126	57	15	76	18125	234	106	59	17	74	23500
NK	NK1433-3120	164	106	57	16	74	19500	221	100	57	18	74	22000
PHILLIPS	PS0897 V32	176	114	57	16	80	12250	--	--	--	--	--	--
PHILLIPS	PSF082 VPR	149	97	57	15	78	13375	--	--	--	--	--	--
PHILLIPS	PSF098 VPR	120	77	56	15	77	13500	--	--	--	--	--	--
PHILLIPS	PSF1091 V32	147	95	58	16	78	13750	--	--	--	--	--	--
	AVERAGE	155	155	57	16	77	16394	220	220	59	18	74	22533
	CV (%)	11	11	2	2	2	--	9	9	1	3	1	1
	LSD (0.05)**	25	16	1	1	2	5557	29	13	1	1	1	470

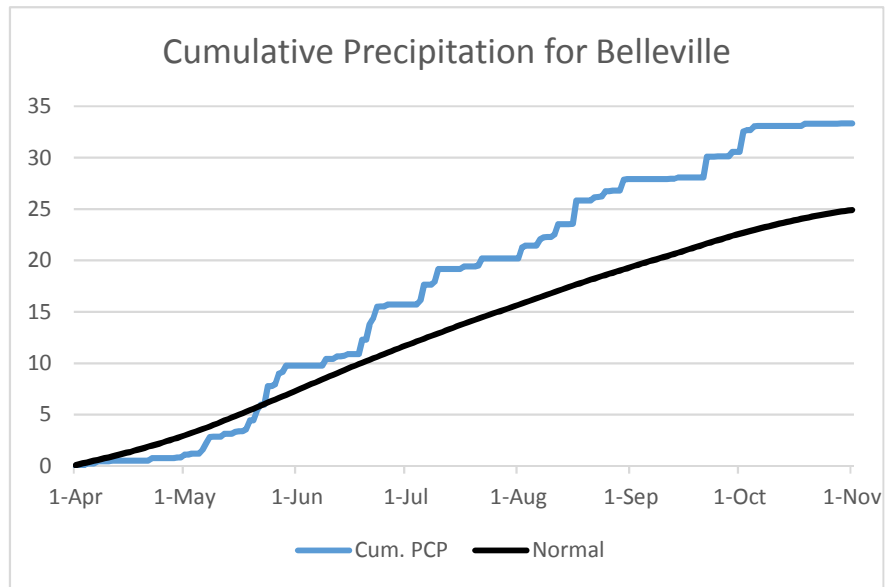
*Seed treatment and hybrid traits are listed in Table 9.

**Yields must differ by more than the LSD value to be considered statistically different.



CENTRAL KANSAS DRYLAND CORN TESTS

Belleville, Republic County
 North Central Experiment Field
 Planted: 5/3/2019
 Harvested: 10/14/2019
 180-0-0 N, P, K
 Crete silt loam
 Previous crop: grain sorghum



Assaria, Saline County
 Clayton Short Farm
 Planted: 5/6/2019
 Harvested: 9/27/2019
 180-0-0 lb/a N, P, K
 Ulysses silt loam
 Previous crop: grain sorghum

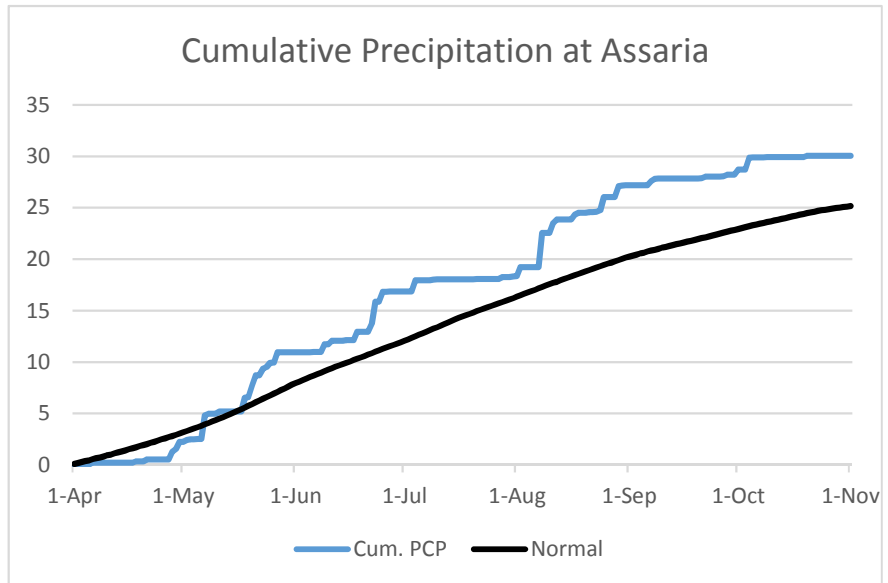
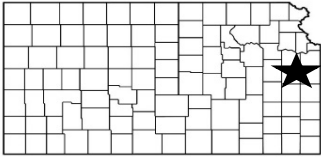


TABLE 6. CENTRAL KANSAS DRYLAND CORN PERFORMANCE TEST, 2019

BRAND	NAME	BELLEVILLE, Republic County				ASSARIA, Saline County			
		YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)
DEKALB	DKC50-64RIB	173	93	58	14	176	88	58	13
DEKALB	DKC60-88 RIB	187	101	60	17	224	112	59	15
DEKALB	DKC65-95 RIB	192	104	60	18	201	101	60	16
MATURITY CHECK	EARLY	193	104	60	16	223	111	60	14
MATURITY CHECK	LATE	211	114	60	20	219	109	59	16
MATURITY CHECK	MED	194	105	59	18	212	106	59	14
MIDLAND	349PR	196	106	58	17	--	--	--	--
MIDLAND	429PR	191	103	59	17	--	--	--	--
MIDLAND	430PR	189	102	59	17	--	--	--	--
MIDLAND	570PR	206	111	59	18	--	--	--	--
MIDLAND	594PR DG	224	121	58	19	--	--	--	--
MIDLAND	656PR	155	84	60	19	--	--	--	--
MIDLAND	770PR DG	210	114	59	17	--	--	--	--
PHILLIPS	PS0897 V32	173	94	59	17	201	100	59	14
PHILLIPS	PS1295 A31	--	--	--	--	127	64	59	16
PHILLIPS	PS1652 VPR	--	--	--	--	201	101	60	16
PHILLIPS	PSF082 VPR	196	106	58	15	168	84	59	14
PHILLIPS	PSF098 VPR	136	73	58	16	207	103	57	14
PHILLIPS	PSF133 DGR	191	103	58	20	214	107	58	16
PHILLIPS	PSF148 VPR	--	--	--	--	229	114	61	15
RENK	RK10DGVT2P	173	93	59	16	--	--	--	--
RENK	RK779SSTX	154	83	61	16	--	--	--	--
RENK	RK807SSTX	174	94	59	18	--	--	--	--
RENK	RK842SSTX	187	101	60	17	--	--	--	--
RENK	RK937VT2P	197	107	59	17	--	--	--	--
RENK	RK945DGVT2P	183	99	58	18	--	--	--	--
RENK	RK961VT2P	183	99	58	19	--	--	--	--
RENK	RK965VT2P	157	85	59	18	--	--	--	--
	AVERAGE	185	185	59	17	200	200	59	15
	CV (%)	6	6	1	5	11	11	0	0
	LSD (0.05)**	20	11	1	1	33	16	0	0

*Seed treatment and hybrid traits are listed in Table 9.

**Yields must differ by more than the LSD value to be considered statistically different.



SHORT SEASON DRYLAND CORN TESTS

Ottawa, Franklin County

East Central Experiment Field

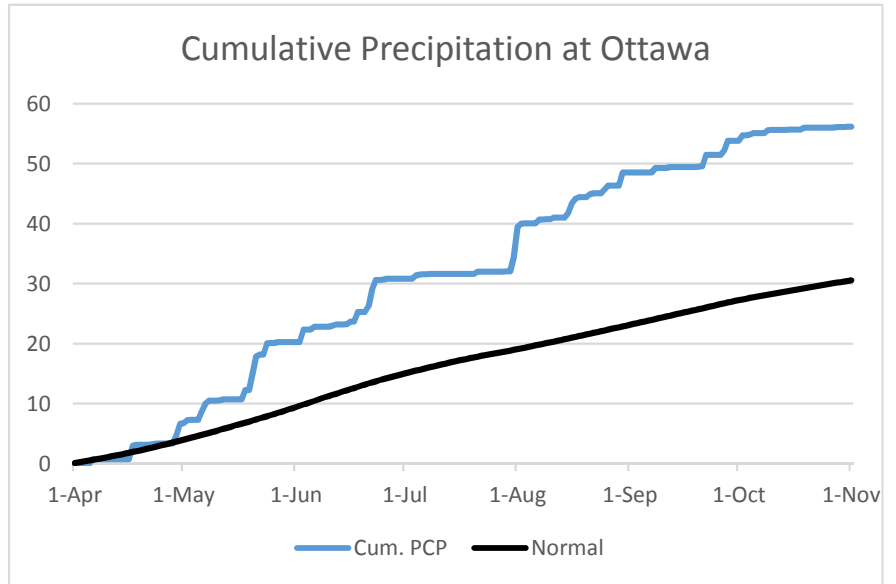
Planted: 4/26/2019

Harvested: 9/17/2019

140-40-15 lb/a N, P, K

Woodson silt loam

Previous crop: soybean



Parsons, Labette County

K-State Southeast Research Center

Planted: 4/11/2019

Harvested: 9/6/2019

180-46-50 lb/a N, P, K

Parsons silt loam

Previous crop: soybean

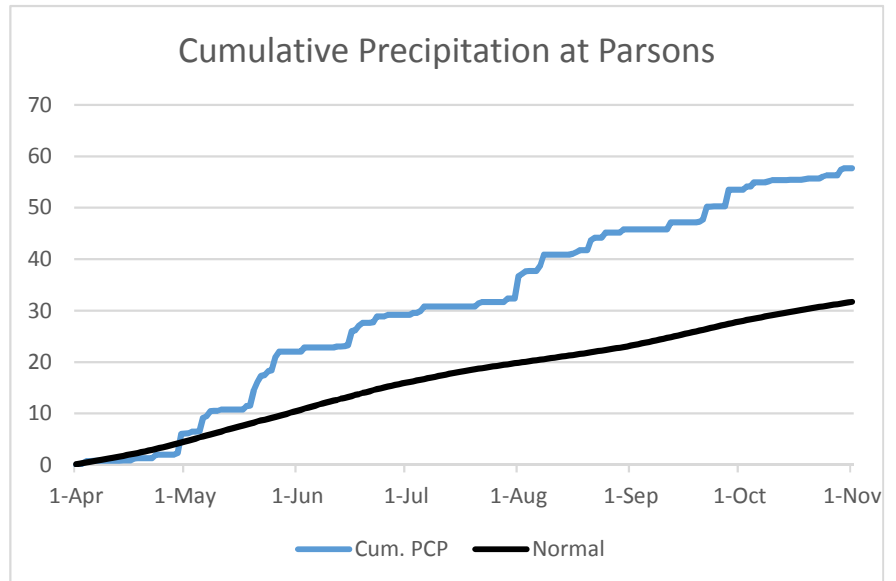
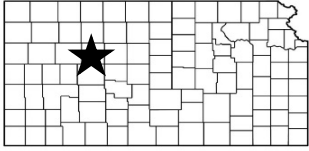


TABLE 7. KANSAS SHORT-SEASON DRYLAND CORN PERFORMANCE TEST, 2019

BRAND	NAME	OTTAWA, Franklin County						PARSONS, Labette County					
		YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	DAYS (silk)	1000 ppa	YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	DAYS (silk)	1000 ppa
DEKALB	DKC50-64RIB	141	92	57	15	73	22	128	89	56	15	79	20
DEKALB	DKC60-88 RIB	168	110	61	17	74	24	159	111	56	18	79	22
GOLDEN HARVEST	G03R40	166	108	60	16	73	21	144	101	56	12	79	22
GOLDEN HARVEST	G03R40-5222	152	99	62	18	75	20	157	109	55	18	65	22
GOLDEN HARVEST	G05K08-3010A	167	109	59	16	73	20	121	85	55	16	71	21
GOLDEN HARVEST	GX99944-3010	164	107	60	15	71	22	147	102	54	19	80	21
MATURITY CHECK	EARLY	138	90	54	17	73	20	157	109	57	18	77	22
MATURITY CHECK	MED	155	101	58	17	76	21	150	104	56	19	80	20
MIDLAND	150PRX	128	84	61	16	74	21	129	90	55	17	78	20
	AVERAGE	153	103	59	16	73	21	144	101	56	17	76	21
	CV (%)	10	10	--	3	2	6	7	7	2	5	--	5
	LSD (0.05)**	23	15	--	1	2	1767	14	10	1	1	--	1389

*Seed treatment and hybrid traits are listed in Table 9.

**Yields must differ by more than the LSD value to be considered statistically different.



WESTERN KANSAS DRYLAND CORN TESTS

Hays, Ellis County

Western Kansas Research Center

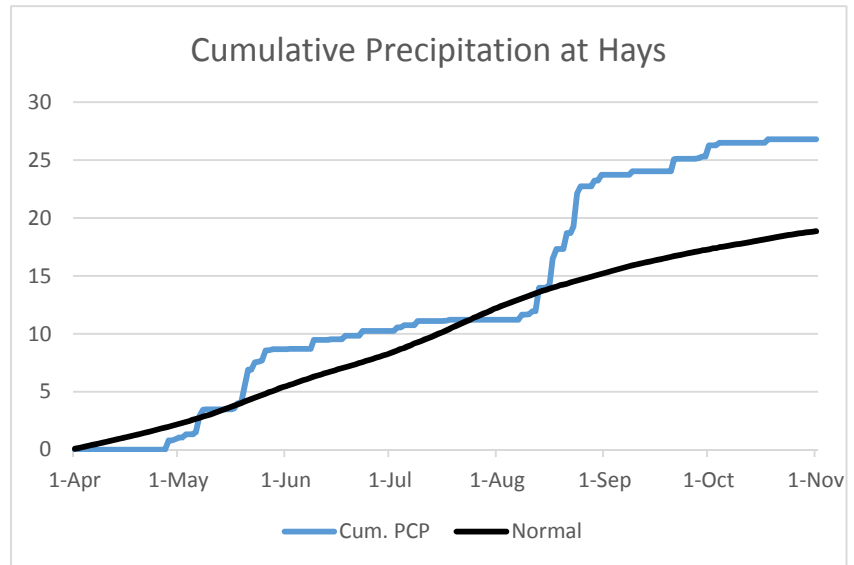
Planted: 5/15/2019

Harvested: 10/11/2019

100-0-0 lb/a N, P, K

Harney clay loam

Previous crop: wheat



Colby, Thomas County

K-State Northwest Research Center

Planted: 5/15/2019

Harvested: 10/24/2019

100-30-0 lb/a N, P, K

Keith silt loam

Previous crop: fallow

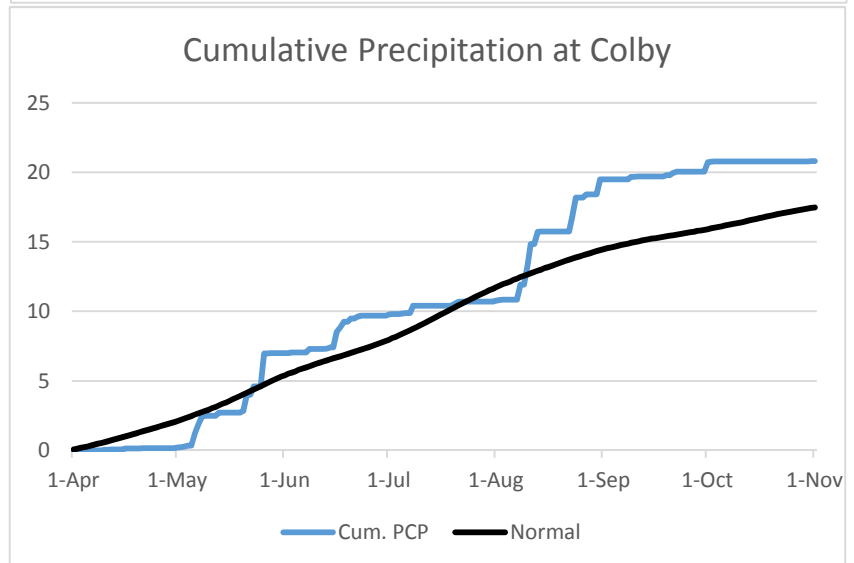


TABLE 8. WESTERN KANSAS DRYLAND CORN PERFORMANCE TEST, 2019

BRAND	NAME	HAYS, Ellis County				COLBY, Thomas County					
		YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	DAYS (silk)	HT (in)
DEKALB	DKC50-64RIB	49	68	54	17	142	93	54	12	68	76
DEKALB	DKC60-88 RIB	87	120	56	18	186	122	56	15	73	77
DEKALB	DKC65-95 RIB	69	95	54	20	132	86	56	17	73	80
MATURITY CHECK	EARLY	68	95	54	17	135	89	55	15	73	81
MATURITY CHECK	LATE	82	114	55	21	130	85	55	21	76	82
MATURITY CHECK	MED	76	105	55	18	197	129	56	16	75	77
PHILLIPS	PS0897 V32	84	116	51	18	--	--	--	--	--	--
PHILLIPS	PSF082 VPR	71	98	53	17	--	--	--	--	--	--
PHILLIPS	PSF098 VPR	92	127	53	17	--	--	--	--	--	--
PHILLIPS	PSF1091 V32	93	129	54	18	--	--	--	--	--	--
RENK	RK10DGVT2P	45	62	53	17	184	121	55	16	72	82
RENK	RK937VT2P	71	98	56	18	152	100	55	16	74	86
RENK	RK945DGVT2P	51	71	54	19	174	114	53	20	72	81
RENK	RK961VT2P	79	110	54	19	122	80	53	19	74	80
RENK	RK965VT2P	66	91	54	20	122	80	54	20	73	78
	AVERAGE	72	100	54	18	152	100	55	17	73	80
	CV (%)	7	7	2	3	7	7	1	5	3	3
	LSD (0.05)**	7	10	1	1	16	11	1	1	3	4

*Seed treatment and hybrid traits are listed in Table 9.

**Yields must differ by more than the LSD value to be considered statistically different.

Table 9. Entries in the 2019 Kansas Corn Performance Tests*

	SD TRT*	DBL	RES	P	F		SD TRT	DBL	RES	P	F
DEKALB						MIDLAND					
DKC60-88 RIB	--	--	--	--	--	656PR	C250	113	RR, VT2P	Y	Y
DKC65-95 RIB	--	--	--	--	--	669PR	C250	113	VT2Pro	Y	Y
DKC50-64RIB	ACC/VOT	100	VT2PRIB	--	--	594PR DG	C250	113	RR, VT2P	Y	Y
GOLDEN HARVEST						770PR DG	ACC250	115	VT2P	--	Y
G03R40	--	--	--	--	--	735PR	C250	115	RR	Y	Y
G03R40-5222	AV500+V	--	--	--	--	NK					
G05K08-3010A	AV500+V	--	--	--	--	NK0821-3120	AV500	108	RR/LL/ECB	N	--
G08R52	--	--	--	--	--	NK1082-3330A	AV500	110	RR/LL/ECB	N	--
G08R52-3220	AV500+V	--	--	--	--	NK1205-3120	AV500	112	RR/LL/ECB	N	--
G10K03-3220	AV500+V	--	--	--	--	NK1433-3120	AV500	114	RR/LL/ECB	N	--
G13H15-3120	AV500+V	--	--	--	--	NK1573-3330	AV500	115	RR/LL/ECB	N	--
G14N11-5222	AV500+V	--	--	--	--	PHILLIPS					
G14R38	--	--	--	--	--	PS0897 V32	CM250	108	VIP 3220 E-Z	N	SF
G15L32-3330	AV500+V	--	--	--	--	PSF082 VPR	ACC250	108	VT2P	--	Y
GX90926-3120	--	--	--	--	--	PSF098 VPR	ACC250	109	VT2P RIB	--	Y
GX91088-3220	--	--	--	--	--	PSF1091 V32	CM250	109	VIP 3220 E-Z	N	SF
GX91212-3010	--	--	--	--	--	PS1295 A31	CM250	112	A3120 E-Z	N	SF
GX91214-3120	--	--	--	--	--	PSF133 DGR	ACC250	113	VT2P	N	N
GX91406-3010	--	--	--	--	--	PSF148 VPR	ACC250	114	VT2P	N	Y
GX91489-3120	--	--	--	--	--	PS1652 VPR	ACC250	116	VT2P RIB	N	SF
GX91590-3120	--	--	--	--	--	RENK					
GX91591-3220	--	--	--	--	--	RK10DGV2P	AC250	106	VT2P	N	N
GX91798-3120	--	--	--	--	--	RK779SSTX	AC500/VOT	108	SSTX	N	N
GX91899-3110	--	--	--	--	--	RK807SSTX	AC500/VOT	111	SSTX	N	N
GX99944-3010	--	--	--	--	--	RK842SSTX	AC250	112	STX	N	N
G11B63-3010A	AV500+V	111	CB,RR,LL	N	Y	RK937VT2P	AC250	113	VT2P	N	N
G16K01	AV500	116	LL,RR,CB,RW	Y	Y	RK945DGV2P	AC250	115	VT2P	N	N
HEINE SEEDS						RK961VT2P	ACC250	116	GEN. VT2P	N	N
8175 VT2Pro	--	109	--	--	--	RK965VT2P	AC250	116	VT2P	N	N
8220 VT2Pro	--	110	--	--	--						
Exp 8450VT2Pro	--	111	--	--	--						
851DGV2Pro	ACC250	111	DGV2Pro	Y	Y						
8500DGV2Pro	P/VOT500	111	DGV2Pro	Y	N						
823VT2ProRIB	ACC250	111	VT2Pro	Y	N						
8300VT2Pro	--	112	--	--	--						
852VT2ProRIB	ACC250	112	VT2ProRIB	Y	Y						
MATURITY CHECK											
EARLY	--	--	AQUAmax	--	--						
LATE	--	--	AQUAmax	--	--						
MED	--	--	AQUAmax	--	--						
MIDLAND											
150PRX	ACC250	104	VT2P	--	N						
349PR	C250	108	VT2Pro	Y	Y						
429PR	C250	110	VT2Pro	Y	Y						
430PR	ACC250	111	VT2P	--	Y						
570PR	ACC250	112	VT2P	--	Y						

*SD TRT = Seed treatment (C = Cruiser, ACC = Acceleron, AV = Avicta, P = Poncho, VOT = Votivo. Numbers indicate rates if available); DBL = days to black layer; RES = herbicide, disease, and insect resistance traits [(Bt, BtCB, CB, YG, YG1, YG+, YGCB), Hx] = transgenic corn borer protection; BTRW, RW, YGRW, HxRW = transgenic rootworm protection; CL, I, IT, IMI = imidazolinone resistant/ tolerant; LL = Liberty Link; RR = Roundup Ready; TS, T = Triple Stack (RRCBRW)]; P = prolific; F = flex ear. Values provided by entrants.

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

Excerpts from the
University Research Policy Agreement with Cooperating Seed Companies

Permission is hereby given to Kansas State University 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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SRP 1152 January 2020