

# 2007

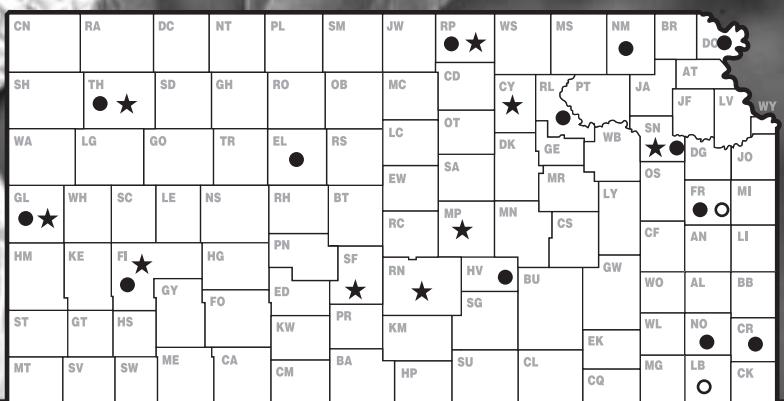
Kansas Performance Tests with

# Corn Hybrids

**Report of Progress 983**



Kansas State University Agricultural Experiment  
Station and Cooperative Extension Service



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# 2007 CORN CROP REVIEW

## Statewide Growing Conditions

The 2007 growing season was delayed by widely spread rains and wet soil conditions until much later than normal in the spring. When the weather finally permitted planting, most areas of the state enjoyed adequate topsoil and subsoil moisture; however, many counties in southeastern Kansas suffered from too much moisture. Frequent rains and moderate temperatures continued through June and July. August brought above-average temperatures and drier weather, causing some stress to the rapidly developing corn, but more favorable weather conditions returned in September and October.

## Harvest Statistics

The October 12 Crops Report predicted a 493.2 million-bushel crop, up 43% from last year. In 2007, 3.6 million acres were harvested for grain, up 20% from 2006. The predicted average yield of 137 bushels per acre is 22 bushels more than the previous year. Nationally, 2007 will see the most corn acres harvested for grain since 1933. (Kansas Agricultural Statistics)

## Diseases

While growing conditions were generally very good throughout the season, the 2007 Kansas corn crop was not without disease problems.

Heavy rains early in the season resulted in above normal levels of crazy top downy mildew. This disease requires saturated soils shortly after emergence for infection to occur. While the leafy tassels and ears attract attention, the relatively small percentage of infected plants prevented this disease from being an economic concern.

As the crop progressed, weather conditions became favorable for gray leaf spot. This is the most significant foliar disease in Kansas on an annual basis, and its incidence and severity in 2007 required many fields to be sprayed with a fungicide, especially in northeast, north-central, south-central and southwestern Kansas.

The same rains that increased the incidence of crazy top downy mildew also prevented the planting of corn in many areas until late June, or in a few instances, even into early July.

Late-planted corn is particularly susceptible to southern rust, and 2007 was no exception. Fortunately, the hardest hit area of the state, southeastern Kansas, was close to maturity when the epidemic began, and yield losses were minor. A few fields of late corn, especially where a highly susceptible hybrid was planted, required spraying. Southern rust could be found in all areas of the state by early September.

August was an extremely hot and dry month for many areas of the state. This resulted in the development of stalk rot in many fields. Both charcoal rot and Fusarium stalk rot were common in many fields with lodging being a significant problem in a few.

Overall, crop losses to disease in 2007 were at near-normal levels, although individual fields with one or more of the problems described above may have experienced yield losses of 20 % or more.

(Doug Jardine, Kansas State University Department of Plant Pathology)

## Insects

Very few reports of early-season insect pest problems were received. This was probably due to the abundant moisture throughout much of the state in April and May, and to the widespread use of insecticide treated seed. Seed treatments are very effective against wireworms and white grubs, which are two of the most frequent early-season pests.

A few reports of black cutworm infestations were noted, but these were relatively isolated cases and seemed to occur later than in past years, probably because of the cool, wet spring weather. Corn rootworm activity seemed to be much less than usual, with only a few reports from northeast Kansas. However, it doesn't take very many adult females to lay enough eggs to cause problems in continuous corn fields. European and southwestern corn borers were still relatively less problematic than in previous years, and no reports of problems with western bean cutworms were received.

(Jeff Whitworth, Kansas State University Department of Entomology)

## 2007 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. Many companies submit seed treated with systemic insecticides (Cruiser, Maxim, Poncho) that can affect yield in some situations. A column listing insecticide seed treatments for each hybrid in Table 16 is included to help interpret yield results.

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 preceding data summaries for each test. Tables 2 through 15 contain results from the individual performance tests. Hybrids are listed together by company name.

Figures 1 through 7 graphically summarize yield and maturity information over the past few years for each region. Relative maturity is measured in terms of both number of days from planting to silking and grain moisture at harvest and can be critical when considering a corn hybrid for a specific cropping system. The number beside each bar shows the number of tests in which a given hybrid was compared with the check hybrids. In general, the greater the number of comparisons, the greater confidence one can place in the stated performance of that hybrid. Symbols beside each bar indicate if a hybrid was significantly greater (+) or less (-) than the average of the check hybrids.

A summary of growing season weather data is given for individual test discussions. Precipitation graphs include cumulative lines for 2007 and the 30-year normal, in addition to the daily rainfall amounts since last fall. Temperature graphs include daily maximum and minimum temperatures compared with normal. General trends in precipitation and temperature relative to normal are readily observed in the graphs.

A table with monthly totals and averages for the growing season is also included.

The growth unit, or growing-degree-day concept, was developed to measure the amount of heat available for growth and maturation. To calculate the daily accumulation, add the maximum and minimum temperatures for each day, divide by 2, and subtract a base temperature of 50. Any temperature below 50°F was considered to be 50, and any temperature over 86°F was considered 86.

Most corn tests were planted at a rate 10% to 20% in excess of the desired population and thinned only to remove doubles. Planting to stand enables evaluation of product performance for the entire growing season.

Grain yields are reported as bushels per acre of shelled grain (56 lbs/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.

The percentage of lodged stalks is reported when appropriate. Severely lodged stalks or dropped ears that could not be picked up by normal harvest procedures were not included in yield. Because harvest often is delayed until latest-maturing entries are ripe, early and mid-season hybrids can lose ears simply because they must wait well past their optimum harvest date. In most years at most locations, dropped ears constitute a very small portion of lodging and do not significantly affect yields.

Small differences in yield should not be overemphasized. Relative ranking and large differences are better indicators of performance. Least significant differences (LSDs) 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.

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**Table 1. Companies entering hybrids in the 2007 Kansas Corn Performance Tests.**

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<b>AgVenture of Eastern KS, LLC</b> Iola, KS 620-228-3148	<b>Integra (Wilbur-Ellis Co.)</b> China Spring, TX 254-836-0169 mcritten@wecon.com	<b>Mycogen Seeds</b> Indianapolis, IN 1-800-MYCOGEN mycogen.com	<b>Premium Seed, Inc.</b> Berwick, IL 309-462-2396 premiumseed.com
<b>CroPlan Genetics</b> St. Paul, MN 800-851-8810 croplangenetics.com	<b>Kruger Seed Co. (Access/Kruger)</b> Dike, IA 319-989-2414 krugerseed.com	<b>NC+/Midwest (Channel Bio Corp.)</b> Kentland, IN 800-331-7201	<b>Producers Hybrids</b> Battle Creek, NE 888-675-3190 producershybrids.com
<b>DeKalb (Monsanto Seed)</b> St. Louis, MO 314-694-1000 monsanto.com	<b>Lewis Hybrids, Inc.</b> Ursa, IL 800-252-7851 lewhybrids.com	<b>NK Brand Seeds</b> Lincoln, NE 402-420-6664 nk-us.com	<b>Renze Hybrids</b> Carroll, IA 800-634-2676 renzehybrids.com
<b>Dyna-Gro</b> Goodard, KS 800-950-2231 uap.com	<b>LG Seeds</b> Elmwood, IL 800-752-6847 lgseeds.com	<b>NuTech/AgSource</b> Leland, IA 877-561-9067	<b>Stine Seed Co.</b> Adel, IA 800-362-2510
<b>Fielder's Choice (Grow Direct)</b> Monticello, IN 800-321-3177 fielderschoicedirect.com	<b>MFA Incorporated</b> Columbia, MO 573-876-5482 mfa-inc.com	<b>Ottlie RO Seed</b> Marshalltown, IA 641-753-5561 ottiliero@hughes.net	<b>Taylor Seed Farms, Inc.</b> White Cloud, KS 800-742-7473 taylorseedfarms.com
<b>Fontanelle Hybrids</b> Fremont, NE 402-721-8567 fontanelle.com	<b>Midland Genetics Group</b> Ottawa, KS 785-242-3598 info@midlandgenetics.com	<b>Pfister Hybrid Corn Co.</b> El Paso, IL 309-527-6000 pfisterhybrid.com	<b>Triumph Seed Co., Inc.</b> Ralls, TX 800-530-4789 triumphseed.com
<b>Garst Seed Co.</b> Slater, IA 800-831-6630 garstseed.com	<b>Midland-Phillips, Phillips (Phillips Seed Farms)</b> Hope, KS 800-643-4340 info@phillipsseed.com	<b>Pioneer Hi-Bred Intl., Inc.</b> Lincoln, NE 402-467-5458 pioneer.com	

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## NORTHEAST KANSAS DRYLAND CORN TEST ON SILT LOAM SOIL

Private farm 1 mile north of Severance; Fuhrman Farms, Inc.

Ulysses silt loam; Soybean in 2006

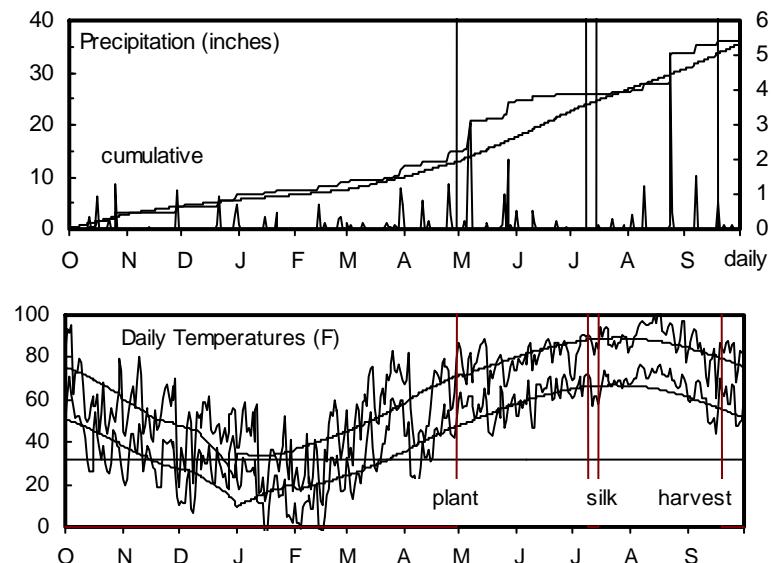
109 - 30 - 0 lb/a N, P, K

Planted on 4/30/2007; Harvested on 9/18/2007

Target stand of 26,000 plants/acre; 8.0 in. spacing

Wet conditions in the spring affected stands; wetter than normal throughout growing season.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	12.0	9.8	39	38	239	34
April	2.9	3.1	50	54	216	231
May	9.4	4.5	66	64	509	447
June	1.6	5.0	72	73	663	688
July	0.5	4.2	77	78	804	813
August	7.3	4.0	82	76	877	781
Sept.	2.6	4.8	70	68	587	551
Totals:	36.2	35.4	54	53	3,894	3,545



Private farm north of Centralia; Keith Flentie, farmer/cooperator

Wymore silt loam; Soybean in 2006

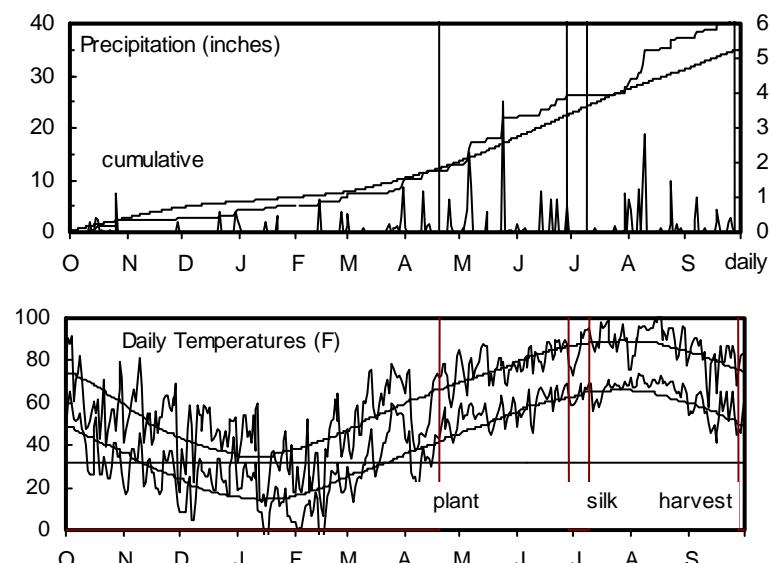
160 - - lb/a N, P, K

Planted on 4/20/2007; Harvested on 9/26/2007

Target stand of 23,000 plants/acre; 9.1 in. spacing

Wetter than normal conditions and a few major storms contributed to extensive lodging. Many plots were completely down at harvest.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	10.0	10.1	38	37	224	58
April	2.8	3.2	51	53	217	223
May	9.1	4.6	66	62	497	400
June	4.3	4.6	72	72	641	656
July	1.5	4.7	78	77	784	792
August	9.5	3.8	80	75	826	763
Sept.	3.5	4.0	68	67	543	518
Totals:	40.7	35.0	53	53	3,733	3,409



## NORTHEAST KANSAS DRYLAND CORN TEST ON SILT LOAM SOIL, continued.

Agronomy North Farm near Manhattan; Jane Lingenfelser, agronomist

Reading silt loam; Soybean in 2006

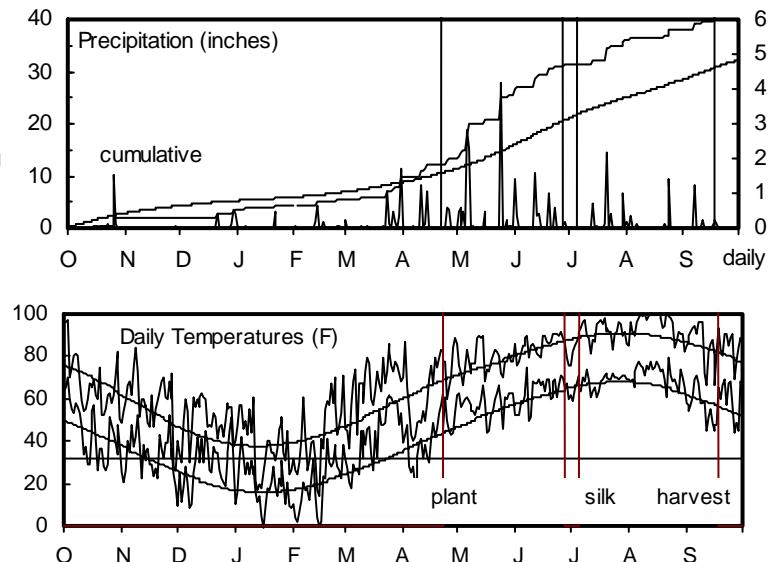
120 - 0 - 0 lb/a N, P, K

Planted on 4/23/2007; Harvested on 9/17/2007

Target stand of 23,000 plants/acre; 9.1 in. spacing

Conditions were generally good throughout the growing season. The plants became somewhat stressed during the extended hot weather in July and August, but timely rains helped grain fill.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	9.8	8.6	43	39	315	57
April	3.7	2.6	54	53	277	237
May	11.9	4.5	68	64	559	441
June	5.9	5.1	74	73	705	685
July	4.7	4.0	79	79	829	823
August	2.3	3.5	84	78	887	801
Sept.	2.0	3.8	72	70	617	587
Totals:	40.2	32.1	58	54	4,188	3,628



North Central Kansas Experiment Field, Belleville; Barney Gordon, agronomist; Michael Larson and Doug Stensaas, techs.

Crete silt loam; Wheat in 2006

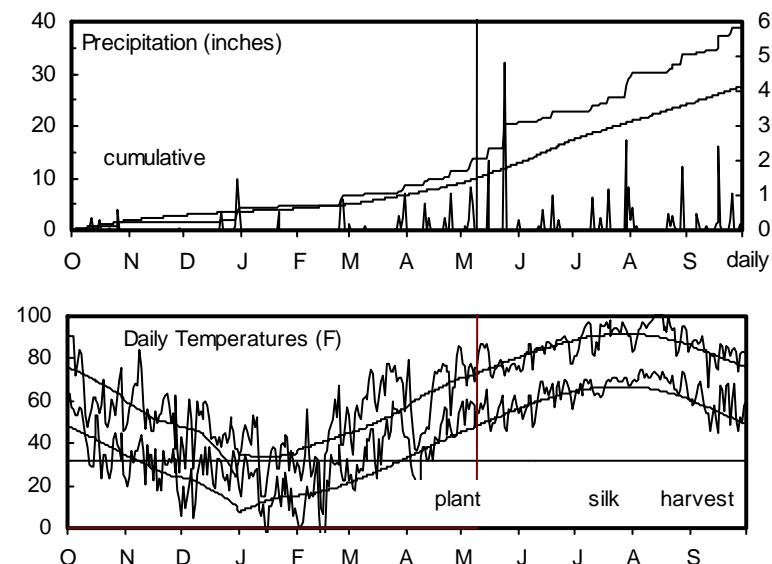
180 - 30 - 5 lb/a N, P, K

Planted on 5/10/2007; Harvested on 10/24/2007

Target stand of 22,000 plants/acre; 9.5 in. spacing

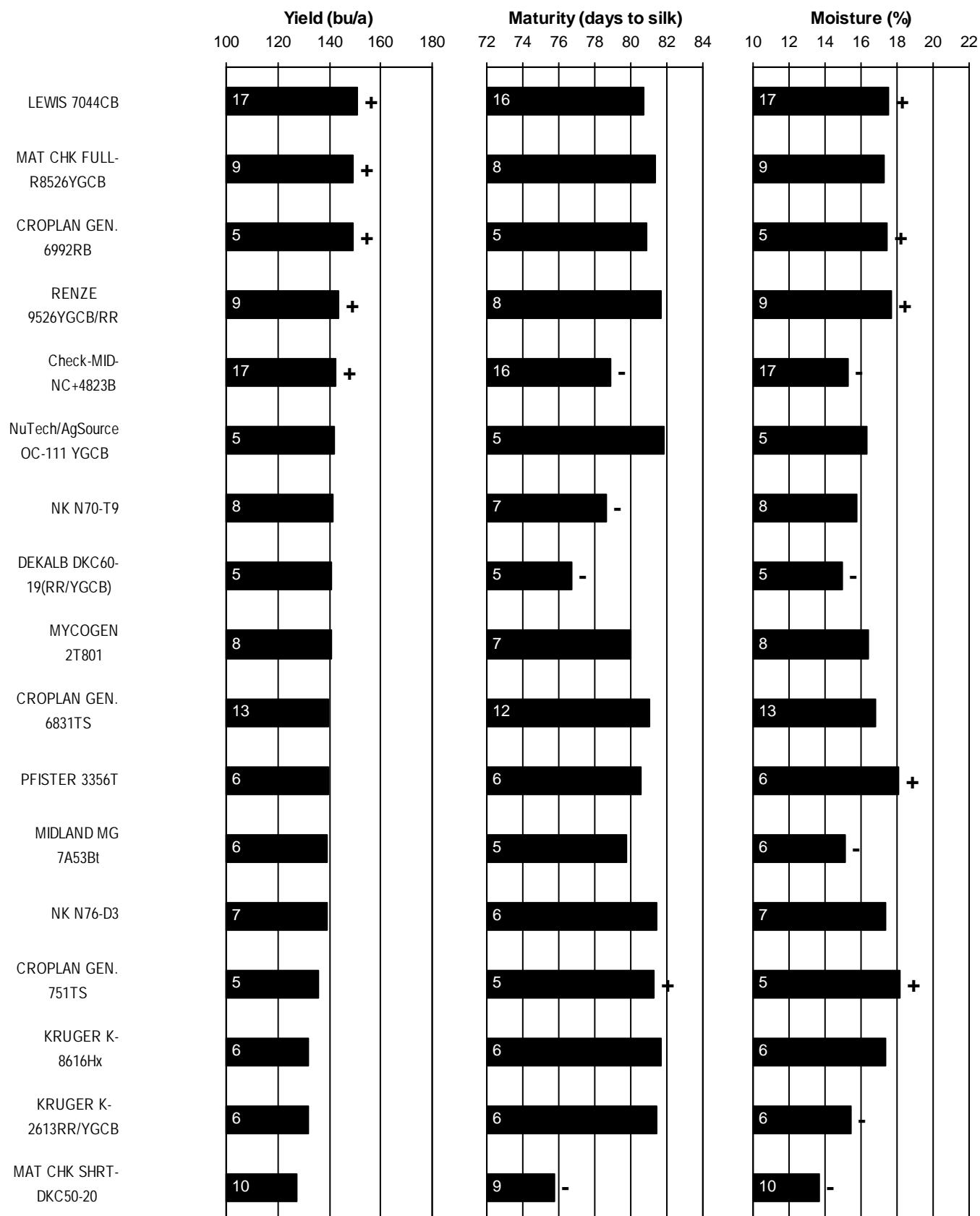
Generally good conditions throughout growing season with frequent rainfall.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	8.8	6.6	40	36	246	25
April	2.5	2.3	51	52	235	217
May	9.3	3.7	66	63	516	421
June	2.4	4.6	73	73	678	679
July	6.2	3.4	80	78	819	807
August	4.4	3.4	82	77	862	780
Sept.	5.3	3.5	70	68	603	538
Totals:	38.8	27.4	55	52	3,959	3,468









**Figure 1. NORTHEAST Kansas corn hybrid standardized performance summary, 2003-2007.**

Values within bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically higher or lower than mean of checks.

## NORTHEAST KANSAS SPRINKLER-IRRIGATED CORN TEST ON SILT LOAM SOIL

Kansas River Valley Experiment Field, Topeka; Larry Maddux, agronomist; Charles Clark and William Riley, technicians

Eudora silt loam; Soybean in 2006

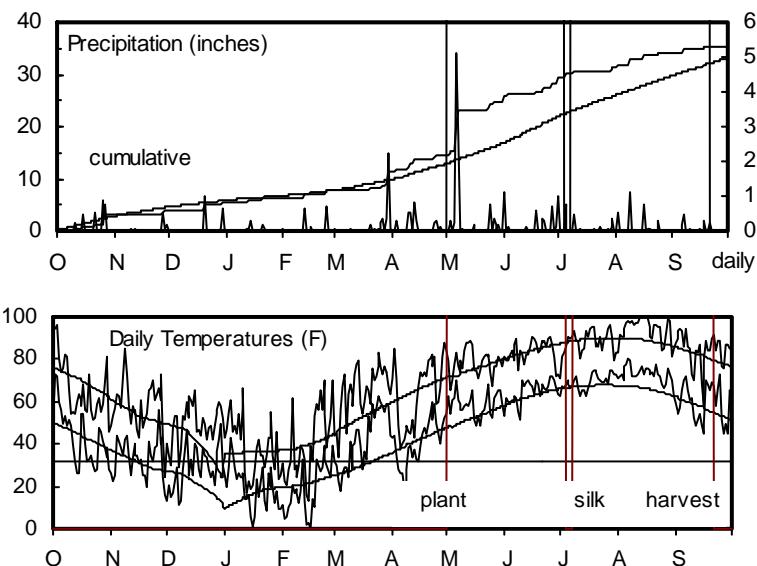
160 - 40 - 0 lb/a N, P, K

Planted on 5/1/2007; Harvested on 9/20/2007

Target stand of 26,000 plants/acre; 8.0 in. spacing

Weather conditions after planting contributed to "rootless" corn, which reduced the number of plants per acre.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	11.4	9.7	42	38	296	50
April	3.2	3.0	53	54	255	236
May	10.3	3.9	69	64	576	444
June	4.4	5.1	74	73	709	698
July	2.0	4.1	79	78	844	827
August	2.8	3.7	84	77	906	802
Sept.	1.4	3.5	71	69	622	571
Totals:	35.4	33.0	57	54	4,207	3,627



Private farm near Clay Center; Mark Taddiken, cooperator

Muir silt loam; Soybean in 2006

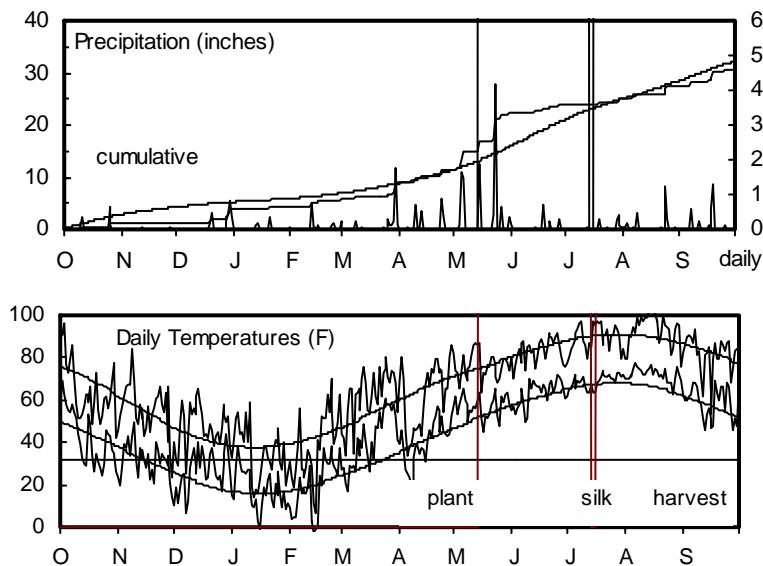
200 - 15 - 0 lb/a N, P, K

Planted on 5/14/2007; Harvested on 10/22/2007

Target stand of 30,000 plants/acre; 7.0 in. spacing

Wet weather delayed planting and harvest. Most plots had some degree of lodging.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	8.9	8.6	40	39	248	57
April	2.7	2.6	51	53	234	237
May	10.8	4.5	67	64	518	441
June	1.4	5.1	73	73	681	685
July	1.3	4.0	79	79	834	823
August	2.5	3.5	83	78	884	801
Sept.	2.9	3.8	70	70	591	587
Totals:	30.5	32.1	56	54	3,989	3,628



Irrigation Experiment Field, Scandia; Barney Gordon, agronomist; Michael Larson and Doug Stensaas, technicians

Crete silt loam; Soybean in 2006

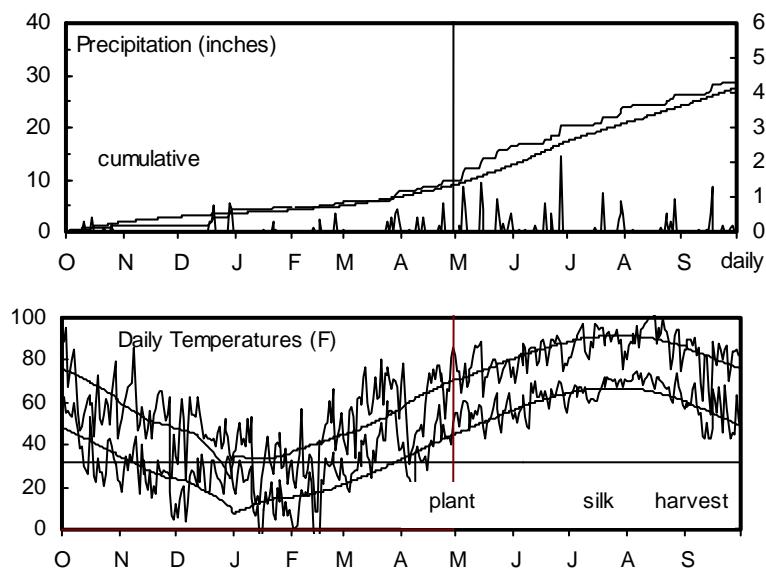
200 - 30 - 5 lb/a N, P, K

Planted on 4/30/2007; Harvested on 10/24/2007

Target stand of 30,000 plants/acre; 7.0 in. spacing

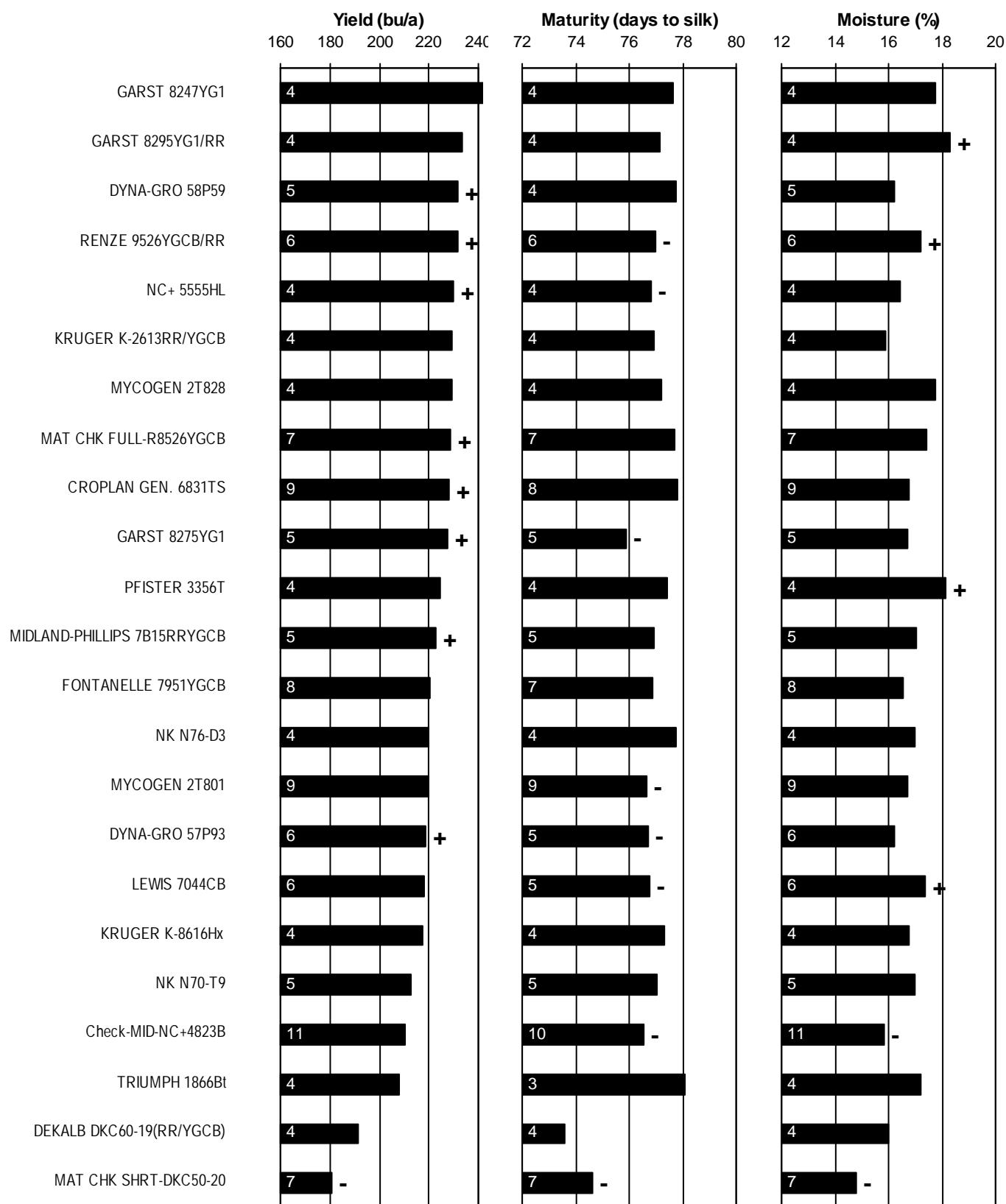
Normal growing conditions with no extremes in the weather.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	7.9	6.6	38	36	218	25
April	1.9	2.3	50	52	220	217
May	6.8	3.7	66	63	490	421
June	4.0	4.6	72	73	650	679
July	3.5	3.4	78	78	802	807
August	2.3	3.4	80	77	836	780
Sept.	2.4	3.5	68	68	550	538
Totals:	28.8	27.4	54	52	3,766	3,468









**Figure 2. NORTHEAST Kansas IRRIGATED corn hybrid standardized performance summary, 2003-2007.**

Values within bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically higher or lower than mean of checks.

## EASTERN KANSAS DRYLAND CORN TEST ON SILTY CLAY LOAM

Private farm northwest of Topeka; Larry Maddux, agronomist; Charles Clark and William Riley, technicians

Silty clay loam; in 2006

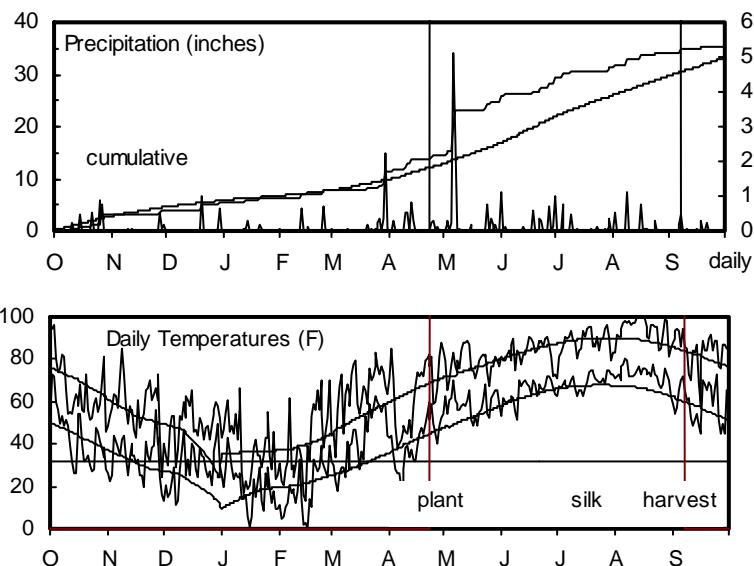
155 - 35 - 0 lb/a N, P, K

Planted on 4/24/2007; Harvested on 9/6/2007

Target stand of 22,000 plants/acre; 9.5 in. spacing

Wetter than normal throughout most of season;  
some lodging reported.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	11.4	9.7	42	38	296	50
April	3.2	3.0	53	54	255	236
May	10.3	3.9	69	64	576	444
June	4.4	5.1	74	73	709	698
July	2.0	4.1	79	78	844	827
August	2.8	3.7	84	77	906	802
Sept.	1.4	3.5	71	69	622	571
Totals:	35.4	33.0	57	54	4,207	3,627



East Central Kansas Experiment Field, Ottawa; Larry Maddux and Jim Kimball, agronomists

Woodson silt loam; Soybean in 2006

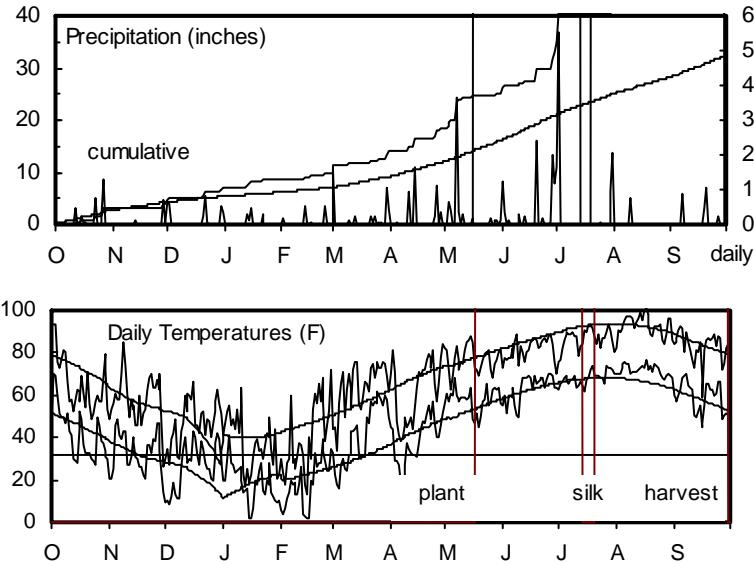
120 - 30 - 15 lb/a N, P, K

Planted on 5/17/2007; Harvested on 9/28/2007

Target stand of 21,000 plants/acre; 10.0 in. spacing

Planting was delayed by wet weather. Good  
conditions throughout spring and summer. Very little  
lodging.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	14.0	9.0	41	41	274	94
April	4.4	2.9	51	56	232	278
May	6.8	4.1	67	65	545	481
June	9.7	4.9	73	74	676	713
July	8.6	4.0	78	80	819	831
August	0.8	3.2	82	79	889	807
Sept.	2.6	4.0	71	71	609	616
Totals:	46.8	32.2	56	56	4,044	3,820



Harvey County Experiment Field, Hesston; Mark Claassen, agronomist; Lowell Stucky and Kevin Duerksen, technicians

Smolan silt loam; Soybean in 2006

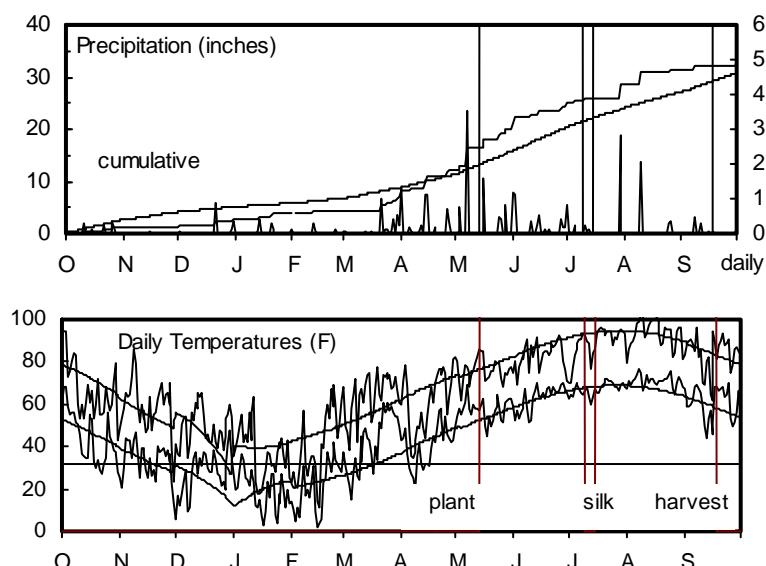
95 - 37 - 0 lb/a N, P, K

Planted on 5/14/2007; Harvested on 9/17/2007

Target stand of 18,000 plants/acre; 11.6 in. spacing

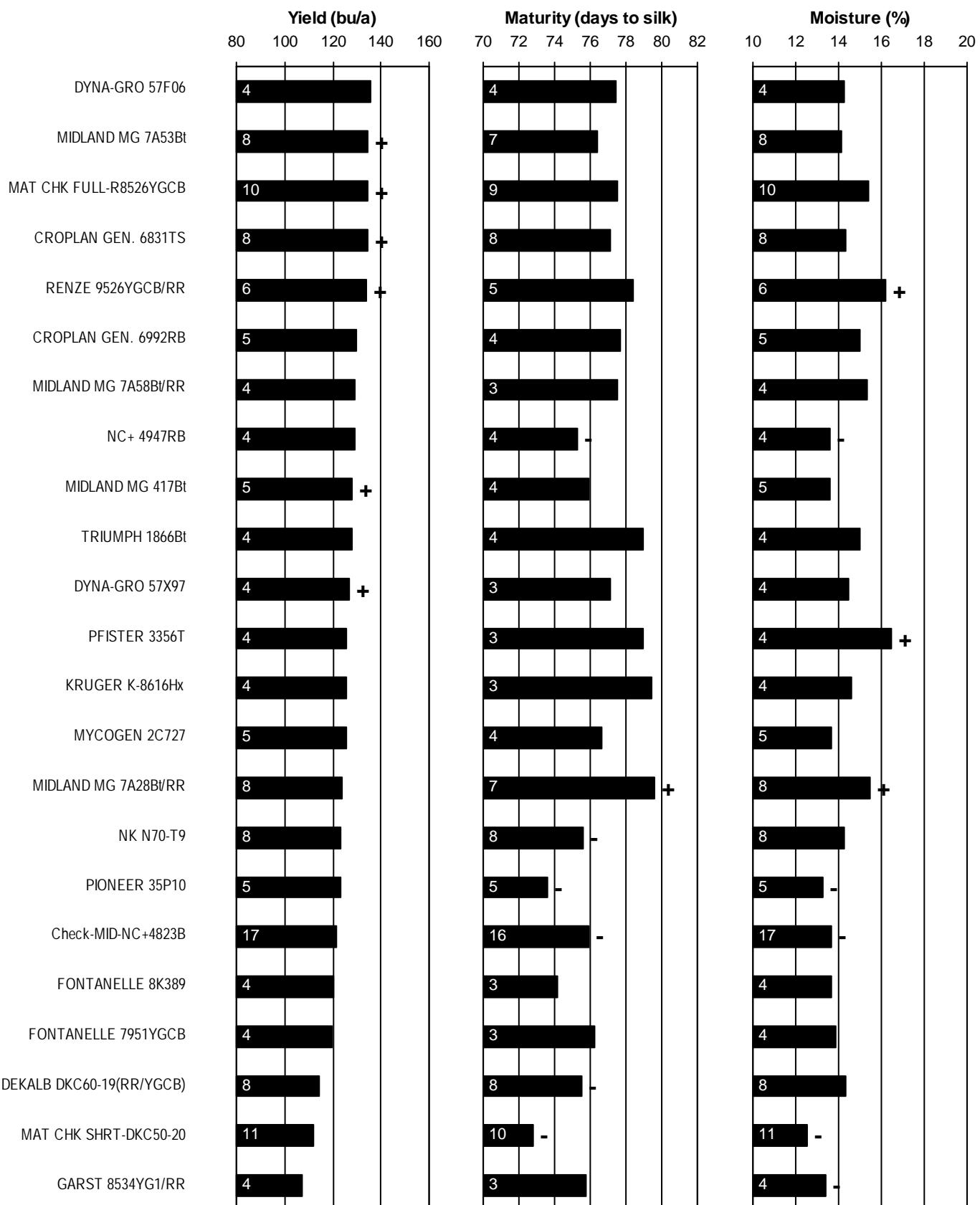
Rainfall was well above normal in April and May.  
Despite having less rainfall and warm temperatures  
the rest of the summer, conditions were generally  
better than average for corn.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	7.0	8.7	42	41	260	91
April	5.2	2.6	51	56	214	271
May	7.8	4.4	67	65	521	477
June	5.3	4.7	73	75	668	724
July	3.5	3.7	79	81	807	840
August	2.8	3.1	82	80	878	819
Sept.	0.9	3.6	72	71	633	632
Totals:	32.4	30.6	56	56	3,982	3,854









**Figure 3. EAST/CENTRAL Kansas corn hybrid standardized performance summary, 2003-2007.**

Values within bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically higher or lower than mean of checks.

## EAST CENTRAL KANSAS DRYLAND SHORT-SEASON CORN TEST ON SILT LOAM SOIL

East Central Kansas Experiment Field, Ottawa; Larry Maddux and Jim Kimball, agronomists

Woodson silt loam; Soybean in 2006

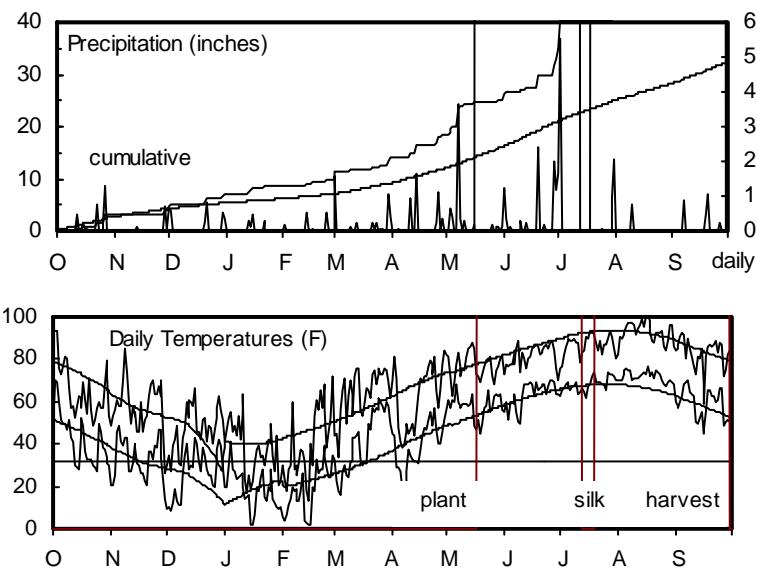
120 - 30 - 15 lb/a N, P, K

Planted on 5/17/2007; Harvested on 9/28/2007

Target stand of 22,000 plants/acre; 9.5 in. spacing

Higher than normal moisture in spring and summer.  
Very little lodging.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	14.0	9.0	41	41	274	94
April	4.4	2.9	51	56	232	278
May	6.8	4.1	67	65	545	481
June	9.7	4.9	73	74	676	713
July	8.6	4.0	78	80	819	831
August	0.8	3.2	82	79	889	807
Sept.	2.6	4.0	71	71	609	616
Totals:	46.8	32.2	56	56	4,044	3,820



Four-State Farm Show, Pittsburg; James Long, agronomist; Kelly Kusel, research technician

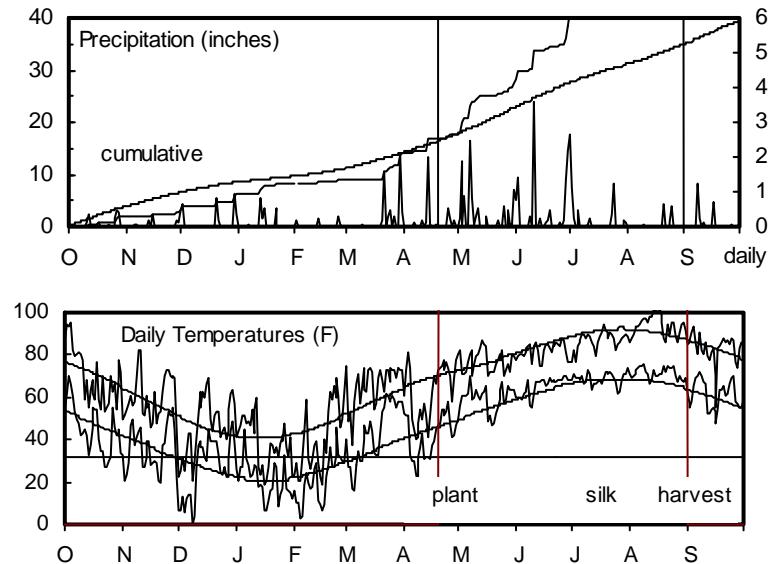
Parsons silt loam; Soybean in 2006

150 - 60 - 60 lb/a N, P, K

Planted on 4/20/2007; Harvested on 8/30/2007

Target stand of 22,000 plants/acre; 9.5 in. spacing

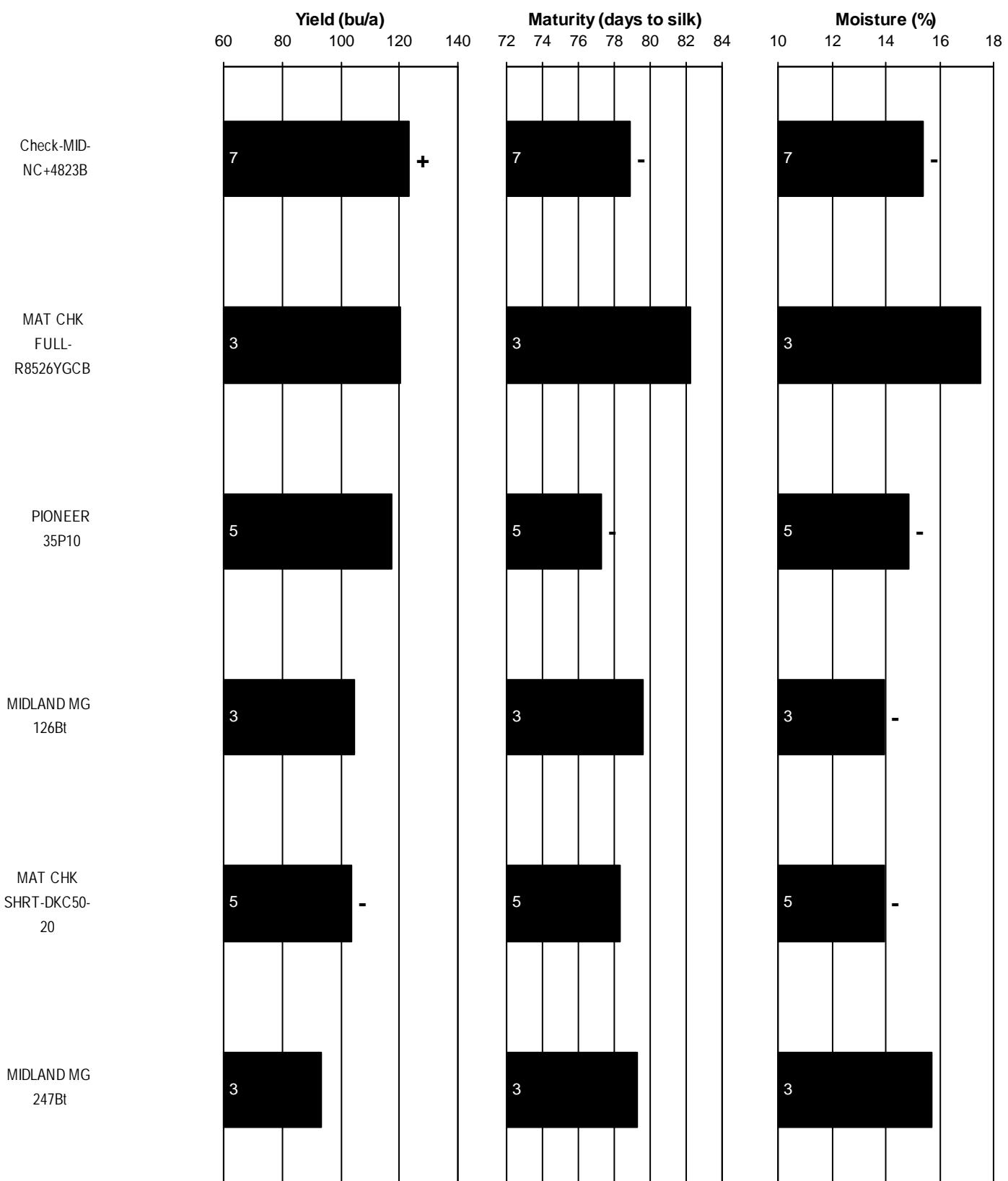
Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	14.5	14.0	43	43	307	123
April	3.4	3.7	52	57	254	284
May	9.8	5.0	68	65	598	479
June	13.5	4.8	74	74	747	711
July	4.0	3.6	78	80	860	833
August	1.3	3.8	82	79	939	817
Sept.	2.4	4.5	72	71	694	633
Totals:	48.9	39.3	57	57	4,397	3,878





**TABLE 9. SHORT-SEASON MULTI-YEAR YIELD PERCENT OF TEST AVERAGES, 2005-2007.**

BRAND	NAME	Pittsburg, Crawford County					Ottawa, Franklin County				
		2007			2-Yr.	3-Yr.	2007			2-Yr.	3-Yr.
		(%)	(%)	(%)	Avg.	Avg.	(%)	(%)	(%)	Avg.	Avg.
DEKALB	DKC52-63(RR2/YGCB)	105	110	--	107	--	--	--	--	--	--
DYNA-GRO	56P07	--	--	--	--	--	113	92	--	102	--
DYNA-GRO	55P86	--	--	--	--	--	120	95	--	102	--
DYNA-GRO	57F06	98	103	--	102	--	--	--	--	--	--
MAT CHK	FULL-R8526YGCB	105	104	--	105	--	107	110	--	108	--
MAT CHK	MID-NC+4823B	104	102	111	103	105	103	110	109	107	107
MAT CHK	SHRT-DKC50-20	98	102	100	100	100	88	90	85	89	88
MIDLAND	MG 126Bt	97	101	--	99	--	88	101	--	94	--
MIDLAND	MG 247Bt	86	95	--	91	--	85	92	--	88	--
MIDLAND	MG 7A53Bt	109	105	--	107	--	--	--	--	--	--
MYCOGEN	2C727	106	102	--	105	--	--	--	--	--	--
NK	N68-B8	107	98	--	102	--	--	--	--	--	--
PIONEER	35P10	95	116	114	106	108	106	101	99	104	102
AVERAGE (bu/a)		182	99	168	141	150	104	132	126	118	120
CV (%)		7	14	5			8	9	9		
LSD (.05)		10	13	7			12	12	12		



**Figure 4. Kansas SHORT-SEASON corn hybrid standardized performance summary, 2003-2007.**

Values within bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically higher or lower than mean of checks.

## SOUTH CENTRAL KANSAS IRRIGATED CORN TEST ON SILT LOAM SOIL

Private farm near Inman; Jane Lingenfelser, agronomist; Norman and Tracy Schmidt, cooperators

Crete silt loam; Soybean in 2006

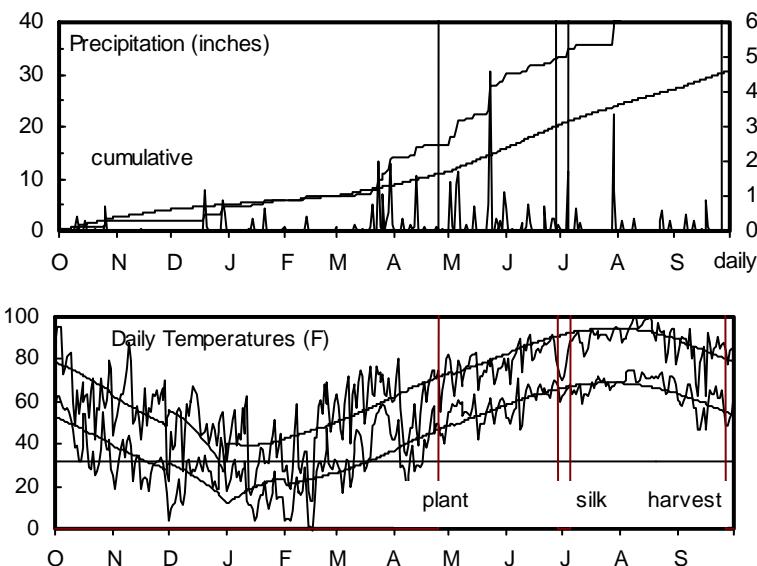
230 - 30 - 0 lb/a N, P, K

Planted on 4/26/2007; Harvested on 9/25/2007

Target stand of 30,000 plants/acre; 7.0 in. spacing

Conditions were generally good for optimum growth.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	14.0	8.7	41	41	241	91
April	2.7	2.6	50	56	203	271
May	13.0	4.4	66	65	485	477
June	3.7	4.7	73	75	661	724
July	7.2	3.7	78	81	803	840
August	1.9	3.1	82	80	870	819
Sept.	1.8	3.6	71	71	603	632
Totals:	44.1	30.6	56	56	3,864	3,854



Private farm near Hutchinson; Evans Seed Farm; Bill Heer, agronomist; John Evans, cooperator

Punkin silt loam; Soybean in 2006

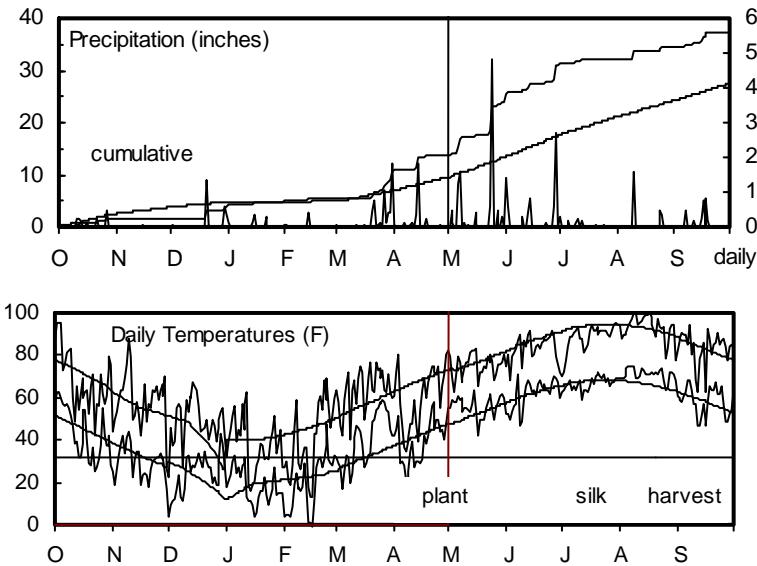
200 - 30 - 0 lb/a N, P, K

Planted on 5/1/2007; Harvested on 10/9/2007

Target stand of 30,000 plants/acre; 7.0 in. spacing

Wet weather before and after planting affected emergence and stands.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	10.7	6.8	41	40	241	101
April	2.9	2.6	50	55	203	271
May	10.4	3.8	66	65	485	459
June	7.3	4.3	73	75	661	712
July	0.9	3.5	78	81	803	832
August	2.4	3.1	82	79	870	807
Sept.	2.6	3.3	71	70	603	610
Totals:	37.2	27.3	56	56	3,864	3,792



Private farm near St. John, Russell & Son Farms; Jane Lingenfelser, agronomist; Rick Russell, cooperator

Carwile fine sandy loam; Soybean in 2006

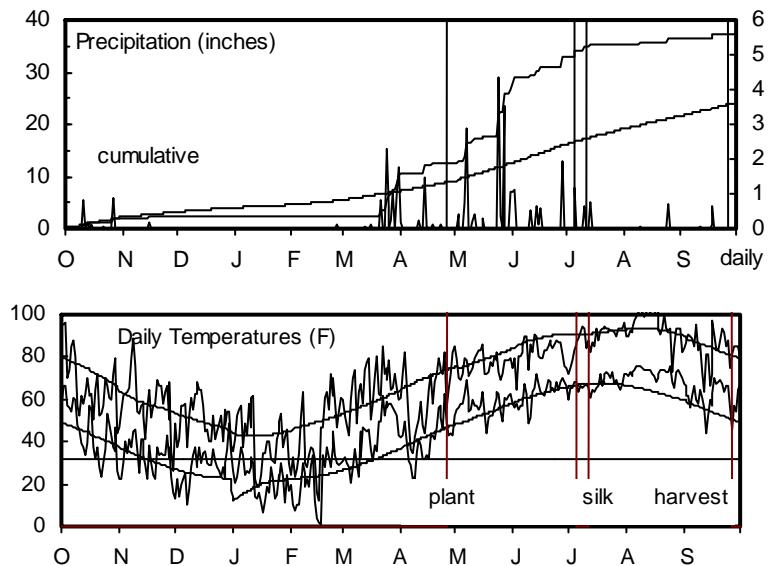
184 - 0 - 0 lb/a N, P, K

Planted on 4/27/2007; Harvested on 9/25/2007

Target stand of 30,000 plants/acre; 7.0 in. spacing

Some low spots in the field had standing water for much of the spring and early summer.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	10.3	7.1	44	42	270	126
April	2.1	2.0	51	56	226	302
May	14.4	3.4	67	66	530	497
June	6.1	3.7	73	76	673	725
July	2.6	2.9	79	79	817	824
August	0.8	2.5	84	78	895	764
Sept.	0.8	2.5	73	69	654	568
Totals:	37.1	24.0	57	56	4,065	3,806





**TABLE 10 continued. SOUTH CENTRAL KANSAS IRRIGATED CORN PERFORMANCE TESTS, 2007.**

BRAND	NAME	Inman, McPherson County					Hutchinson, Reno County					St. John, Stafford County							
		YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	DAYS (silk)	1000 ppa	YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	1000 ppa	YIELD (bu/a)	PAVG (%)	TW (lb/bu)	MOIST (%)	DAYS (silk)	LDG (%)	1000 ppa
TRIUMPH	1203CBRR	--	--	--	--	--	--	--	--	--	--	--	158	98	57	15	73	22	29.5
TRIUMPH	1536CBRR	202	102	58	13	65	30.9	--	--	--	--	--	--	--	--	--	--	--	--
TRIUMPH	1706VT3	--	--	--	--	--	--	--	--	--	--	--	163	102	56	15	72	3	27.7
TRIUMPH	1608VT3	186	94	57	14	65	23.3	165	94	56	15	22.4	--	--	--	--	--	--	--
TRIUMPH	1977CbRR	<b>231</b>	117	58	15	70	28.4	135	77	56	17	26.4	152	95	57	17	73	6	30.3
	AVERAGE	198	198	58	14	66	27.4	176	176	56	16	24.2	160	160	57	15	72	13	29.9
	CV (%)	8	8	1	3	2	7.1	7	7	1	4	14.8	9	9	2	8	3	--	5.1
	LSD (.05)	22	11	1	1	2	2.7	17	10	1	1	5.0	21	13	1	2	3	26	2.2

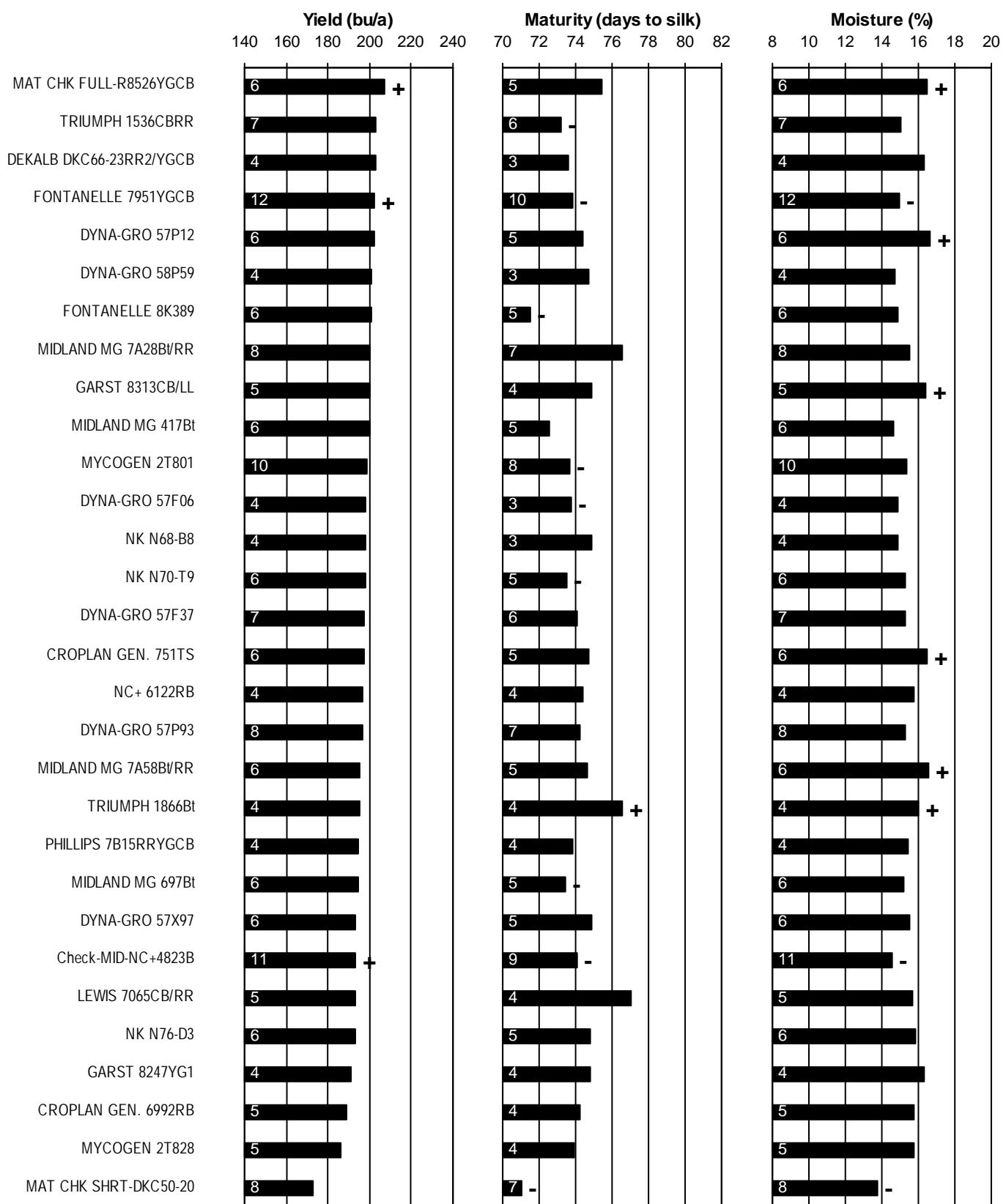
\* Seed treatments and hybrid traits located in Table 16.

\*\* Yields in bold are in the top LSD group.

\*\*\* Unless two hybrids differ by more than the LSD, little confidence can be placed in one being superior to the other.

**TABLE 11. SOUTH CENTRAL MULTI-YEAR YIELD PERCENT OF TEST AVERAGES, 2005-2007.**

BRAND	NAME	Inman, McPherson County					Hutchinson, Reno County					St. John, Stafford County				
		2007 (%)	2006 (%)	2005 (%)	2-Yr. Avg. (%)	3-Yr. Avg. (%)	2007 (%)	2006 (%)	2005 (%)	2-Yr. Avg. (%)	3-Yr. Avg. (%)	2007 (%)	2006 (%)	2005 (%)	2-Yr. Avg. (%)	3-Yr. Avg. (%)
DYNA-GRO	57F37	--	--	--	--	--	--	--	--	--	--	100	111	95	106	102
FONTANELLE	7951YGCB	87	103	108	95	99	--	--	--	--	--	99	102	99	200	100
MAT CHK	MID-NC-44823B	81	103	97	92	94	--	--	--	--	--	103	92	104	97	100
MAT CHK	SHRT-DKC50-20	80	92	86	86	86	--	--	--	--	--	106	75	74	90	85
MYCOGEN	2T801	--	--	--	--	--	--	--	--	--	--	111	100	102	105	104
NK	N76-D3	96	102	95	99	98	--	--	--	--	--	--	--	--	--	--
PHILLIPS	7B15RRYGC	--	--	--	--	--	--	--	--	--	--	91	102	102	96	98
	AVERAGES (bu/a)	198	221	194	209	204						160	167	222	164	183
	CV (%)	8	10	8								9	11	6		
	LSD (0.05)*	11	14	12								13	15	8		



**Figure 5. S. CENTRAL Kansas IRRIGATED corn hybrid standardized performance summary, 2003-2007.**

Values within bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically higher or lower than mean of checks.

## WEST KANSAS NO-TILL DRYLAND CORN TEST

Agricultural Research Center - Hays; Ken Kofoid, agronomist

Harney clay loam; Wheat in 2006

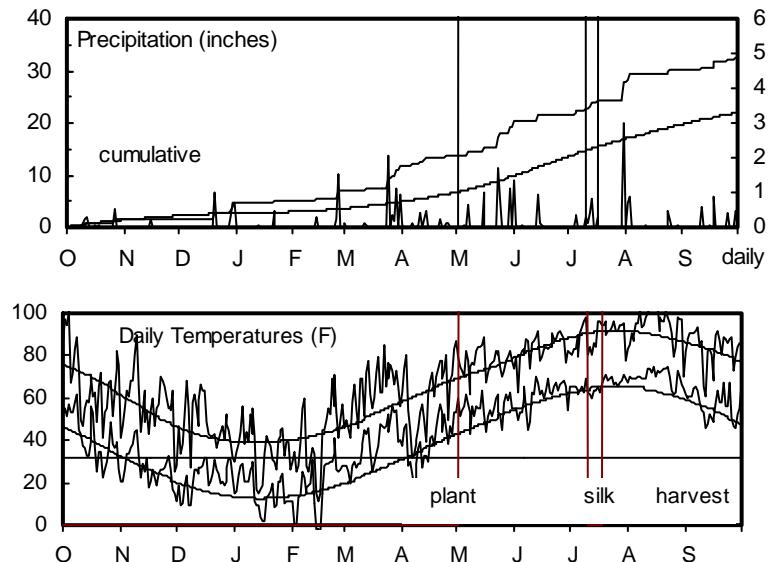
80 - - lb/a N, P, K

Planted on 5/2/2007; Harvested on 10/3/2007

Target stand of 17,000 plants/acre; 12.3 in. spacing

Plant emergence was excellent with nearly 100% stand. Spring and summer conditions were ideal with adequate, and sometimes surplus, rainfall. Dry and warm August caused slight stress during grain filling.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	11.9	4.8	40	36	230	40
April	1.8	1.8	51	50	222	205
May	5.4	3.1	66	61	507	381
June	2.6	3.8	72	71	657	635
July	6.0	3.4	78	78	784	783
August	2.5	2.8	82	76	851	760
Sept.	2.4	2.3	70	68	590	540
Totals:	32.6	21.9	55	52	3,840	3,343



Southwest Research-Extension Center, Garden City; Monty Spangler

Keith silt loam; Wheat in 2006

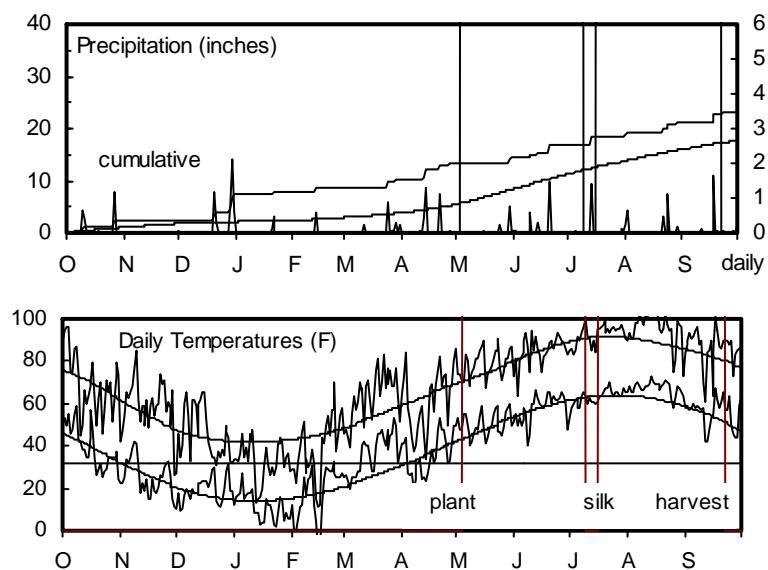
200 - - lb/a N, P, K

Planted on 5/4/2007; Harvested on 9/21/2007

Target stand of 17,000 plants/acre; 12.3 in. spacing

Ample moisture at planting; somewhat dry later in June and early July. Very hot in July and August, but there were timely rains during grain fill.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	10.3	3.8	39	37	225	56
April	2.9	1.6	49	50	202	214
May	1.2	2.9	64	61	474	388
June	2.5	3.0	72	72	629	635
July	1.7	2.5	78	78	763	768
August	2.6	2.2	81	75	805	746
Sept.	2.1	1.6	71	68	603	530
Totals:	23.3	17.6	54	52	3,700	3,337



## WEST CENTRAL KANSAS NO-TILL DRYLAND CORN TEST, continued.

Southwest Research-Extension Center, Tribune; Alan Schlegel, agronomist

Ulysses silt loam; Wheat in 2006

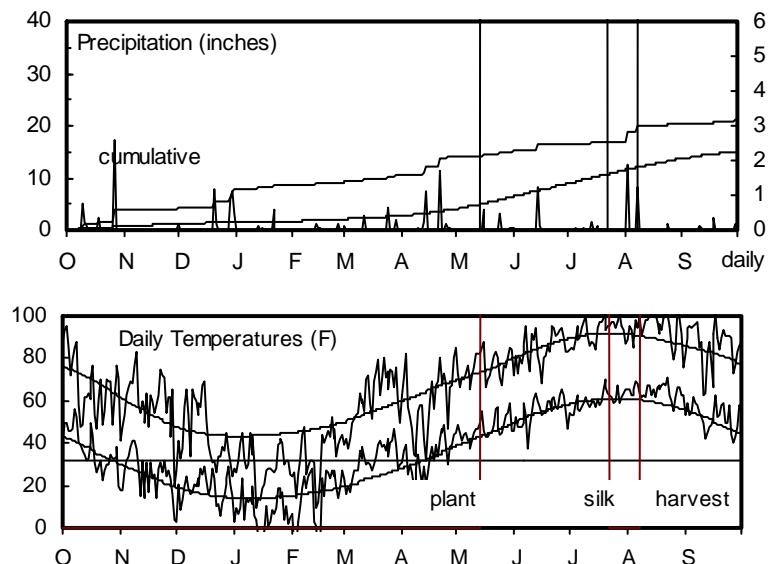
10 - 34 - 0 lb/a N, P, K

Planted on 5/14/2007; Harvested on 10/12/2007

Target stand of 17,000 plants/acre; 12.3 in. spacing

Good emergence and establishment. Dry conditions and high temperatures severely restricted pollination and grain fill.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	10.7	2.7	36	37	197	73
April	3.3	1.3	47	49	187	222
May	1.1	2.3	61	59	417	381
June	1.4	2.5	70	70	577	581
July	0.5	2.6	77	76	720	720
August	3.3	2.3	79	74	766	697
Sept.	0.7	1.3	70	66	548	504
Totals:	21.0	15.0	52	52	3,412	3,177



Northwest Research-Extension Center, Colby; Patrick Evans, agronomist

Keith silt loam; Wheat in 2006

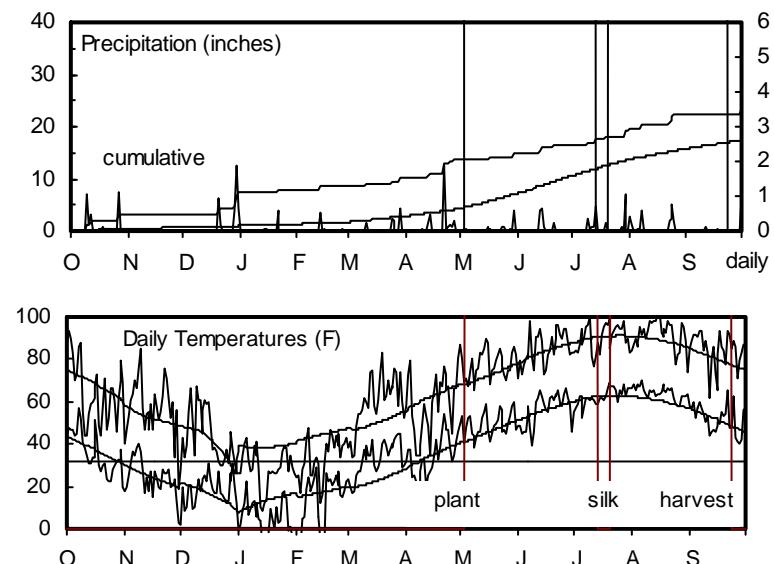
170 - 25 - 0 lb/a N, P, K

Planted on 5/3/2007; Harvested on 9/22/2007

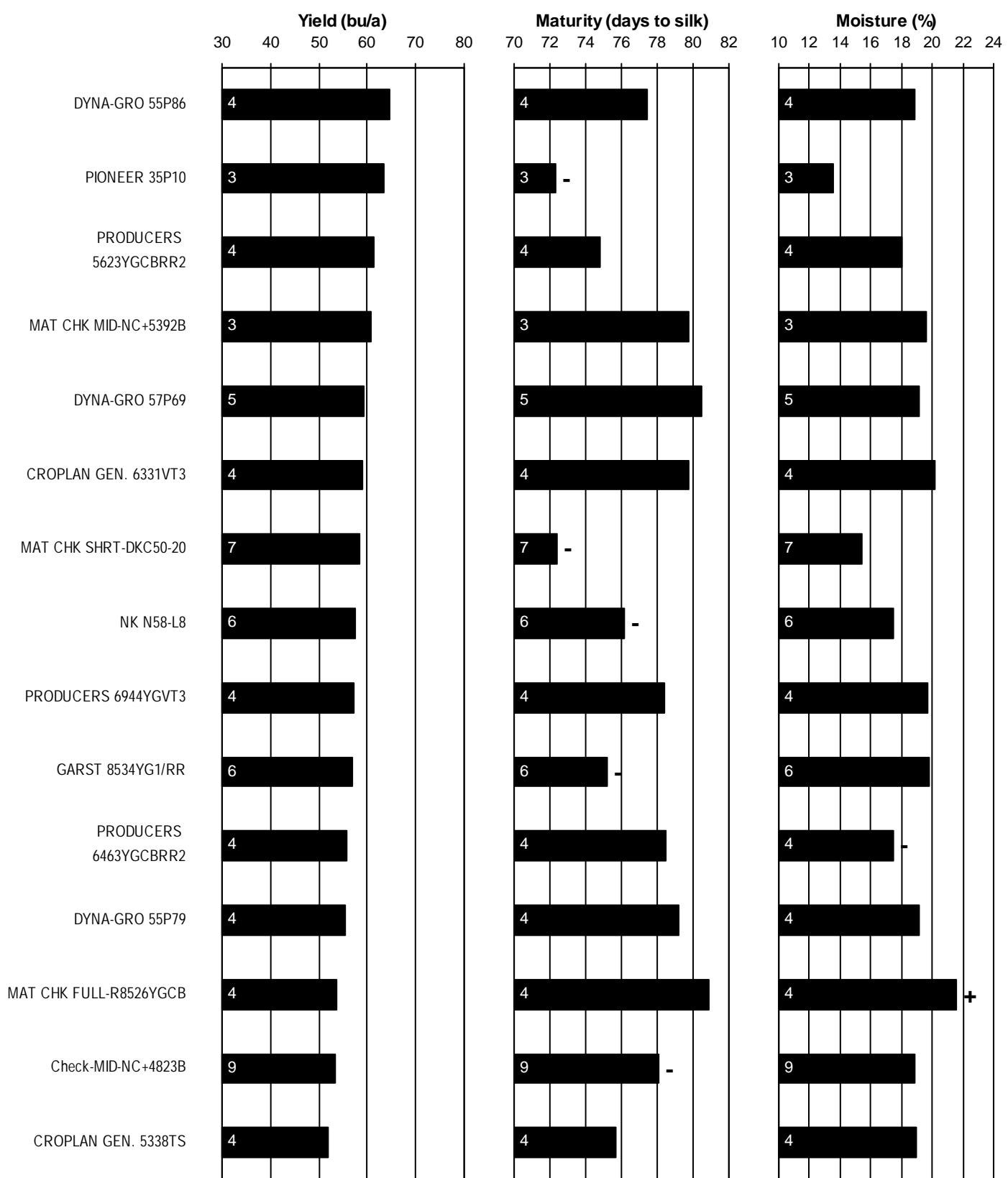
Target stand of 17,000 plants/acre; 12.3 in. spacing

Good planting conditions and stand establishment. Summer was not extremely hot, and plots received some beneficial rainfall in July and August. Spider mites and corn ear worms were present.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	10.2	2.8	35	36	184	19
April	3.5	1.4	47	49	177	187
May	1.2	2.9	63	59	448	351
June	1.6	3.4	71	70	606	591
July	2.7	3.1	76	76	738	748
August	3.0	2.1	78	74	763	714
Sept.	1.2	1.6	68	66	542	483
Totals:	23.4	17.4	51	51	3,457	3,093







**FIGURE 6. WEST Kansas DRYLAND corn hybrid standardized performance summary, 2003-2007.**

Values within bars indicate the number of comparisons with checks. Symbols (+, -, -) indicate if statistically higher or lower than mean of checks.

## WEST KANSAS IRRIGATED CORN TEST ON SILT LOAM SOIL

Northwest Research-Extension Center, Colby; Patrick Evans, agronomist

Keith silt loam; Sunflower in 2006

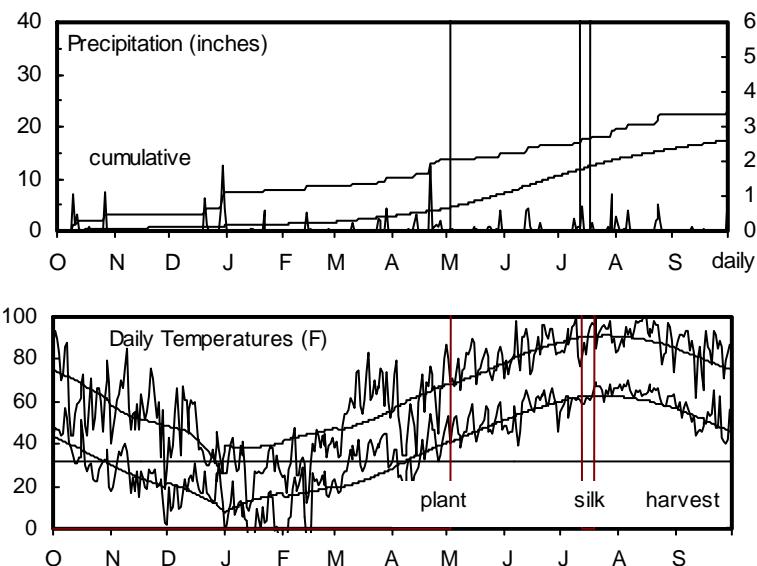
230 - 40 - lb/a N, P, K

Planted on 5/3/2007; Harvested on 10/9/2007

Target stand of 30,000 plants/acre; 7.0 in. spacing

Normal growing conditions with no extremes in the weather. Sprayed for corn borer and spider mites.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	10.2	2.8	35	36	184	19
April	3.5	1.4	47	49	177	187
May	1.2	2.9	63	59	448	351
June	1.6	3.4	71	70	606	591
July	2.7	3.1	76	76	738	748
August	3.0	2.1	78	74	763	714
Sept.	1.2	1.6	68	66	542	483
Totals:	23.4	17.4	51	51	3,457	3,093



Southwest Research-Extension Center, Tribune; Alan Schlegel, agronomist

Ulysses silt loam; Sunflower in 2006

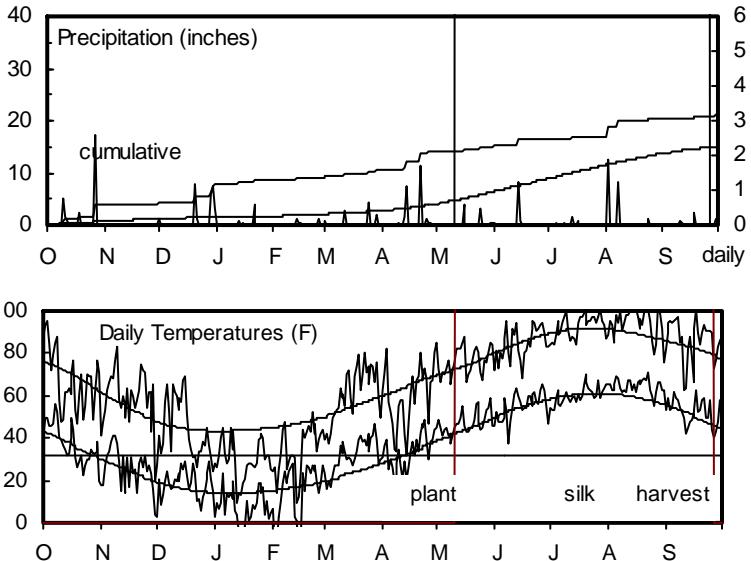
240 - 0 - 0 lb/a N, P, K

Planted on 5/11/2007; Harvested on 9/25/2007

Target stand of 30,000 plants/acre; 7.0 in. spacing

Conditions were generally good. Plots were sprayed for spider mites in August.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	10.7	2.7	36	37	197	73
April	3.3	1.3	47	49	187	222
May	1.1	2.3	61	59	417	381
June	1.4	2.5	70	70	577	581
July	0.5	2.6	77	76	720	720
August	3.3	2.3	79	74	766	697
Sept.	0.7	1.3	70	66	548	504
Totals:	21.0	15.0	52	52	3,412	3,177



Southwest Research-Extension Center, Garden City; Monty Spangler, technician

Keith silt loam; Fallow in 2006

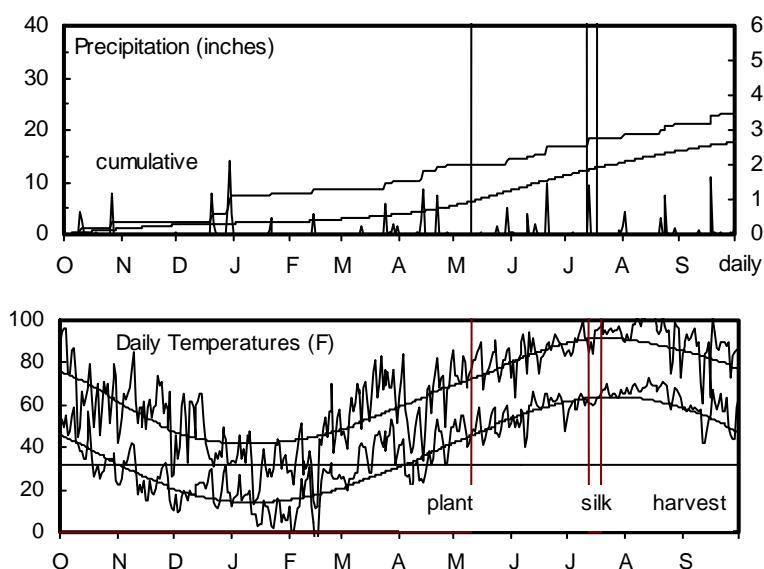
200 - - lb/a N, P, K

Planted on 5/11/2007; Harvested on 10/9/2007

Target stand of 30,000 plants/acre; 7.0 in. spacing

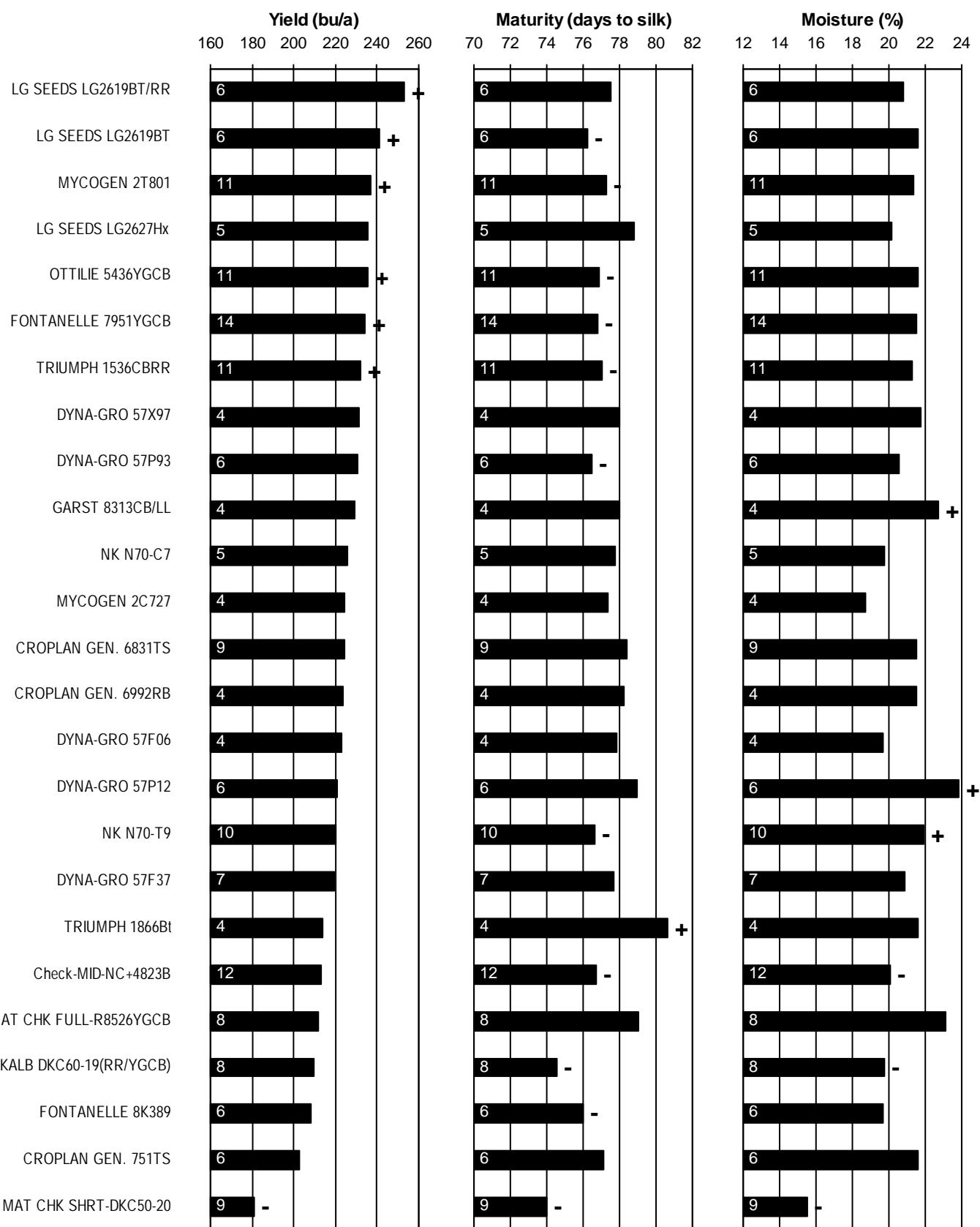
Good moisture throughout spring and early summer. Dry conditions in August were moderated by timely rains during grain fill.

Month	Precipitation		Average Temp.		GDU	
	2007	Norm.	2007	Norm.	2007	Norm.
Oct.-Mar.	10.3	3.8	39	37	225	56
April	2.9	1.6	49	50	202	214
May	1.2	2.9	64	61	474	388
June	2.5	3.0	72	72	629	635
July	1.7	2.5	78	78	763	768
August	2.6	2.2	81	75	805	746
Sept.	2.1	1.6	71	68	603	530
Totals:	23.3	17.6	54	52	3,700	3,337









**Figure 7. WEST Kansas IRRIGATED corn hybrid standardized performance summary, 2003-2007.**

Values within bars indicate the number of comparisons with checks. Symbols (+, -, -) indicate if statistically higher or lower than mean of checks.







**Table 16. Entries in the 2007 Kansas Corn Performance Tests - continued.**

	SD	TRT*	GDD	DBL	RES	P	F		SD	TRT	GDD	DBL	RES	P	F
<b>TRIUMPH</b>															
1977CbRR	--		--	--	--	--	--	--							
6512PLRR	--		--	--	--	--	--	--							
8607CbRR	--		--	--	--	--	--	--							
1536CBRR	--		2550	115	CB,RR	N	Y								
1866Bt	--		2610	117	CB	N	Y								
<b>MATURITY CHECK</b>															
MID-NC+5392B	--		--	--	--	--	--	--							
SHRT-DKC50-20	--		2528	100	RR,CB	--	Y								
MID-NC+4823B	--		2710	112	CB	N	Y								
FULL-R8526YGCB	--		2800	118	CB	N	Y								

\*SD TRT = Seed treatment (C=Cruiser®, CE=Cruiser® Extreme, P=Poncho®. Numbers indicate rates if available); GDD = growing degree days; DBL = days to black layer; RES = herbicide, disease, and insect resistance traits ((Bt, BtCB, CB, YG, YG1, YG+, YGCB, YGPL), 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.

For those interested in accessing crop performance testing information electronically, visit our World Wide Web site. All of the information contained in this publication, plus more, is available for viewing or downloading.

The URL is <http://kscroptests.agron.ksu.edu>.

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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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## **Kansas State University Agricultural Experiment Station and Cooperative Extension Service**

SRP 983

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